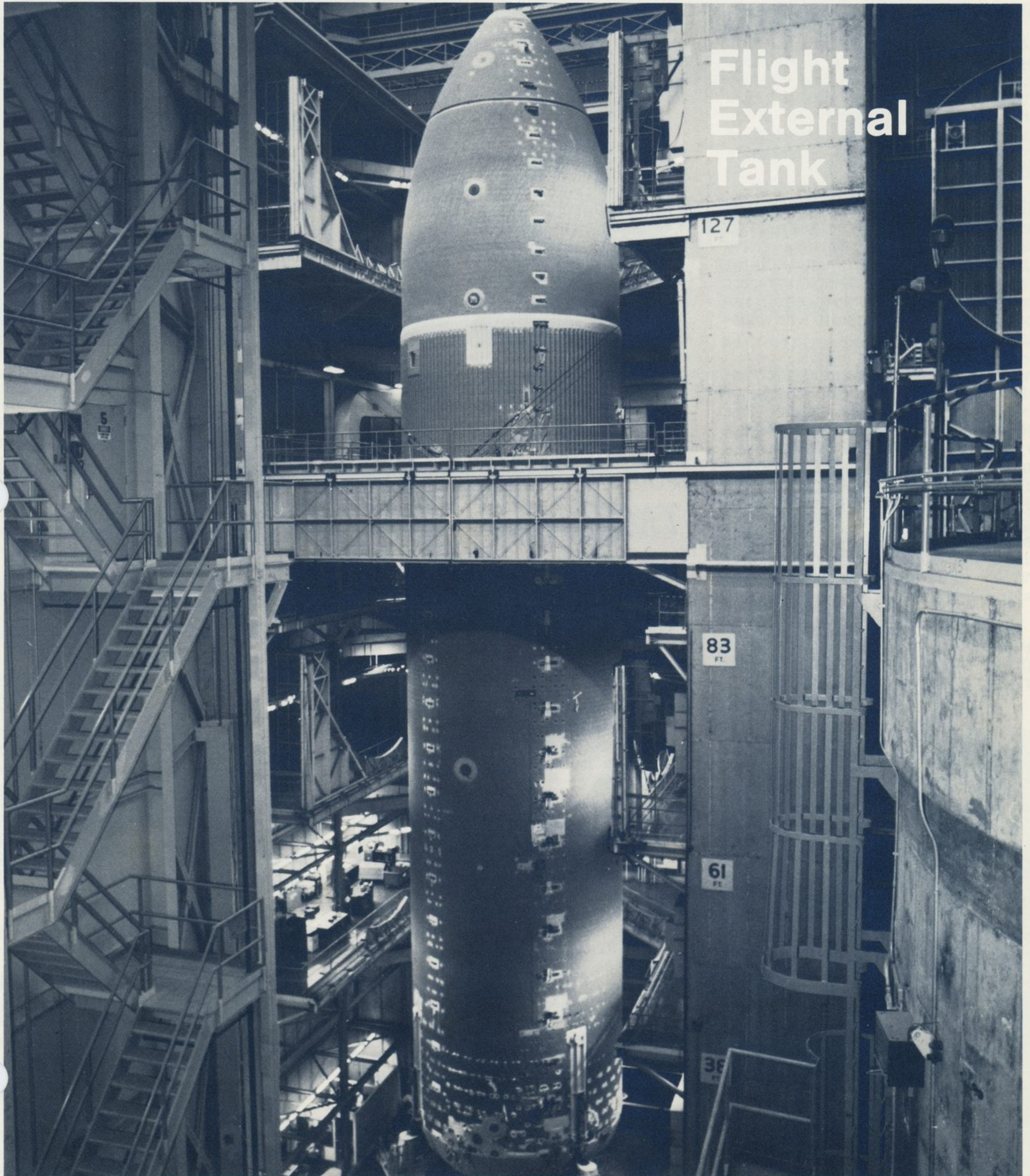


MARTIN MARIETTA

# news

DENVER DIVISION

NUMBER 3/1980



Flight  
External  
Tank

127

83  
FT.

61  
FT.

39  
FT.

## Division teams with two firms to bid on Shuttle cargo processing

The division has teamed with McDonnell Douglas and IBM to bid on an upcoming NASA contract for Space Shuttle cargo processing services.

The request for proposal is expected from NASA in March. A draft work statement indicates the contract will extend for several years. The RFP will call for bids on a program under which the contractor will be the focal point for all NASA payloads and experiments flying on Shuttle.

Shuttle orbiter's cargo bay is 15 feet wide and 60 feet long — equivalent to a railroad freight car. Anticipating a variety of payloads from different users, NASA will use the cargo processing contractor to assure that all elements for each mission fit together and operate with maximum effectiveness.

Under the team arrangement, McDonnell Douglas Technical Services Company will bid as prime contractor. The Denver Division would be a subcontractor with responsibility for mission integration activities at Johnson Space Center, Texas; Goddard Space Flight Center, Maryland; and Marshall Space Flight Center, Alabama. The division's task involves engineering and analytical work to assure compatibility and smooth integration of all payload components.

The division is the U.S. Air Force payload integration contractor for all military payloads flown on Shuttle.

### On the cover

Flight external tank number two is assembled in the vertical assembly cell at Michoud in preparation for shipment this summer to the Kennedy Space Center. The oxygen tank and the intertank are mated to the hydrogen tank in this cell, followed by detailed alignment of the solid rocket booster attachment points on the sides of the tank. Following assembly and alignment, the tank is moved to the final assembly area in the factory where propellant lines, cable trays, electrical fittings, and other mechanical devices are installed prior to shipment by barge.



A sole source MX Launcher Segment proposal was submitted in mid-February to the Ballistic Missile Office of the Air Force Systems Command at Norton Air Force Base. The 4000-page proposal was bound in 10 binders. Among those preparing the proposal for shipment were Jana Anderson, left, a reproduction clerk; Monica Monzon, center, and Laurel Sitler, right, operators of bindery equipment. Robert L. Rosenthal was proposal manager. Contract go ahead is expected in late May.

## TMS proposal is being prepared

### JA advisers are honored

Denver Division and Denver Data Systems employees serving as advisers to Junior Achievement companies sponsored by Martin Marietta recently were recognized for their contributions to teenage free enterprise educational programs.

Advisers and their guests were honored at the Country Dinner Playhouse.

Companies and the advisers:

Rocky Mountain Achievers: Wallace E. Goodwin, Robert D. Terrazas, and Robert L. Stanford.

Creative Minds of Tomorrow: Robert J. Ancell, Jarrett C. Peter, Robert M. Rodriguez, and Lyle D. Graff.

Impressions (Data Systems): Thomas E. Cook, Dennis E. Shaw, Mary P. Hinsey, Gerald P. Klein, and Richard T. Mason.

Cook, who is recovering from open heart surgery, and Klein were unable to attend the dinner.

Work is under way on a proposal for the phase A study contract for a tele-operator maneuvering system (TMS) for the space transportation system. The request for proposal is from NASA's Marshall Space Flight Center. The proposal is due in March.

J. Robert Tewell is TMS proposal manager.

During the study phase, expected to take 10 months, the contract winner will look at requirements, concepts, and critical technology needed to develop the initial satellite services capabilities that can be performed by TMS.

It is anticipated TMS will be used in flight in mid-1984.

Mission for TMS will be to deploy and retrieve satellites, service and maintain satellites, and to support large space structures assembly.

The division has been involved in tele-operator systems work for nearly 10 years.

The design and built contract is expected to be awarded in mid-1982.

# New timekeeping system begins

## March 3

A new timekeeping system using a single time card to record attendance and labor costs in the Denver Division will be used beginning March 3.

Using the new system:

- Each employee will record his/her own time and, along with the supervisor, be responsible for accuracy of the record.
- All employees will account for a minimum of 8 hours a day and 40 hours a week rather than recording exceptions for attendance as in the past.

The system applies to all overhead and direct personnel. Excluded from the system at this time are employees at Vandenberg, Michoud, hourly reproduction and maintenance employees at Denver, and those using the manufacturing operations telecommunications inquiry on-line network (MOTION).

Training sessions have been held to describe the new system.

During the first week of use, cost accounting and timekeeping personnel will be available to answer questions.

Because of the short time allowed for payroll preparation, employees are urged to turn in completed cards at the end of their shift on Friday. Those working weekend overtime should have cards turned in at timekeeping stations by 11 am Monday.

## Thanksgiving holiday?

The division's business is good and employees are working hard. Many are working long hours. But that isn't the reason the Thanksgiving holidays were eliminated from the list in *Martin Marietta News*.

"We publish every mistake we make," is a truism in the newspaper business and that's what happened to Thanksgiving. Somewhere in the process of writing, editing, typesetting, and pasteup, Thanksgiving was dropped. The proofreader goofed.

Yes, Thanksgiving will be observed November 27 and 28.

### INSTRUCTION - TIME CARD

1. "W" Code for those employees working weekend Overtime
- 2.
- 3.
- 4.
- 5.
6. Pre-printed information
- 7.
- 8.
- 9.
- 10.
11. Enter Master Account Number if appropriate
12. Enter Sub Account Number if appropriate
13. Enter Suffix Account Number if appropriate
14. Enter Control Point Number if appropriate
15. Enter Ops Analysis Number if appropriate
16. Enter Department Charge if different from Home Department
17. Enter Distribution ID Number or Work Center as applicable
18. Enter Code if applicable
19. Enter Shift if other than 1st shift, enter '2' for 2nd and '3' for 3rd
20. Enter number of straight time hours each day (to nearest 10th hours)
21. Enter number of overtime hours each day (to nearest 10th, after 1 hr for ES & .5 hr NES & Hourly)
22. Enter total straight time hours for that day (must add to 8.0 hrs)
23. Enter total overtime hours for that day
24. Enter total straight time hours for 20
25. Enter total overtime hours for 21
26. Enter total weeks straight time for 22 & 24 (must add to 40.0 hrs)
27. Enter total weeks overtime for 23 & 25.
28. Employee Signature (certifies correctness of information)
29. Supervisor Concurrence Signature (Verifies correctness of information)
30. Authorized Overtime Signature
31. Authorized Overtime
32. Authorized Overtime Exception
33. Monday DT
34. Status CC (Timekeeping use only)

## Share-the-ride rescue shuttle departure changed

The departure time for shuttle service to aid stranded carpoolers has been changed from 5:30 pm to 6:30 pm. Employees who have missed their rides may call ext. 4646 for assistance.

Those requesting transportation should give their name, department and badge numbers, plant location, and destination when making the call.

The rescue shuttle generally will follow a route that connects with RTD bus stops as well as stopping at convenient pick-up points for private transportation.

Mrs. Beverly Thompson, the division's share-the-ride coordinator, said the later departure is expected to be of more help and that it also coincides with the last shuttle service each day between the main plant and offsite locations.

Mrs. Thompson also said applications for computer matching of drivers and riders for the share-the-ride program are continually accepted.

## Today magazine features superstars

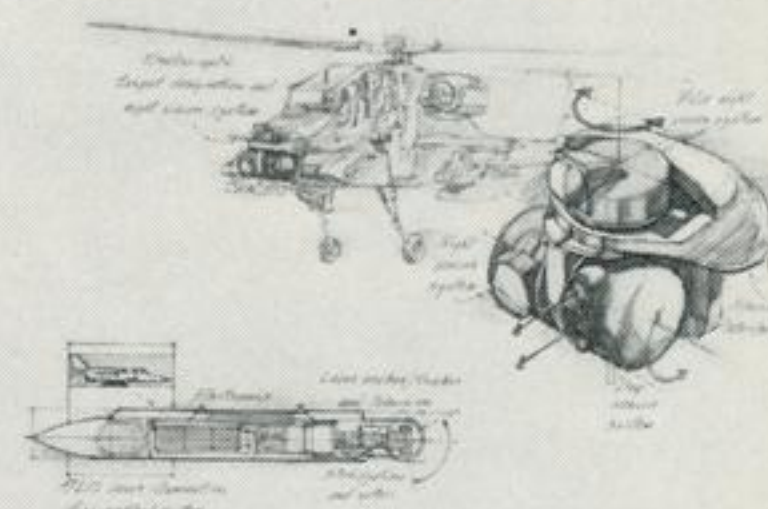
The winter issue of *Martin Marietta Today* magazine, in the mail to employees, features a five-part portfolio of success stories — superstars — in the Corporation. Included as one of the five is a story on the Denver Division.

Denver also is featured as a city.

A separate story describes the backpack maneuvering unit being built by the division for Space Shuttle astronauts.

What is the advantage of our advanced electro-optics?

It puts you on target.



Martin Marietta has pioneered the development of electro-optical surveillance systems. Utilizing laser, forward-looking infrared, and television — these systems permit tactical aircraft to acquire, track and designate targets at extended ranges, and to fly low level night missions. With our target acquisition and designation systems, helicopters can track targets around the clock. An infrared night vision system allows pilots to navigate and fly night-of-the-month in the dark. Another of our advanced electro-optical systems provides illumination for the accurate, unassisted delivery of laser-guided weapons by high-speed, single-seat aircraft. This same technology applied to laser-guided artillery, gives ships and ground forces the capability for first-round accuracy against moving targets. Our work in applying even newer electro-optical technologies to next generation systems keeps Martin Marietta in the forefront of tactical weapons systems development.

MARTIN MARIETTA

Reproduced here is the first in the series of *Martin Marietta Aerospace* advertisements that will appear in 1980. The advertising program stresses the capabilities of the Aerospace company divisions and is being published in more than a dozen of the top aerospace and defense publications in the United States and Europe.

## Boiler to begin a new life

A 6-foot by 4-foot by 6-foot diesel-fueled boiler will soon begin its third life when it takes its place behind the scenes at the Colorado Railroad Museum at Golden.

The boiler has been given to the museum by the division after being removed from the acoustics vibration laboratory. It was used to heat the lab, but became surplus when the heating system was updated.

The boiler was first used by the Union Pacific railroad on its City of Denver, not to power the train but to heat the coaches. The City of Denver locomotives (two were assigned to the train) were among the first diesel electrics used. The change over from steam locomotives to diesel created a problem – the coaches still required steam for heat. The small boiler was added to the diesel locomotive to provide the steam.

Only recently have some of the steam-heated coaches been replaced by ones using self-contained electric power.

The City of Denver diesel locomotives went into service in 1936 and continued until 1956 after traveling more than 5.5 million miles.

At the museum, the boiler will be used to generate steam for cleaning other equipment.

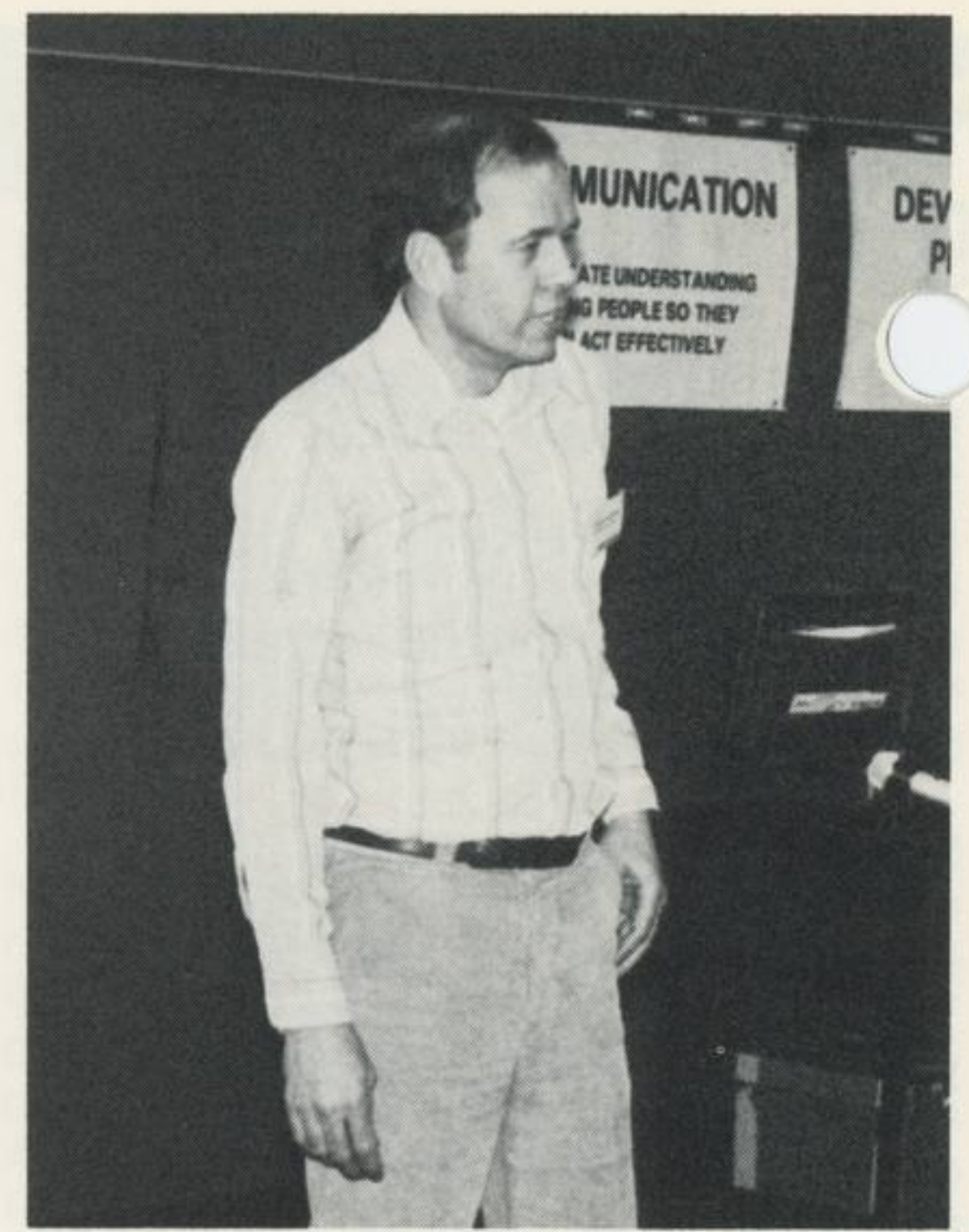
### Credit union annual meeting set for March 27

The first annual membership meeting of the Red Rocks Federal Credit Union will be held March 27 at 5 pm in the sixth floor SSB presentation room. Officers will be elected at the meeting.

More than 950 Denver Division and Denver Data Systems employees have joined the credit union, depositing more than \$53,000.

Charles E. Richards, credit union manager, said the growth of the organization here has been more rapid than any credit union he has known in his 20-year association with credit unions.

He also said members of other credit unions may belong here as well as to their current organization or they may transfer funds from their current credit union to the one here.



Donald A. Ruscio, in left photo, and Charles N. Bolton, in right photo, recently completed the "Effective Supervisory Practices V" program conducted by the Martin Marietta Corporation human resources staff in Atlanta. The program is designed to prepare new or prospective supervisors in all the Corporation's companies. The course is held at various sites, with one scheduled for Denver March 2 through March 7. At the session here, 26 employees will participate with 20 from the Denver Division, including personnel from Cape Canaveral, Michoud, and Vandenberg. Ruscio graduated with honors from the program.

## Regis College offers new degree program

Regis College is offering bachelor of science degrees in business administration and in technical management through the Regis College Education Program II (RECEP II).

To be eligible for the program, a student must have a minimum of 40 transferable semester hours. A core curriculum of 30 semester hours must be completed at Regis to be eligible for the degrees. Classes are held in one-month increments, meeting four hours once a week at various locations in the metropolitan area. Some of the classes may be held at Martin Marietta.

Additional credit to complete the 128 hours required for graduation may be earned by such non-college based education as CLEP tests, challenge testing, independent study, or by a portfolio process in which students earn credit by preparing written reports on non-classroom learning experiences.

The training, education, and employee development office, ext. 5698, has information on RECEP II.

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February 1980

## Recreation

(For information, call or visit the recreation office, ext. 6750, engineering building module 125.)

**Basketball playoffs:** Winter basketball league playoff tournaments will be played March 8 and 9 at Saint Mary's Junior High School in Littleton. Competing in the two tournaments will be the top four teams in the Serious league and the Open league.

**Spring tennis tournament:** Registration forms for the annual spring tennis tournament will be available in March. Singles and doubles competition will be held for all levels of ability beginning in April. The tourney is sponsored by the Martin Marietta Tennis Club.

**Trip dates changed:** Dates for the seven-day, six-night trip to Cancun, Mexico have been changed from April 12 - April 18 to April 14 - April 19. All other trip arrangements remain the same.

**Theater tickets reduced:** Prices for tickets to the four American Multi Cinema theaters have been reduced from \$2.50 to \$1.50 with the new tickets valid Monday through Thursday. (The \$2.50 tickets were valid seven days, but saved employees only 50 cents.)

# Savings bonds get new name

The U. S. Treasury department has introduced a new savings bond—the Series EE, U. S. Energy Savings Bond—that will receive a ½ percent bonus if held to maturity. The interest rate for the bonds will increase from 6.5 percent to 7 percent for those held the full 11 years.

Series E bonds that have not finally matured and U. S. Savings Notes (Freedom Notes) will also receive the ½ percent bonus if they are held for 11 years from the date of the first semi-annual interest period that began on or after January 1. Bonds and notes redeemed earlier will not receive the bonus.

Division employees participating in the payroll savings program will continue to receive Series E Savings Bonds until June 30. After that, the bonds issued will be U. S. Energy Savings Bonds.

According to the Treasury department, “the redesignation of the bonds as U. S. Energy Savings Bonds is intended to focus attention on the national goals of reducing energy consumption and increasing domestic supplies. The Energy Savings Bonds will assist in financing the large Federal energy expenditure required in the coming years.”

The new Energy Savings Bonds retain the safety, convenience, and security features of the Series E Savings Bonds, but there are some changes:

- Energy Savings Bonds have a guaranteed life of 11 years.
- The new bonds will be available in denominations of \$50, \$75, \$100, \$200, \$500, \$1,000, \$5,000, and \$10,000. Purchase price is one-half the face value; e.g. a \$50 bond costs \$25.
- The bonds must be held at least 6 months instead of the 2-month minimum for Series E bonds.
- Individuals may buy \$15,000 yearly in U. S. Energy Savings Bonds (purchase price) compared to \$7,500 (purchase price) for Series E bonds.

## Performance Sharing Plan match is 100 percent

Salaried employees participating in the Corporation's Performance Sharing Plan have received a 100 percent match of their individual contributions for 1979.

Announcement of the matching was made by J. Donald Rauth, chairman of the Martin Marietta Corporation board of directors in his letter to participants.

## At Vandenberg



Marian Hospital's newest infant life support system is discussed by Elizabeth Seidman, RN, left, Carol Mollica, center, and Otha L. Jones, right, director of Vandenberg operations. The hospital in Santa Maria purchased the second incubator for its pediatrics center with funds provided by a Martin Marietta Foundation grant.

## Vandenberg cost reduction goal is exceeded

Vandenberg operations exceeded its \$40,000 cost reduction goal in 1979 by more than \$300 with an additional \$6,612 expected to be approved in 1980 for ideas suggested in 1979.

Aubrey R. Collins, a finance and contracts administrator and chairman of the cost reduction program, said three proposals “prominently contributed to the program's success.”

Greatest cost reduction came from a method for reconditioning electrical umbilical connector components damaged during launch. The method, devised by Gordon B. Chambers, a senior mechanical engineer, saved \$14,445. In the past, if umbilical damage happened during launch the entire unit was scrapped.

The elimination of redundant elevator maintenance proposed by Clarence T. Way Jr., a senior field engineer, resulted in cost savings of \$12,350. Various preventive maintenance procedures have been consolidated into one.

The joint efforts of Eugene Marchbanks, operational services supervisor, Eddie D. Hall, reproduction equipment operator; Joe N. Valencia, clerical analyst; and Randi Claussen, assistant buyer,

resulted in a consolidated mail distribution system between company and customer agencies. Preparation and postage costs were reduced. The system saved \$11,849.



An electrical umbilical connector restored to original condition by a technique developed by Gordon B. Chambers, left, is examined by Aubrey R. Collins, right, chairman of the Vandenberg cost reduction program. Chambers' development was one of the most significant cost reduction efforts.

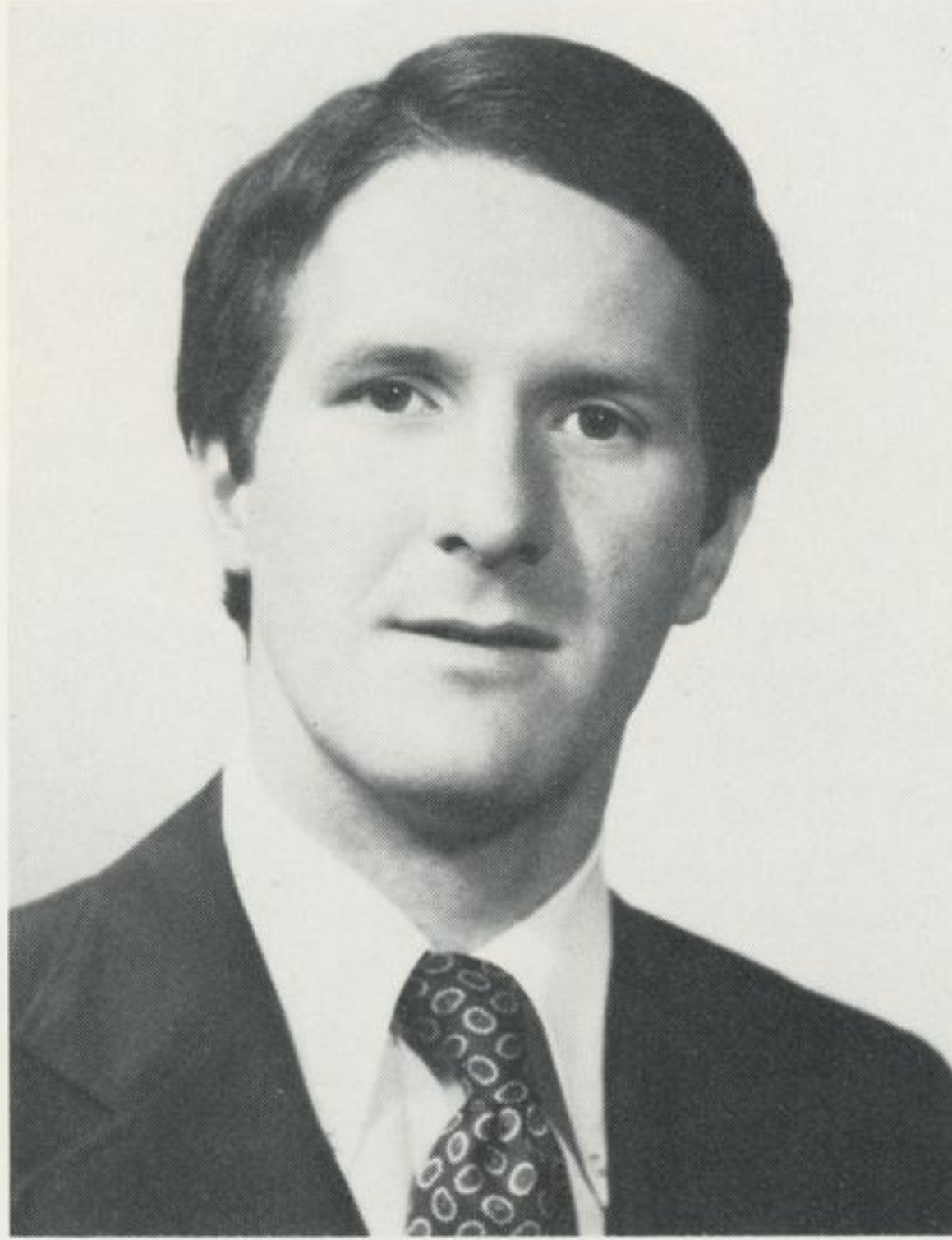
## At Michoud

### Production operations director is named

Robert F. Hieter has joined Martin Marietta as director of production operations. He replaces G. L. Tarlton who has been appointed staff assistant to Richard M. Davis, external tank project director.

Paul R. Donohue has been named to the new position of production operations deputy director reporting to Hieter with responsibility for manufacturing the external tank.

Hieter comes to Michoud operations from Gulfstream American Corporation in Savannah, GA, where he was operations deputy director. He has been in the aerospace industry 20 years, including positions with Grumman and Republic Aviation.



Evan D. McCollum

### Public relations promotions made

Evan D. McCollum has been named public relations manager for Michoud operations, replacing Daniel G. Robertson. Robertson has been promoted to public relations director for the Orlando Division.

McCollum, who has been a senior public relations specialist with the Denver Division, served a public relations internship with the division during the summer of 1978 and became an employee in August 1978 after graduation from Brigham Young University.

Robertson began his Martin Marietta career in 1968 as an editor at the Orlando Division. He later was named manager of public relations for the Corporation's Chesapeake Park operations. He moved to the Denver Division in 1972 and was assigned responsibility for Viking project public relations and public affairs. He was at the Jet Propulsion Laboratory in 1976 during the peak of the Viking mission.

The NASA public service medal was presented Robertson for his contributions to the Viking project. He returned to Denver in 1977 as manager of media relations. He was appointed public relations director for Michoud operations in January 1978.

Robertson began his new duties February 18. McCollum will divide his time between Michoud and Denver until early March when he will move to Michoud.

### Engineer's paper gains recognition

A technical paper written by David L. Kelley, payload integration contract flight operations engineer in Houston, has brought requests for information from around the world.

The paper, co-authored by Richard Allison, an assistant professor at the University of Houston, reviews methods of applying fault tree analysis to waste treatment plant processes to determine instrumentation needed to warn of waste process failures.

Many U.S. city officials requested information on the technique as did officials from Venezuela, England, Japan and Greece.

A previous paper, providing samples of the technique, was published in the journal of the environmental engineering division of the American Society of Civil Engineers.

## At Canaveral

### Canaveral employees cited by Air Force

Twenty-three Canaveral operations employees have been commended by Col. George L. Rosenhauer, commander of the Air Force System Command's 6555th Aerospace Test Group at Patrick Air Force Base, FL.

In a letter to Felix J. Scheffler, director of Canaveral operations, Colonel Rosenhauer said:

"Again, the efforts of your people contributed directly to the success of our most recent launch. I received praise from the Secretary of the Air Force level and down through the command structure.

"Specifically, the untiring efforts of your crew before and after Hurricane David enabled us to safely protect \$500 million of the government's resources. I would like the . . . individuals to be personally commended for volunteering to remain and assist us with late preparations."

Those cited by Colonel Rosenhauer were:

W. V. Alderman, N. J. Cruke, R. E. Crouse, R. F. DeLaVergne, A. L. Freels, A. C. Huthmacher, D. F. McNeill, C. E. Poe, C. C. Rinehart, F. W. Robinson, R. L.

Schmidt, William Shillingsburg, L. B. Smith, J. J. Stacharowski, J. L. Stark, C. R. Stewart, J. G. Stiene, E. E. Thompson Jr., J. P. Weatherford, J. W. Weddle, D. W. Willoughby, J. N. Wilson, and G. E. Woodcock.



Lee F. Stewart, left, recently received the Silver Snoopy award for his performance as program planning senior specialist at external tank operations at Kennedy Space Center. He is congratulated for the honor by Thomas C. Wirth, director of external tank operations at KSC. The Silver Snoopy was presented by Space Shuttle astronauts Robert L. Crippen and John W. Young.