

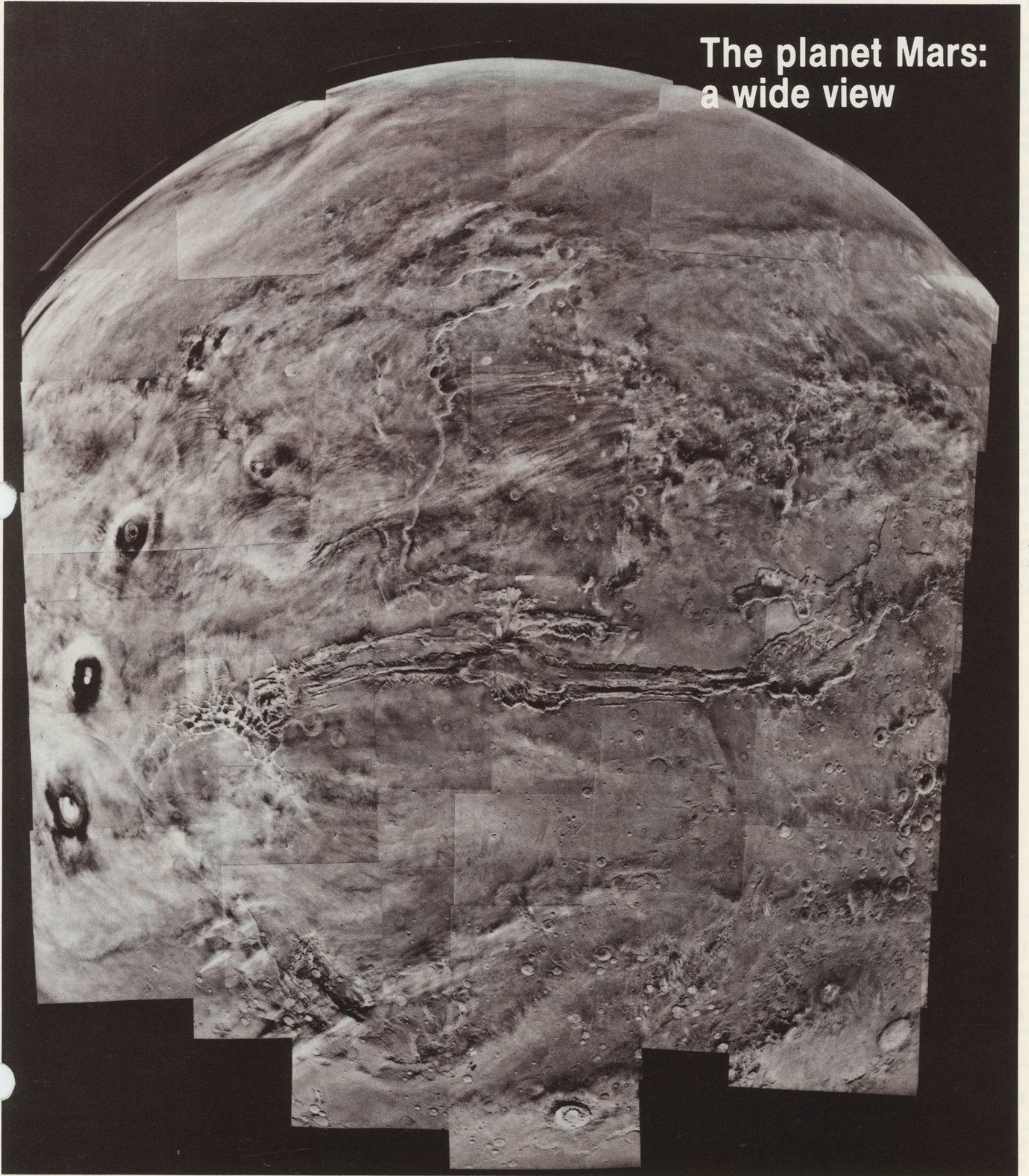
MARTIN MARIETTA

news

DENVER DIVISION

NUMBER 13/1980

The planet Mars:
a wide view



Viking project praised by editorial

"It is rare enough that a government program succeeds in doing everything it set out to do," A Washington (DC) *Post* editorial said in August. "When one ends up doing far more than expected, it is time for some hearty congratulations. The program is Project Viking, NASA's exploration of Mars...."

The editorial appeared as Viking orbiter 1 exhausted its gas supply and ended its long and productive mission. However, exploration of the planet will continue into 1990, perhaps to 1994, by Viking lander 1, which has been programmed to operate unattended.

Citing the project as the first successful attempt to land and operate an unmanned spacecraft on Mars (three previous Russian tries had failed) the newspaper's editorial continued:

"...both Vikings landed safely, and though they had been designed for a 90-day mission life, both operated four years. Their mere construction was an extraordinary achievement. Containing elaborate computers, two power stations, cameras, a weather station, two chemical laboratories, incubators for biological experiments and mechanical arms for digging and collecting soil samples, the whole thing had to be crammed into a few square feet and had to survive a rocket launch, a year's trip through space, sterilization (to avoid contaminating Mars) and the shock of landing on the Martian surface."

The editorial briefly describes the mass of information sent to earth, including

On the cover

The 102-frame photomosaic of Mars taken by orbiter 1 before it was shutdown, is perhaps the best wide-area view yet obtained by the orbiting spacecraft. Prominent features of the planet shown include the huge Arsia Mars volcano in the lower left, and Valles Marineris—the Grand Canyon—running through the center of the photo. The north pole of Mars is in the upper left near the notch created in assembling the mosaic. The Lowell crater is at the bottom center, in the photo-strip that extends the lowest in the mosaic. A weather front or an atmospheric shock wave has been identified north and east of Arsia Mons, and a cloud formation seen north and west of the Lowell crater.

some of the "major new puzzles."

Concluding its praise of Viking, the editorial states, "By the time all its results have been analyzed, it will have contributed to a better understanding of the origin and evolution of the solar system, and of the nature of the planetary processes that underlie life on earth, as well as a detailed view of the planet most like our own in this still lonely universe."

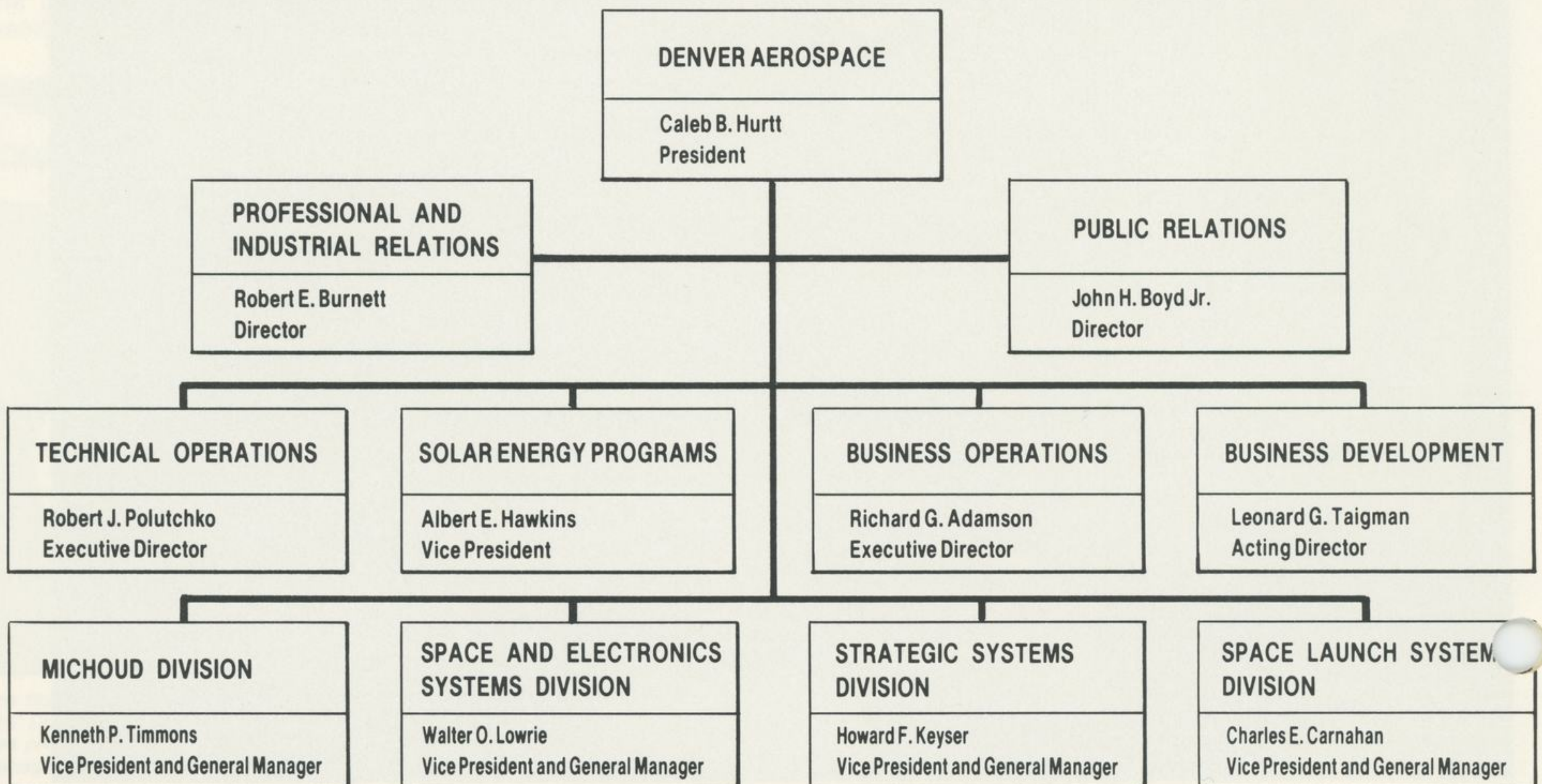
Phone service grows as business grows

Major changes are being made in telephone service to keep pace with the tremendous growth in Denver Aerospace.

Changes made and planned include:

- A new Dimension Telephone System has been installed at the South Lincoln (CCMS) facility.
- Installation of a similar system has begun at the Cinderella City facility.
- A Centry Infrotron Computerized Telephone System will be installed at the Denver System Center the first week in November.
- Marcomnet direct dial service has been extended to Greenwood Commons, Greenwood Plaza, and South Lincoln and will be expanded to include the Denver System Center and Westpoint the first week in November. The expansion will improve response time when employees dial the operator.
- The Corporation will install a Corporate Computerized Telephone Network in April 1981 to replace Marcomnet.

Some service problems have occurred because of long lead times for some installations and some equipment malfunctions, particularly at Greenwood Commons and Greenwood Plaza. The difficulties have been corrected.



This organization chart summarizes the recent restructuring of Denver Aerospace into four divisions and associated elements.

Mobile blood unit here in November; policy is modified

The Belle Bonfils mobile blood unit will make its second visit to Denver Aerospace this year November 6 and 7. The blood donated is credited to an account that assures the availability of blood for employees, retired employees, and their families.

Requests to withdraw blood are processed by the Denver Aerospace medical department.

The Bonfils blood center has modified the policy on its blood processing charge. Under the new policy, employees covered by Comprecare, which does not pay the processing fee, may be reimbursed directly for a portion of the charge. These employees should notify the medical department of their Comprecare coverage when requesting blood from the Martin Marietta account so that direct payment arrangements may be made.

Connecticut General continues to pay the processing fee for employees covered by its group policy.

Employees interested in donating should contact Trudy Dion, ext. 7593, or pick up a card at the medical department. About 150 donors are scheduled for each day of the mobile unit visit.

Since the unit is scheduled only during the first shift, second and third shift employees may go to the Belle Bonfils Memorial Blood Center, 4200 E. Ninth Ave. Information on other center locations is available from Ms. Dion. Blood donated at these centers may be designated for the Martin Marietta account.



A new share-the-ride and Junior Achievement coordinator has been named for Denver Aerospace. Lori Sharp, the new coordinator, has extensive experience in planning and coordinating services. She has a BA degree from Emporia State College, Emporia, KS, and an MA degree from the University of Northern Colorado. At UNC, she was involved in the recreation and intramural sports department. She is chairman of the Boulder Council for International Visitors.

Survey results are tabulated

Results of the recent Denver Aerospace employee survey have been tabulated by the midwest firm processing the responses.

A review of the results is being conducted, with a series of reports planned to employees when the review is completed.

United Way drive begins October 8

The 1980 United Way campaign for Denver Aerospace will begin October 8 with a 10 am meeting of department coordinators in the engineering presentations room. The campaign will end November 7.

The 1980 goal, according to Leroy Hollins, campaign coordinator, is to improve the 93 percent participation in 1979.

"An all-out effort by all employees will be necessary if we are to meet the goal and equal past performances," Hollins said.

Funds pledged to Mile High United Way support more than 75 agencies "serving all kinds of people with all kinds of problems,"

United Way representatives will meet with coordinators to discuss campaign plans and to furnish information on the organization's agencies. Campaign supplies will be distributed.

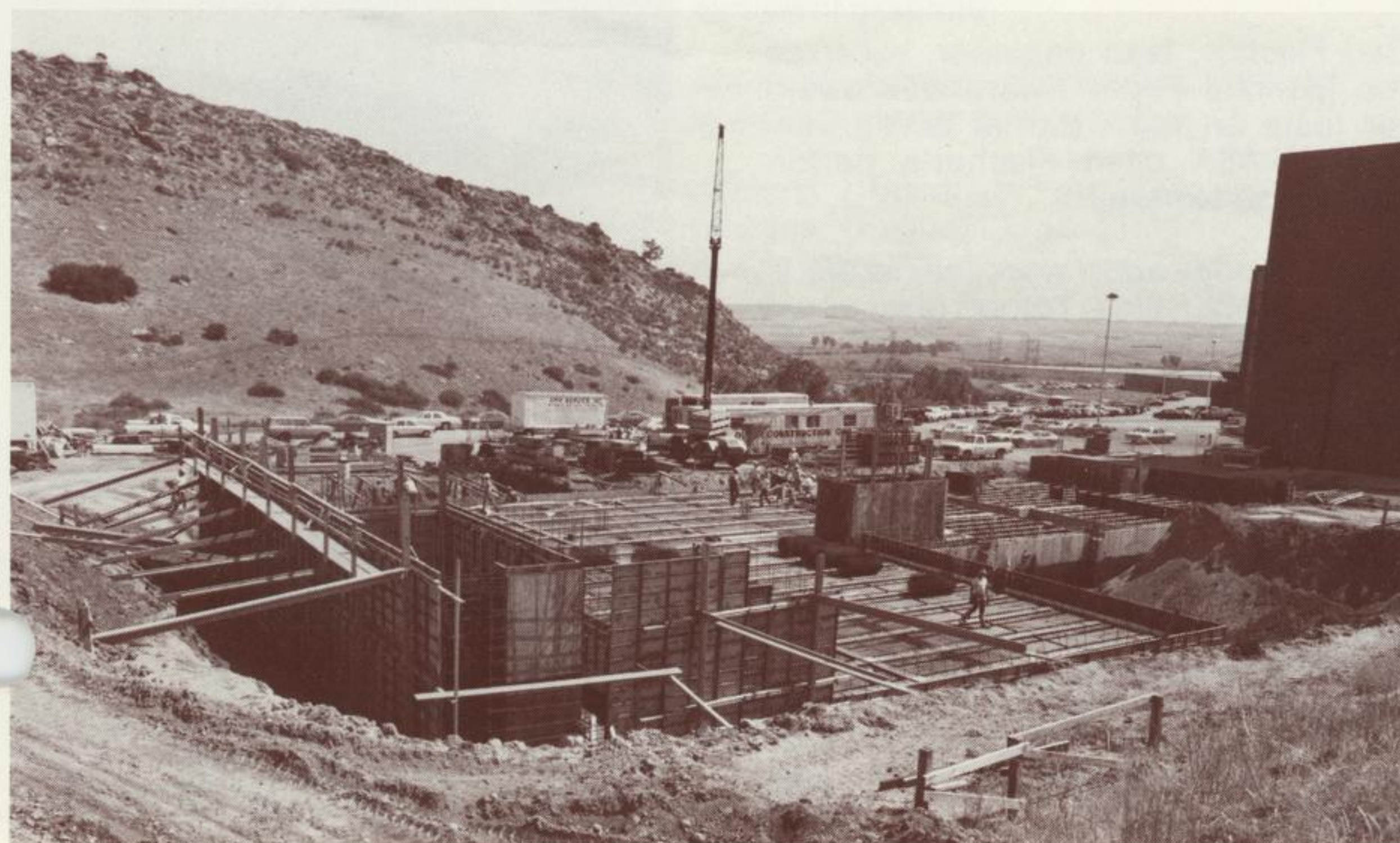
"Our campaign goal is ambitious, but with the help of all employees we can make it a reality," said Hollins.

Air Force officers begin EWI program

Maj. Darwin J. Johnson and Capt. William N. Ochinero have begun a 10-month Education-With-Industry program at Denver Aerospace.

Major Johnson, a 15-year veteran, was unit chief, Titan II ICBM Weapons, 3901 Strategic Missile Evaluation Squadron, Vandenberg Air Force Base. He has a BS in biology from Western Michigan University, and a master's degree in public administration from Golden State University.

Captain Ochinero was a budget and cost analyst with the Air Force Space Division, Los Angeles. He is a five-year veteran. He is working on a master's degree in science systems management at the University of Southern California and has a BS in business administration from California State University at Fresno.



Work is progressing on the new office building under construction next to the SSB.

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Sloan Fellow to study productivity

Dr. James Porter's first assignment after completing his year as a Sloan Fellow is to examine the productivity of Denver Aerospace. And the foreign trip he took as the culmination of his year at the Massachusetts Institute of Technology's Alfred P. Sloan school of management will help.

He met with industrial, business, and government leaders in Hong Kong, Japan, and China—areas where individual productivity is emphasized.

In Japan, the most developed of the three, management techniques appear to be the key to success. "The techniques also work when the Japanese gain control of a company in the U.S.," Porter said. "The things that work in Japan work here."

He believes some of the techniques, like quality circles and the mentor system, can be adapted for use here. "I was impressed by the enormous give and take in work units in Japan," he said. "We can do the same thing."

Porter said the purpose of the trip was to confirm—or modify—information in lectures and seminars by examining first hand different economic systems and different cultures.

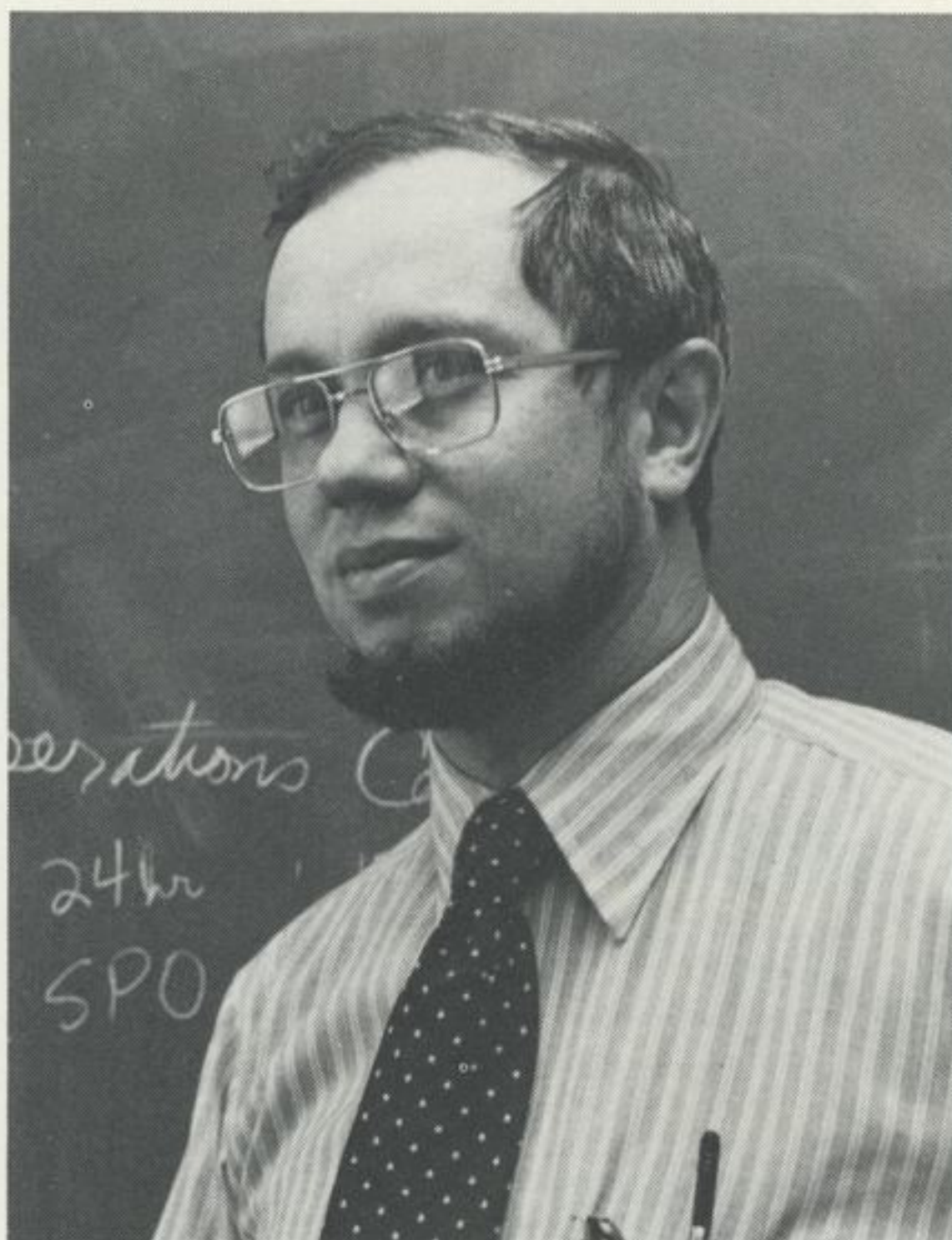
"In Hong Kong, we found an aggressive free enterprise system," Porter said. "The people in China are industrious,

Employee recognized for career counseling

George Mumma has received a certificate of recognition for his participation in the State Community Resource Bank at the Career Education Resource Center.

Since 1978, the bank has been furnishing Colorado educators with contact names for speakers, tours, and shadow programs. The center helps students see the relevance of classroom learning to real world activities, become aware of the wide scope of career and life options, and develop skills to prepare them for the world of work.

Jeanie Lawhead, Career Education Resource Center director, in her letter to Mumma, said, "Your efforts make it possible for both the educators and students to learn the career opportunities, the importance, and the contribution of your organization to the community."



Dr. James Porter

but the market is controlled. Japan's industry does not feature technical innovation, but has the capability to improve on manufacturing processes and make a product better at less cost."

Porter, who has a BS degree in aeronautics from Penn State, an MS in aerospace from Princeton, and a PhD in aerospace from Penn State, earned a MS in management from MIT as a Sloan Fellow.

JA companies to organize

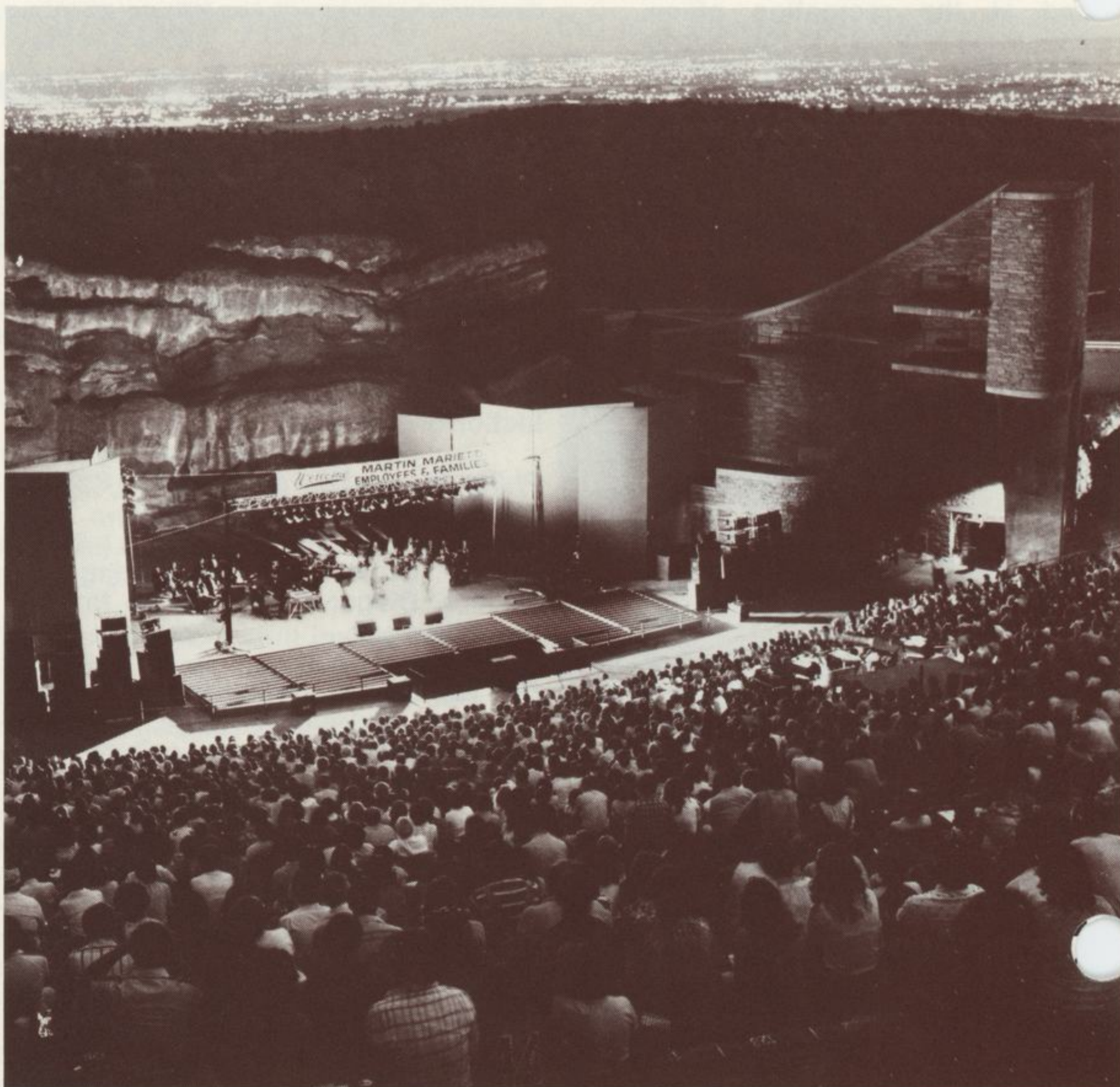
Junior Achievement companies to be sponsored by Martin Marietta will be organized beginning September 30.

The companies, operated by teenagers, will elect officers and select products for manufacturing at the organization meetings. The participants will learn the aspects of managing a business. This year, each company will operate for 15 weeks.

Employees who will be advisers are Robert J. Ancell, Robert N. Hansen, Sherrie L. Fields, Ann Manz, Robert D. Terrazas, Leonard Franzblau, Mary P. Hinsey, Michael Strasser, and Richard T. Mason.

Service award brochure offers wide selection

A service award brochure is being distributed to employees who are eligible for the five- to 45-year awards. A wide selection of items bearing the service award emblem is being offered. Order forms are included with the brochure so employees may choose the item they wish to receive.



Red Rocks theater was packed with employees and their families recently for the special 5th Dimension concert for Martin Marietta.

Recreation

Dinner Theater—A special matinee performance of "Guys and Dolls" will be held Sunday, November 2, at Boulder's Dinner Theater for Martin Marietta employees. Doors open at 12:15 pm. Luncheon with a choice of four entrees, will be served until 1:30 pm. The performance begins at 2 pm. Tickets are \$13.45—a \$2.50 savings—per person. Reservations accompanied by checks are due in the recreation office by October 10.

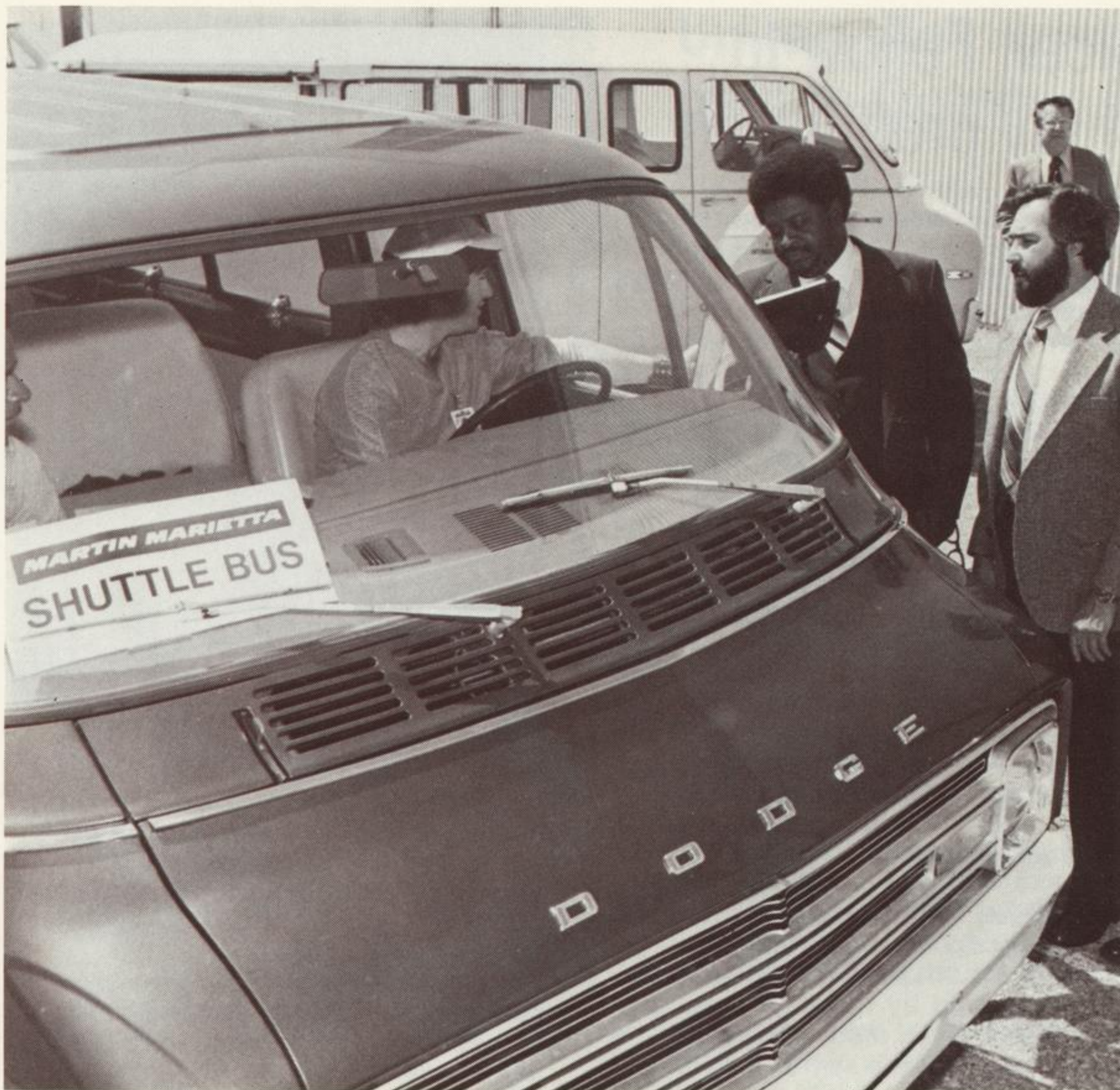
Rifle Sight-In—The Skyline Hunting and Fishing Club will conduct rifle sight-in sessions October 4 and October 5 from 9 am to 4 pm at the club's range. A \$1 fee is charged for each rifle sighted in.

Winter Basketball—Three winter basketball leagues will be formed for 1980-81. A league formation meeting will be October 7, at 3 pm in the engineering building presentations room. Leagues planned are a competitive league, an open league and a Saturday fun league. An all-women's league will be formed if there is enough interest. Teams in the Saturday fun league may be co-ed. Entry blanks, available in display racks and at the recreation office, should be returned to the recreation office, engineering building 125, MS6321.

Discount Tickets—Discount tickets for professional sports events, theaters and restaurants are available at the recreation office.



Vandenberg operations golf team successfully defended the contractors golf title, defeating the Ralph M. Parsons Company team. The Martin Marietta team captain was Vernon L. Dunn, left, shown accepting the perpetual trophy from Kenneth Whitman of the Ralph M. Parsons team.



Vandenberg operations shuttle bus service has earned the Western Space and Missile Center fuel conservation award for Eugene Marchbanks, transportation supervisor. The shuttle, making 22 daily round trips, eliminates the need for five other vehicles. In the photo, Michael Howard, shuttle driver, seated in bus, discusses the service with Alan Millico of WSMC and Marchbanks.

Eight inventors receive cash awards

Eight employees have been selected to receive cash awards for their inventions by the Denver product development review board.

The eight and their inventions are:

Mohan S. Misra, engineering mechanics: High temperature oxidation protection of graphite.

Philip R. Horkin, electronics: Spread spectrum carrier nulling circuit.

John V. Coyner Jr., engineering mechanics: Diagonal tape design for box truss structure.

Dr. Donald R. Wippermann, space systems: Extremely large aperture antenna elements for spaceborne applications.

John R. Lager, engineering mechanics: Measure of moisture content variations through a fibrous composite laminate.

Paul D. Patton, electronics: Patch antenna method for obtaining excellent VSWR on thick dielectric materials.

Dr. Gene J. Lang, electronics: Techni-

que for improving FET Switch isolation, and weight tracking nulling circuit.

Eldon E. Constable, electronics: Snap fastener attachment process, and ground strap securing method for multilayer thermal blankets

Employee lectures at seminar in Italy

Matthew S. Imamura was one of two lecturers from the United States participating in a seminar in Italy September 19 through September 26. The second lecturer was Joseph Loferski of Brown University. Imamura is a Denver Aerospace senior staff engineer.

The International School on Solar Energy Photovoltaic Systems is sponsored by the University of Naples at Urbino, Italy. The school provides fellowships to practicing engineers and scientists from government, universities and industries in the developing nations.

Imamura discussed system design of flat plate and concentrator photovoltaic systems.

Michoud credit union grants first loan

The Michoud Operations Employees' Credit Union has granted its first loan.

Thomas G. Lowrie, a senior industrial engineer, had committed himself to an investment in Pennsylvania before moving to New Orleans in May to join Martin Marietta. When the time came for the investment, Lowrie's resources were tied up.

At a bank, he was told it would take several weeks to process a loan because he was new to New Orleans. He needed the money immediately. As one of the first members of the credit union, Lowrie called Patti Stage, credit union office manager, for help. He received his share-secured loan the next day—the first made by the credit union.

"The credit union saved my neck," Lowrie said. "I was committed to make the investment and the timing was pretty tight. I really feel good about the service I received."

Applications for all categories of loans are being accepted. Loan types are share-secured, new car, used car, and limited signature loans. Loan policy and projected interest rate information is available from the credit union office.

Daily office hours are 11:30 am to 1:30 pm. The office is at EJ-43, second floor, building 102. Telephone number is 255-2998.

The credit union has more than 800 members.



The first loan from Michoud Operations Employees' Credit Union went to Thomas G. Lowrie and was presented by Patti Stage, credit union office manager.



The 1980 New Orleans United Way campaign loaned executive program will be assisted by the Michoud division. Kenneth P. Timmons, general manager and vice president left, is chairman of the program and is recruiting 40 persons to work full time for two months on the campaign. Among those recruited is William T. Brown, right, a Michoud division buyer. The loaned executives are supported by their firms while helping United Way.



Employees recently recognized for their outstanding performances at external tank operations are (left to right) Ronald Blackard, Carl Fischer, and Terry Tolbert.

Employees receive awards at KSC

Three employees at the Michoud division's external tank operations at Kennedy Space Center have been commended for outstanding performances.

Terry Tolbert and Ronald Blackard, field operations technicians, were cited for work on the first flight external tank.

Carl Fischer, lead engineer, received the Manned Flight Awareness award for tests on the external tank's vent hood. NASA cited Fischer's performance as "superb."

During modification work inside the liquid hydrogen tank, Tolbert discovered snap rings that secure electrical connectors were not fully engaged and that they were not properly wired.

Blackard noticed excessive movement at the end of the liquid oxygen feedline support bracket. Investigation showed lack of a bearing on that bracket and on one other. The discovery prevented potential damage to the feeding and possible flight failure.

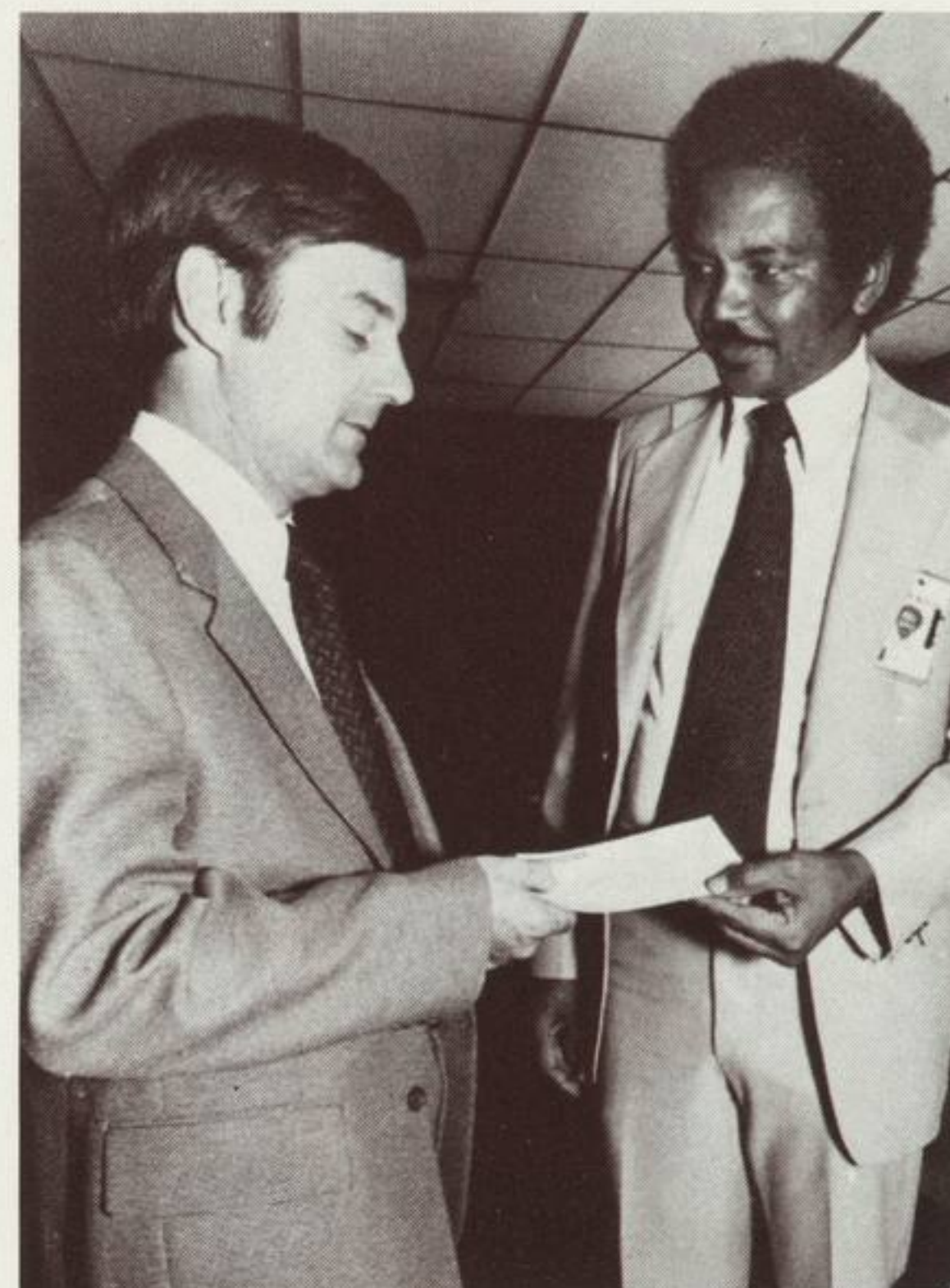
Tolbert and Blackard received cash awards for their efforts.

Corporate gifts aid New Orleans groups

Martin Marietta Corporation gifts and grants of \$11,200 have been given to New Orleans organizations, including the United Way, New Orleans Symphony, and Junior Achievement.

Most recent grants have gone to the Opportunities Industrialization Center (OIC) of Greater New Orleans, \$500; and the Louisiana Foundation for Private Colleges, \$1,000.

OIC is a training organization providing industrial employment opportunities for the disadvantaged. The Louisiana Foundation supports Our Lady of Holy Cross College, Louisiana College, and Centenary College of Louisiana.



Junior Achievement of Greater New Orleans will benefit from a gift from Martin Marietta. Gregory Weaver, left, JA director of development, accepts the contribution from Westley Bayas Jr., Michoud division equal employment opportunity administrator.