

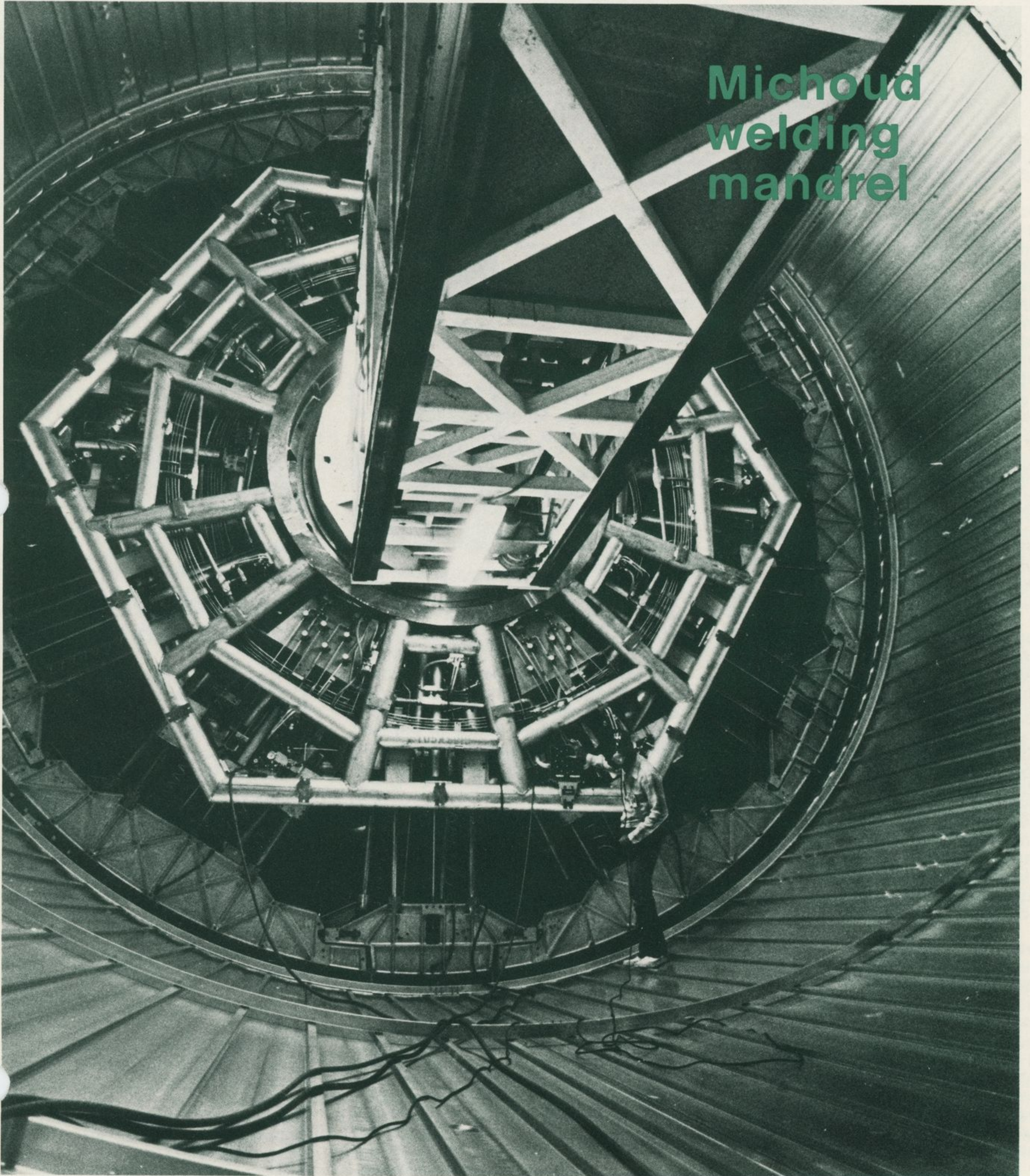
MARTIN MARIETTA

# news

DENVER DIVISION

NUMBER 5/1980

Michoud  
welding  
mandrel



# Seven employees' sons earn '80-'81 scholarships

Seven sons of Denver division employees have been selected to receive Martin Marietta Foundation scholarships for the 1980-81 academic year. Two are from the Denver area, four are from Michoud, and one is from Vandenberg.

Those from Denver are Byron C. Drury and Timothy P. Quinn; Terence J. Alost, Lawrence W. Dautenhahn, Lawrence R. Hartley, and Stephen C. Lipp are from Michoud; and James E. Johnston is from Vandenberg.

Thirty scholarships were awarded by the foundation scholarship committee, composed of Joshua R. Wheeler, former Baltimore county public schools superintendent; Dr. Donald Maley, chairman of the department of industrial education at the University of Maryland; and Charles P. McCormick Jr., vice president of McCormick and Company of Baltimore.

The scholarships, initially for one year and renewable for three years based on academic achievement, are for \$2,000 each year.

The scholarship winners:

**Byron C. Drury**, a senior at Columbine High School, is the son of Mr. and Mrs. Edward Fox. His father is a senior engineer and his mother a secretary at the division. Drury, who says he is "heavily involved in church activities," plans to attend John Brown University in Arkansas to train for a career in contemporary Christian music recording and broadcasting.

**Timothy P. Quinn**, son of Mr. and Mrs. Timothy P. Quinn, plans to attend the Massachusetts Institute of Technology as an engineering student. The elder Quinn is an engineer at the division. The scholarship winner attends John F. Kennedy High School where he is a member of the National Honor Society and participates in a variety of club and sports activities.

**Terence J. Alost** plans to use his scholarship at Tulane University to major in medicine or chemistry. He is the son of Mr. and Mrs. Thomas E. Alost. His father is chief-reliability assurance at Michoud. Young Alost will graduate this year from Slidell High School where he is a National Honor Society member. He earned a letter in football and has been active in a variety of academic and social organizations.

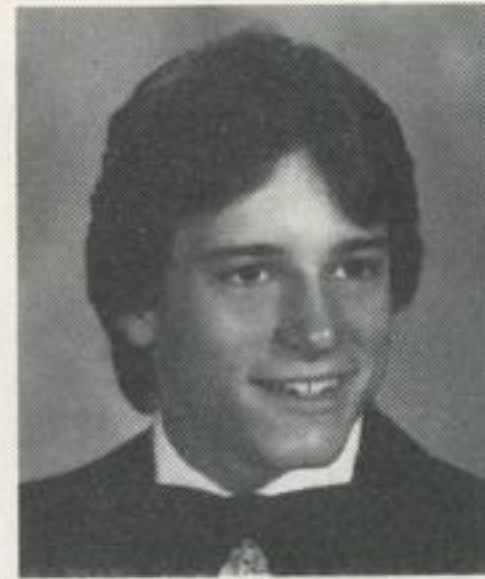
**Lawrence W. Dautenhahn** is the son



DRURY



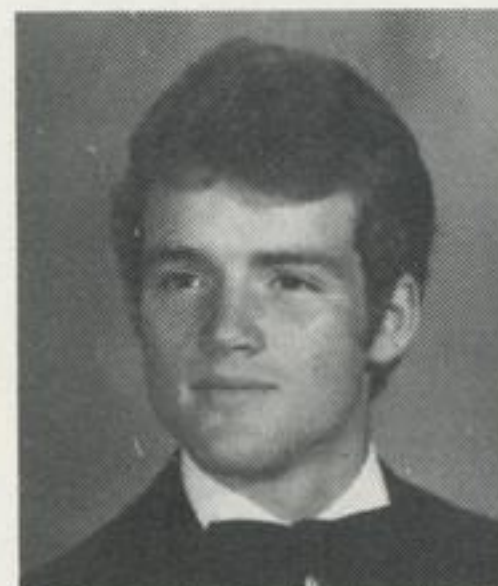
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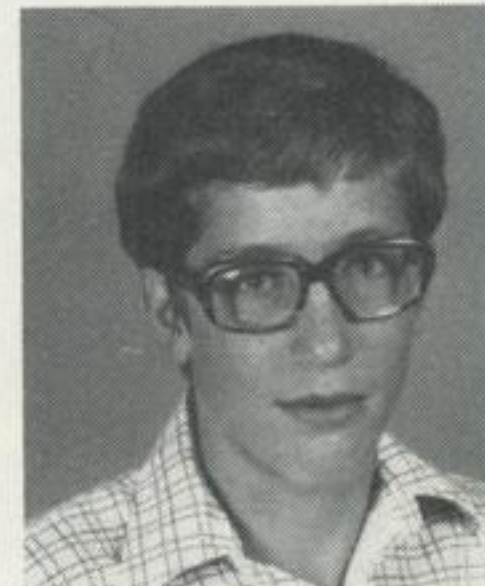
ALOST



DAUTENHAHN



HARTLEY



LIPP



JOHNSTON

of Mr. and Mrs. Timothy G. Dautenhahn. His father is a senior specialist at Michoud. A student at Slidell High School, Dautenhahn plans to attend Louisiana State University and major in premedicine. An honor student, he also has been a member of his school's marching band, jazz band, and symphonic band.

**Lawrence R. Hartley**, a senior at Slidell High School, is the son of Mr. and Mrs. Lawrence L. Hartley. He plans to major in economics at Southern Methodist University. He is a student council and honor society member; earned a varsity letter as a cross-country runner; and has been active in the Key Club service organization locally and regionally. His father is a staff engineer at Michoud.

**Stephen C. Lipp**, the son of Mr. and Mrs. Robert Lipp, is a student at Benjamin Franklin High School. He expects to major in mechanical engineering or physics at the University of New Orleans. His father is a staff engineer at Michoud. Young Lipp will complete high school in three years. He is a member of the National Honor Society and the math honor society. He plays French horn in the school band.

**James E. Johnston** is a tenth grade student at Lompoc Senior High School who will graduate in June 1980. He has been taking college level courses at the University of California at Santa Barbara and at Allan Hancock Community College while a high school student. His mother, Mrs. Kay Johnston, is an accountant at Vandenberg oper-

ations. Johnston wants to use his scholarship to major in chemical engineering at the University of California at Berkeley. In addition to his academic accomplishments, young Johnston has qualified for the National Junior Judo Championships for the past four years.

## Division telephone number to change

The Denver division main telephone number will change May 1 to 977-3000 and all direct in dial extensions will have the 977 prefix.

The change is required to provide direct dial service for Greenwood Commons, Greenwood Plaza, and the expanded facilities at Hampden and Wadsworth. However, outside calls to the Federal Boulevard facilities will continue to go through the operator until additional equipment is installed at Hampden and Wadsworth in October.

Postcards are available at mail rooms for notifying callers of the change. Gummed labels also are available for use on existing stationery to indicate the number change.

Employees at the Greenwood facilities will be trained to use the new equipment April 21 to 29.

# Infrared eye to study Space Shuttle heating

When Space Shuttle makes its inaugural flight, engineers will be using a device designed and built by the division to study performance of insulation tiles protecting the orbiter's surface from the heat of re-entry.

The recently shipped device, called IRIS for infrared imaging of Shuttle, will measure the temperature of the Shuttle's underside as it is heated by friction with the air. The information may enable NASA to modify the orbiter's protection and achieve significant weight reduction.

"Previously, scientists relied on wind tunnel simulators to gather data on spacecraft heating from air resistance," Clifford Choccol, project director, said. "This will be the first opportunity anyone has had to analyze the effects on an actual returning spacecraft."

A 36-inch telescope onboard a high-flying observatory will be aimed at the returning Shuttle orbiter. Re-entering at 25 times the speed of sound, the orbiter will be in the telescope's view for only a fraction of a second. A special tracking device will locate the orbiter and trigger the recording instruments. The rest of IRIS, consisting of computers and data recording instruments, inside the aircraft will measure and record the infrared image received through the telescope.

It is believed information from IRIS will enable the weight of surface tile coverings to be reduced by several thousand pounds, thereby increasing the payload capabilities of Shuttle.



This electronic imaging device, attached to a large telescope in a high-altitude aircraft, will gather data on the heating of Shuttle orbiter's insulation tiles during re-entry. Electrical engineer Roy Sebring adjusts the instrument before it was shipped.

## Division employee selected for Aerospace contracts intern program

Lawrence J. Green, senior contract specialist for the MX program, has been selected as the 1980 intern in the Aerospace headquarters contracts intern program.

At headquarters, Green reports to the assistant general counsel and is responsible for specific contracts function assignments. He began his assignment March 3 and will return to the division in December.

Green worked at the division from 1970 to 1971 as an associate engineer and rejoined the company as a senior engineer in charge management in 1977. He became a contract administrator in October 1979.

He has a BS in engineering physics from North Carolina A&T and a doctorate in law from the University of Denver. He is a registered professional engineer in Colorado and has been admitted to practice law before the Colorado supreme court.



Susan B. Lemeshewsky, right, Aerospace headquarters technical operations intern, meets with Congressman Ronnie G. Flippo of Alabama following AIAA congressional testimony to the subcommittee on space science presented by Norman R. Augustine, Martin Marietta Aerospace vice president for technical operations.

## Technical operations intern program applications due

Applications for candidates for the Aerospace headquarters technical operations intern program are due April 18 for review in the division. One candidate will be selected for consideration by Aerospace headquarters along with candidates from Baltimore and Orlando for the one intern position for 1980-81.

Susan B. Lemeshewsky, senior engineer in material engineering at Michoud operations, is the 1979-80 intern. Reporting to Norman R. Augustine, vice president for technical operations at Aerospace headquarters, she has been involved in a variety of assignments to acquaint her with technical and management functions throughout the Aerospace company.

Applicants for the 1980-81 program should have a minimum of three year's employment with Martin Marietta Aerospace. Other information and application forms are available from Roy Yamahiro, ext. 5272.

## On the cover

**A huge, expanding, rotating mandrel is inserted in a Space Shuttle external tank barrel section at Michoud operations. The mandrel is one of the major components of two automatic welding machines used at Michoud. It is expanded to bring two barrel sections to within .085 of an inch of being perfectly aligned before they are welded together. Here, Larry Cox, general welder, checks the giant machine.**

### MARTIN MARIETTA NEWS

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April 1980

# Credit union names offsite representatives

Offsite representatives have been named for the Red Rocks Federal Credit Union to assist division employees working away from Denver.

The locations and representatives:  
**Vandenberg operations:** Douglas Adams, 2307.

**Canaveral operations:** Richard A. Freeman, 6066.

**Lorton, VA:** Jerry Lewis, (703) 339-5103.

**El Segundo, CA:** Jerry M. Christian, 244.

**Houston, TX:** Richard E. Rokosz, (713) 333-4150.

**MX project office, San Bernadino, CA:** Jerry L. Taylor, (714) 885-0911.

**Wakefield, MA:** Wayne Cooper, (617) 245-4468.

**Aerospace:** Robert Pater, 796-6711.

At the credit union's annual meeting, directors and credit committee members also were elected.

Directors for three-year terms: Fred R. Bennett Jr., Kenneth M. Byers, Robert L. Gale, and Charles Smith; two-year terms: Dee M. Bruening, Dorothea E. Gibson, John J. Smith, and Lloyd Trujillo; one-year term: Thomas Cooper, Nicholas J. Ganiaris, and Marie W. Heidbreder.

Credit committee members for three-year terms: Kenneth N. Eiben and Margaret Zillareal; two-year terms:

## Public relations position is filled

Arthur E. Koski has joined the division public relations department as manager of media relations, replacing Evan D. McCollum, who has been named public relations manager at Michoud operations.



Koski has been manager of the technical communication services department at Martin Marietta Laboratories in Baltimore for four years before coming to Denver. Previously, he was a member of the public relations staff at the Orlando division for 12 years.

A graduate of Wayne State University and Rollins College, Koski is an accredited member of the Public Relations Society of America.

Jeffrey A. Kildow and Suzette R. Womack; one-year term: Ronald E. Pittman.

Officers elected by the board of directors for the coming year were John J. Smith, president; Dorothea E. Gibson, vice president; Dee M. Bruening, secretary; Robert L. Gale, treasurer; and Kenneth M. Byers, assistant treasurer.

Dates also were announced for loan applications. For share-secured loans, applications were accepted beginning March 24. Applications will be accepted for revolving credit loans April 14; for secured loans, like auto loans, May 5.

## Recreation head to lead area council

Leroy Hollins, who heads the division's recreation and employee services, has been elected the first president of the recently organized Denver Metro Industrial Recreation Council.

More than 50 companies were represented at the March 25 organization meeting. Purpose of the organization is to promote, develop, and improve employee recreation programs as well as coordinate local and national events. It is affiliated with the National Industrial Recreation Association.

Mrs. Beverly Thompson, division share-the-ride coordinator and associate in the recreation office, is serving as interim secretary/treasurer of the new organization.

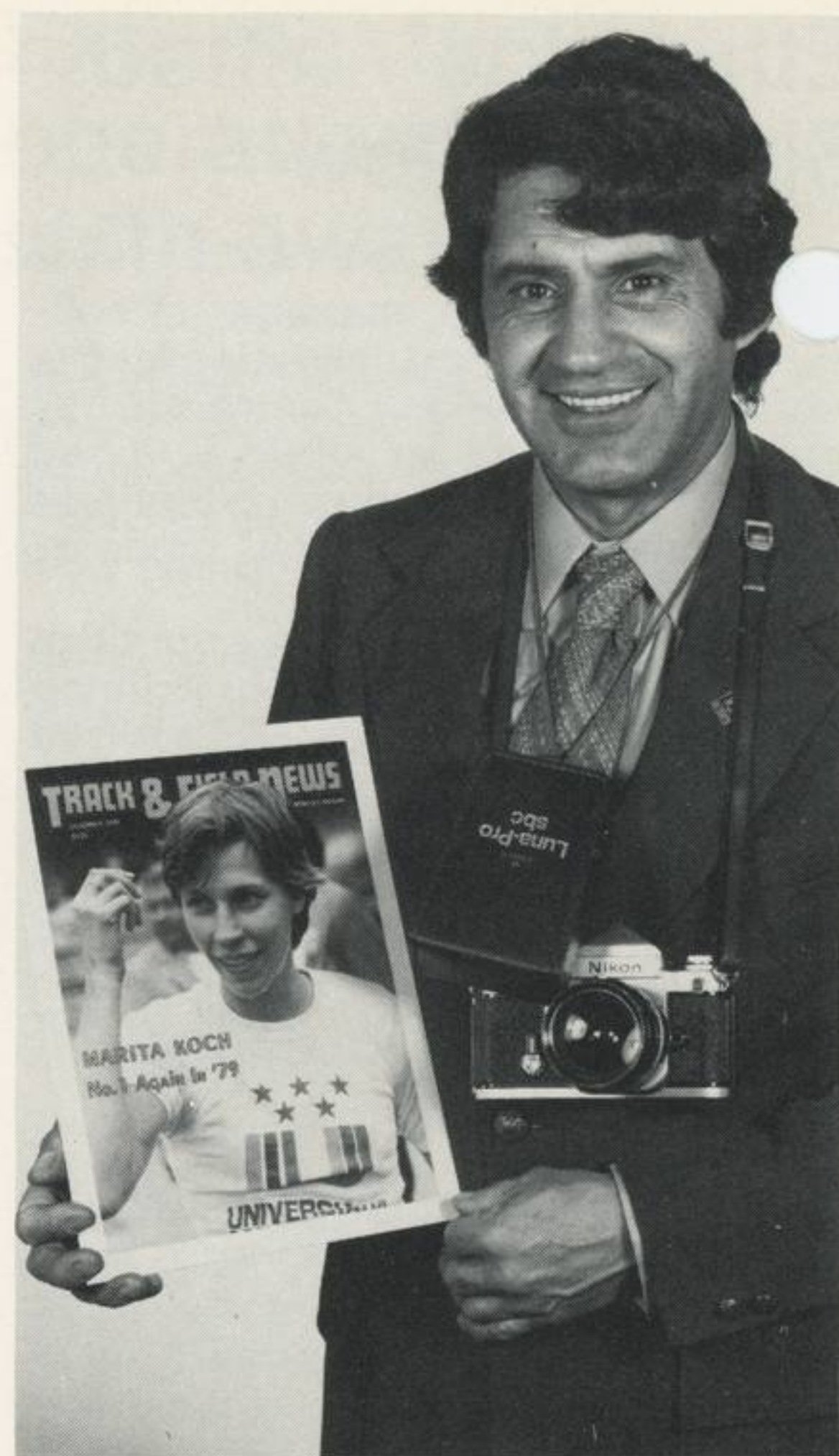
Hollins, who came to the division in 1979, was instrumental in the formation of the council here as well as the highly successful Dallas-Fort Worth council when he was with Texas Instruments.

## Fashion show set for female employees

A sneak preview of the latest spring fashions will be presented May 8 exclusively for Martin Marietta's female employees by Montaldo's at the Heather Ridge Country Club.

Tickets for the show are limited and will be given on a first-come first-served basis one per employee.

Employees will model the fashions. The club is at 13521 E. Iliff Ave. (I-225 Iliff exit). Beverages will be served at 6:30 pm and the show will begin at 7:30. Door prizes will be awarded.



Joseph Arrazola, a division pipefitter, displays the cover of Track & Field News featuring his photograph of track star Marita Koch. Arrazola has combined two outside interests - running and photography - into a second profession. His photographs appear regularly in Runners World, Running Times, and Running as well as Colorado Sidelines, the high school sports publication, is a member of the National Press Photograph Association.

## Recreation

The recreation office, ext. 6750, is in engineering building module 125.

**Softball:** Umpires still are needed for the 1980 softball season. A training clinic for officials will be held April 26, 8 am to 5 pm. Organization meeting for the leagues will be held April 14, 4:30 pm, in the SSB 6th floor presentation room.

**Golf:** The Partner Best-Ball handicap tournament will be held May 31 at the Adams county golf course. The Martin Marietta Open will be held August 23 and 24 at Aurora Hills. Golf league chairmen are requested to register with the recreation office before league play begins.

**Tennis:** Entries will be accepted until noon April 17 for the Spring tennis tourney. There will be play in A, B-1, B-2, C, and novice singles, doubles, and mixed doubles in the elimination tourney.

## Etheridge named Sloan Fellow

On N. Etheridge, manager of software verification and validation for the payload integration contract, has been selected as an Alfred P. Sloan Fellow by the Massachusetts Institute of Technology for the 1980-81 program.

He will follow a 12-month course of study leading to a master of science degree in management at MIT's Alfred P. Sloan school of management.

The Sloan Fellows program, started in 1931, is the oldest executive development program in the nation. It was initiated by the late Alfred P. Sloan, former chairman of the board of the General Motors Corporation.

Etheridge, a Martin Marietta employee for 16 years, has a BS degree in electrical engineering from Colorado State University and is a candidate for a master's degree in electrical engineering from the University of Colorado.

During his career he has managed various autopilot design activities; managed the design of transtage digital attitude control system; was program manager of NASA spacecraft adaptable software concept study; and was software manager for Titan II guidance upgrade.

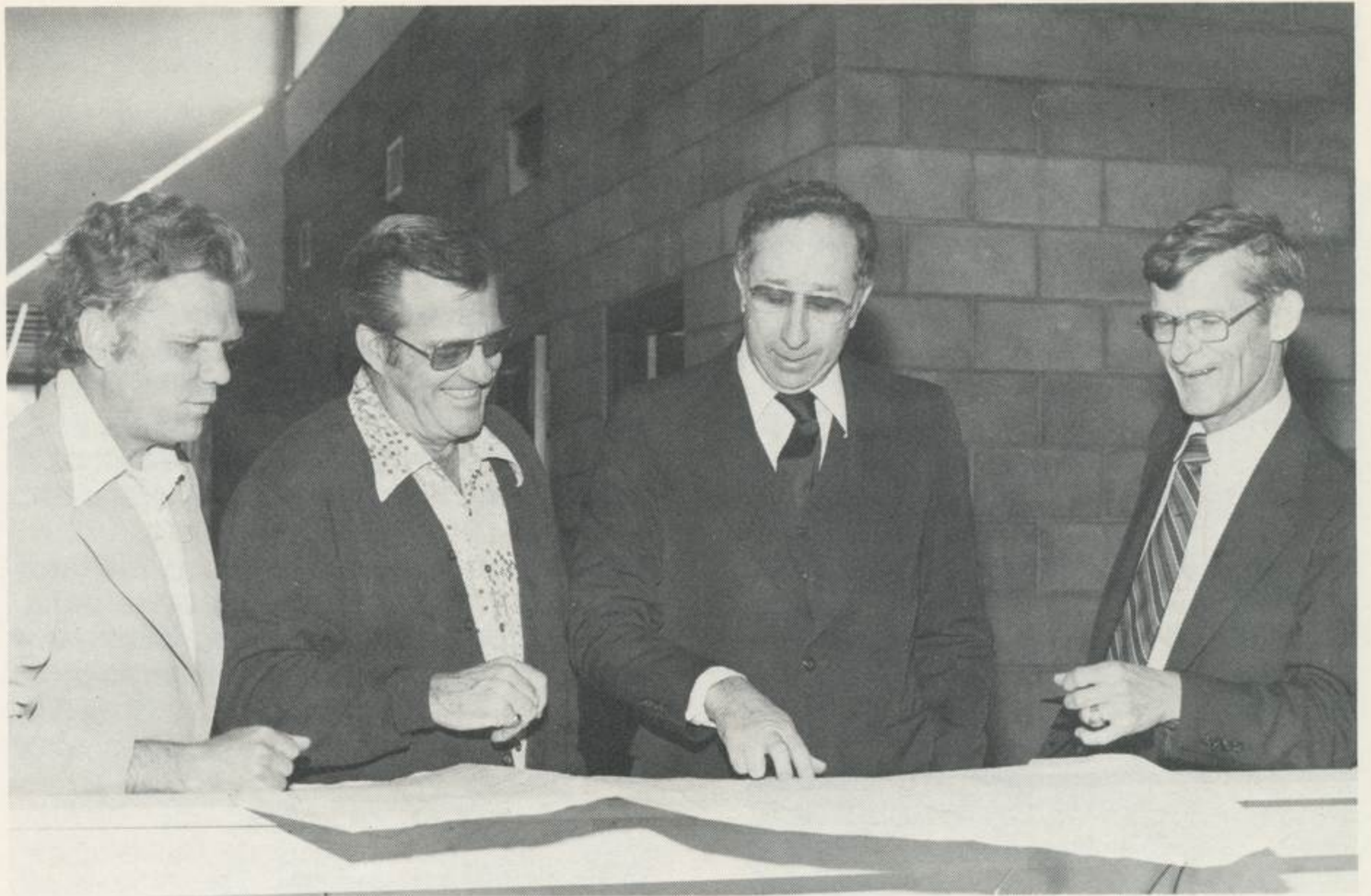
He has completed the first year in the Martin Marietta Aerospace management growth program and a concentrated course in financial analysis for non-financial executives at the Wharton School.

## Aluminum company to build facility

Martin Marietta Aluminum will spend \$17.5 million to replace existing alumina transfer facilities in Portland, OR, with a larger and more efficient installation. The new facility will be constructed at the same location on the Willamette River.

The site, known as Albina, is approximately eight acres, comprising a strip of land 1600-feet long and 200-feet deep. It is served by a 40-foot ship channel and has access to rail transportation. The existing equipment will be used until the new project is completed.

The aluminum company has used the site since 1958 to transfer alumina from ship to rail cars for transfer to the aluminum reduction plants at The Dalles, OR, and Goldendale, WA.



A Martin Marietta Foundation grant recently was presented to the Santa Maria, CA YMCA by Otha L. Jones, right, Vandenberg operations director, and R. D. Rhodus, second from right, GSS project director at Vandenberg. They are shown reviewing building plans with William R. Orrick, left, YMCA general director, and George B. Ziegler, YMCA board president.

## Construction to begin for MX test facilities

A \$10.47 million contract has been awarded for the construction of the integrated test facility that will serve as the main control center for Missile X assembly and flight testing at Vandenberg Air Force Base.

The two-story, 268 feet by 228 feet building will be built by Fred A. Arnold, Inc. of Los Angeles and will be occupied by the Denver division as assembly, test, and system support contractor.

The integrated test facility will house computers, communications equipment, and the control centers for flight testing and evaluation of MX test missiles. It will also contain facilities for the assembly and check out of the test missiles' electronic guidance and other components, as well as a program management and technical offices for MX operations at Vandenberg.

As assembly, test, and system support contractor for MX full-scale development, the division is responsible for the activation and operation of the missile assembly and flight test facilities at Vandenberg. After completion of the new Air Force building, the division will install the electronic and mechanical support equipment for weapon system development testing.

## First Titan 34D begins test program at Canaveral

The first Titan 34D, newest in the family of Titan launch vehicles, has begun the receipt-through-launch check out and testing program at Canaveral operations. The vehicle is in cell no. 2 of the vertical integration building.

A brief ceremony was held to mark the delivery of the vehicle to Cape Canaveral. Among those participating were F. J. Scheffler, Canaveral operations director; Lt. Col. W. S. Yager, commander of the U.S. Air Force 6555th Aerospace Test Group; Lt. Col. J. W. Mansur, Air Force chief of space launch systems; R. E. Werling, base manager for UTC chemical systems division; and V. V. Hawkins, project engineer for Aerojet Services Company.

## CCMS set delivered at North Vandenberg

The recent formal turnover of a set of check out, control, and monitor subsystem (CCMS) equipment marked the second of three deliveries scheduled for Space Shuttle project at Vandenberg Air Force Base.

Initially, the CCMS hardware will support software development for ground processing of the Shuttle vehicle. Later, the system will be used to monitor vehicle operational maintenance and check out subsequent to landing after a Shuttle mission.

## Michoud personnel director is named council chairman

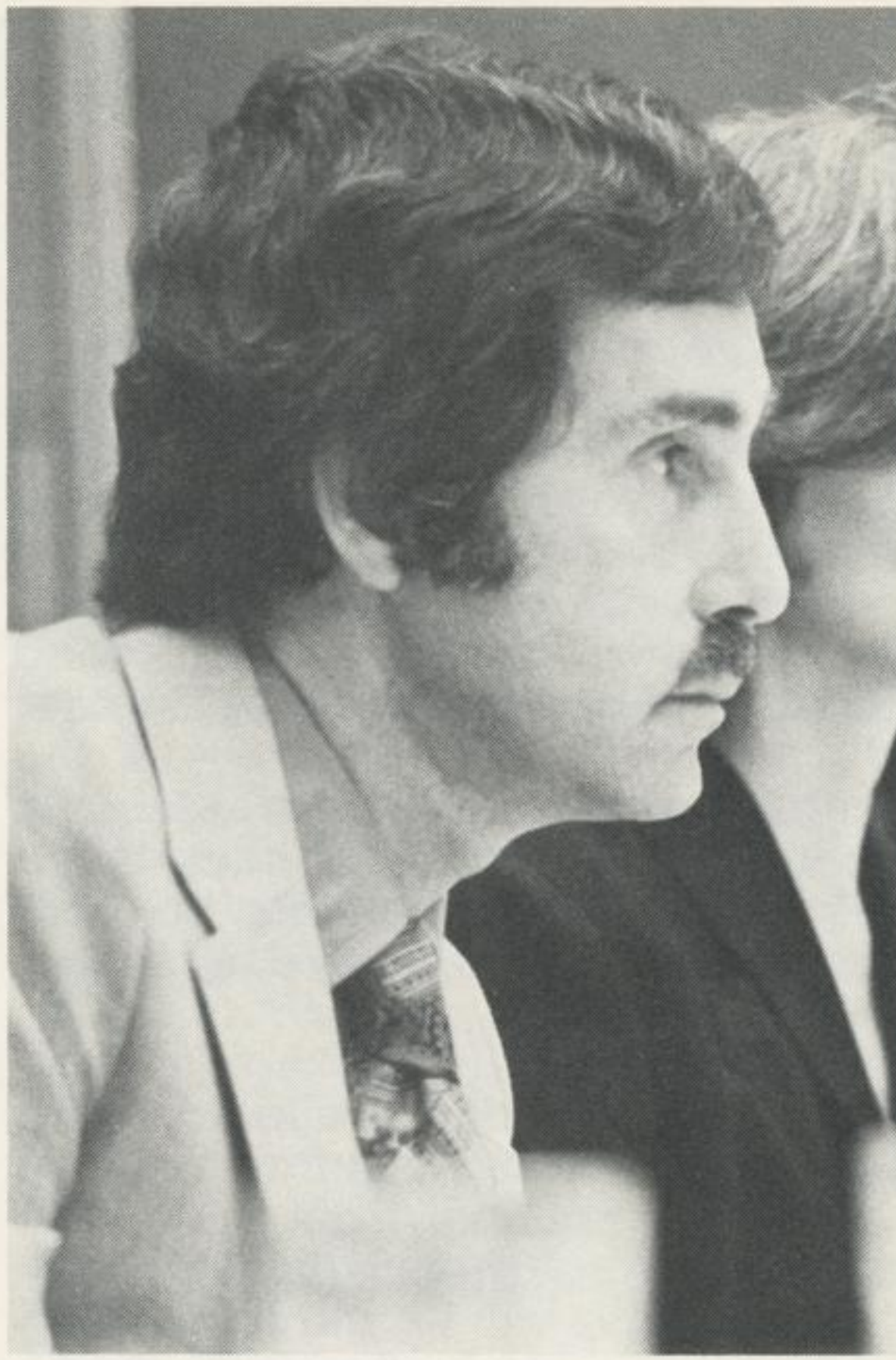
While aerospace, computer, electronics, and high technology industries have spread across the Sunbelt, the New Orleans area lags in attracting these firms, according to Dave Tanzer, Michoud operations personnel director.

Tanzer, who recently was named chairman of the New Orleans Private Industry Council, sees the city's main drawback as a shortage of skilled labor. The council may do much to remedy the problem.

Comprised of business and labor leaders, the council serves as an intermediary in assisting local employment and training organizations in becoming more responsive to the needs of business. It also presents private industry's views and recommendations for suggested programs from private industry to New Orleans Mayor Ernest Morial.

"The council is a new concept," said Tanzer. "The old programs worked, but a good many people were trained only for entry level positions, leaving the worker no room to grow.

"In the council, business and labor analyze programs to make certain money is being well-spent," he said.



Dave Tanzer

In addition to the \$1.06 million in federal funds available for training purposes, money from other sources may also be used by the council.

"The money may be spent on anything related to promotion of jobs or training programs," Tanzer said. "And in turn, the programs will aid in attracting new industry to the area."

## External tank operations get sixth award fee

The division external tank operations at Kennedy Space Center has been awarded its sixth consecutive "superior award for performance" by the NASA/KSC award fee evaluation committee.

The committee has judged the external tank operations' performance from July 1 to December 31, 1979, to be outstanding and its overall accomplishments to be exceptional in all areas of requirements. The total award fee is determined semiannually based on technical and cost performance, and project management.

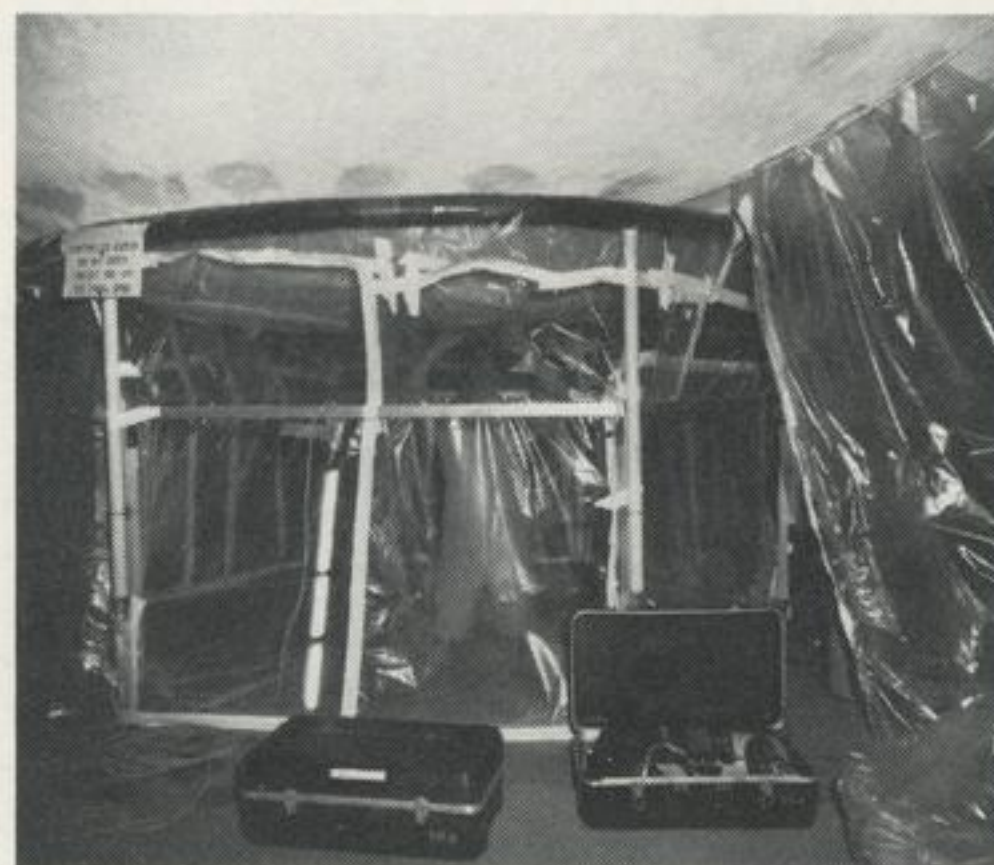
Since the cost-plus-award-fee contract began in October 1976, the KSC external tank operations has received no lower than a superior rating, and no less than 100 percent of the available award fee. The division's external tank operations is the only contractor at KSC to have received such ratings consecutively.

Work performed on the external tank during evaluation period included modifications, systems testing, and thermal protection system closeouts. Work was also performed on software development and validation, and facility modifications, activation, and validation.

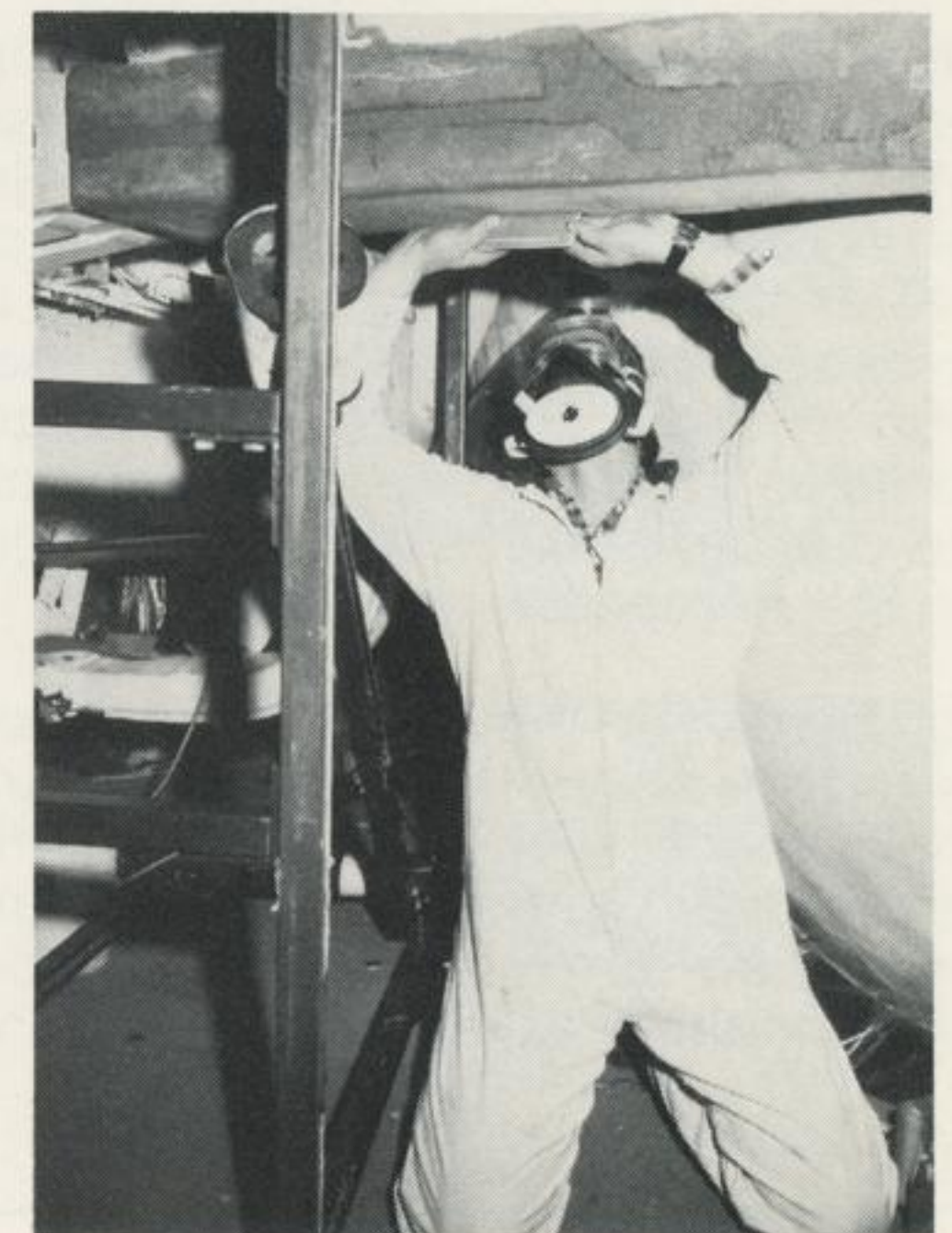
## Work continues on first Shuttle flight external tank at Kennedy Space Center



Bill Enos, right, Operations, and Don Cox, Quality, perform an electrical test on aft interface heater wiring for the first Shuttle flight external tank at Kennedy Space Center. The external tank, currently in the checkout cell in high bay four in the vehicle assembly building (VAB), is undergoing final preparations before being mated with the Shuttle's twin solid rocket boosters.



Thermal protection coating on the bottom of the first Shuttle flight external tank is trimmed to the required thickness. The aft hydrogen dome area, enclosed to control temperature and humidity, is 118 feet 6 inches above the floor of the vehicle assembly building at Kennedy Space Center. The tank extends 154 feet above Gerry Rucker, Operations, shown here inside plastic covering while trimming the thermal protection coating.



Jimmy Mettheus, Operations, prepares a vertical strut for thermal protection system application. The strut is one of several which will connect the external tank to the Shuttle orbiter.