

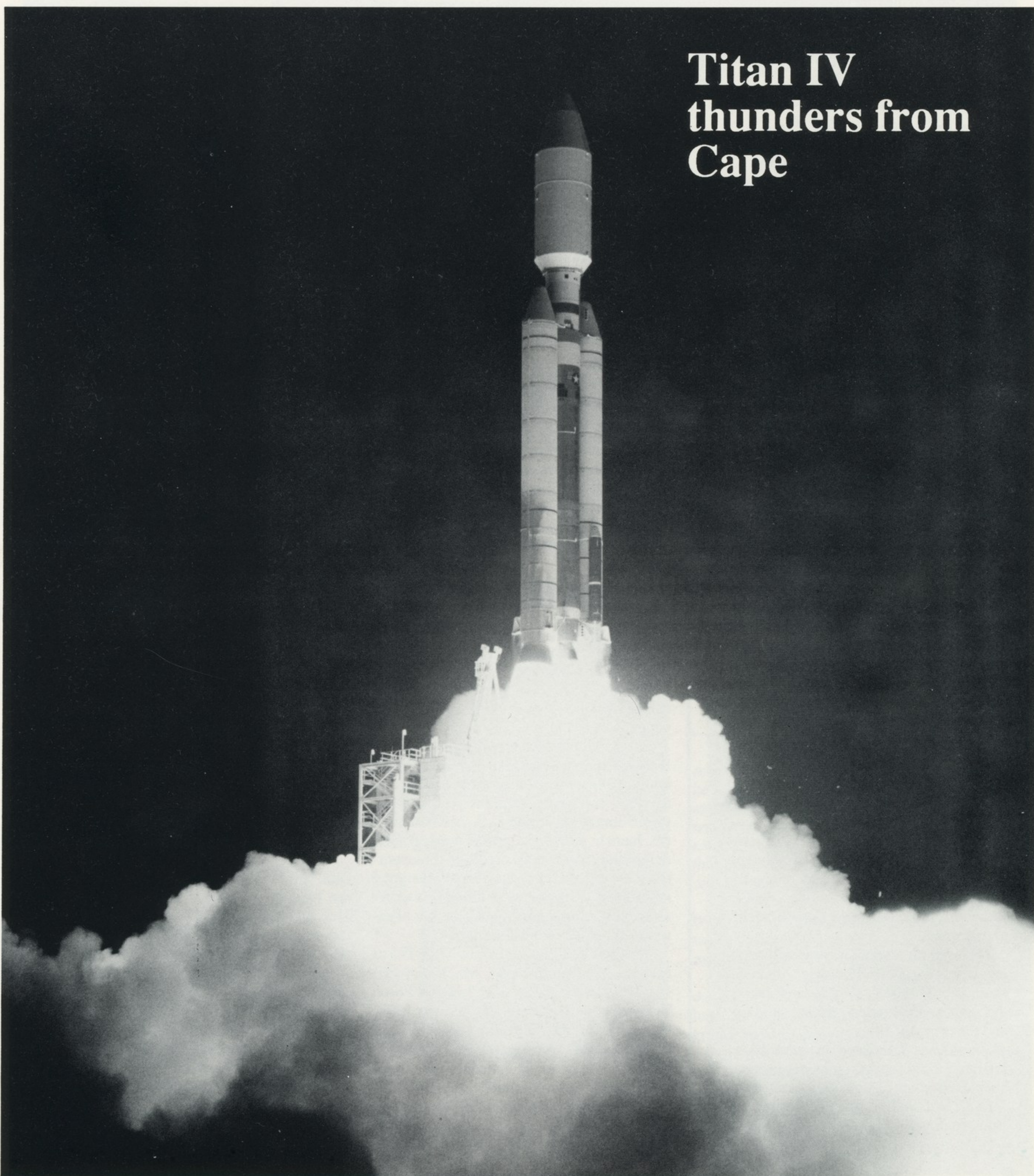
MARTIN MARIETTA

news

ASTRONAUTICS GROUP

June 22, 1990 Number 12

**Titan IV
thunders from
Cape**



Second Titan IV successfully roars June 8 from Cape Canaveral

"We are, of course, delighted by the second successful launch of a Titan IV space booster," Astronautics Group President Peter B. Teets said after the 1:22 a.m. EDT June 8 launch from Complex 41 at Cape Canaveral.

"It's a tribute to the fine work of our employees at our Space Launch Systems company in Denver and at the Cape. This is another major milestone in providing the nation assured access to space," Teets said.

"It's a tribute to the fine work of our employees at our Space Launch Systems company in Denver and at the Cape."

—Peter B. Teets

The Titan IV space launch vehicle could be seen for almost 100 miles along the Florida coast as it blasted off into a 52-degree inclination carrying a classified military payload.

"This was an important launch for America's space program," said Martin C. Faga, assistant secretary of the Air Force for Space. "The Titan IV is the largest booster ever launched by the Air Force and is the backbone of our space booster family. The nation depends on it to

deliver payloads to space. The Titan IV provides our nation a vital path to space for critical national security payloads.

"It has been a challenging task growing from a 10-vehicle program, complementary to the Space Shuttle, into a 41-vehicle production program," Faga said. "All of this was done despite tremendous pressures on our schedule. The Air Force and industry team deserves great praise for managing three and one half times the scope of work while controlling projected program completion cost within five percent of target."

Space Launch Systems has an approximately \$7.3 billion contract with the Air Force to build and launch 41 Titan IVs, the nation's largest and most powerful expendable launch vehicle. The most recent contract, which added 18 Titan IVs last November, also includes an option for eight additional vehicles.

"This was an important launch for America's space program."

—Martin C. Faga

The first Titan IV launch was June 14, 1989, from Cape Canaveral, and future launches will be conducted from both Cape Canaveral and Vandenberg Air Force Base, Calif. ■



Titan IV lights up sky

Space Launch Systems' second Titan IV blazes off Launch Complex 41 at 1:22 a.m. EDT June 8 from Cape Canaveral. The above Associate Press photo was taken from across the waters of Port Canaveral and appeared in newspapers across the nation on June 9. (See cover photo.)

New technical journal to be distributed next month

The first Martin Marietta Astronautics Group Journal is scheduled to be distributed next month to a variety of internal and external audiences.

Planned as a semiannual publication, the journal will showcase Astronautics Group accomplishments and create an open forum for the technical exchange of ideas across the research and technology community, including customers and employees.

The articles are written by employees and published by the Astronautics Group's four companies, and the Technical Operations, Publications, Public Relations, and Business Development departments.

Next month's premier issue will contain articles on the technologies of materials, robotics, and rovers; and some thoughts on the human mission to Mars and the origin of life.

Employees interested in submitting articles for the second technical journal should contact: Rick Rokosz, Ext. 7-6872; Bob Salley, Ext. 7-9168; Jackie Bunting, Ext. 7-2029; or Ron Bena, Ext. 7-5423.

Launch complex work awarded to Bechtel

Space Launch Systems has awarded a \$100 million contract to Bechtel National, Inc., to modify Launch Complex 40 at Cape Canaveral Air Force Station, Fla., so that it can be used to launch Titan IV space launch vehicles.

Under the three-year contract, Bechtel's Defense & Space business line will provide engineering, procurement, and construction services to Space Launch Systems, the prime contractor to the U.S. Air Force for the launch pad work. Tasks will include demolition of existing facilities to accommodate construction of a Bechtel-designed mobile service tower, an umbilical tower, an air conditioning shelter, and a number of associated launch facility structures.

The modifications will allow Titan IVs to be launched from the pad, which now can launch only Titan IIIs. The last Air Force Titan III was launched on Sept. 4, 1989. Commercial Titan, Inc. also uses the pad to launch Titan IIIs for commercial customers. Modification work is scheduled to begin immediately after launch of the third Commercial Titan, planned for tomorrow.

When complete in July 1992, Launch Complex 40 will be used to launch all

configurations of the Titan IV, the Air Force's newest, most powerful rocket. The pad will give the Air Force two Titan IV pads on the East Coast.

"We are dedicated to the successful, timely modification of Launch Complex 40 for Titan IVs, which are absolutely critical to the nation's space launch capability," said Fred Hudoff, president of Space Launch Systems company. The company has a contract to build and launch 41 Titan IVs through 1995, with an option for eight more.

Bechtel President Bill Friend said, "Bechtel recognizes the importance of the Titan IV program to the maintenance of U.S. national security, and we are aware of the critical role this launch complex will play in assuring our access to space."

"Our company has a long history of working on successful projects for Martin Marietta, so we look forward to the opportunity to get involved in this new challenge."

Friend said the bulk of the design engineering will be carried out at Bechtel offices in San Francisco, although the company's office in Cocoa Beach, Fla., will provide significant engineering and construction support.

Group hosts successful IR&D review

Early this month, the Astronautics Group hosted 50 government evaluators for a two-day Independent Research and Development (IR&D) review that resulted in high praises from a top official.

Col. Paul Anderson, director of Technology Assessment and Planning at the Air Force Space Technology Center, said at the outbriefing that the IR&D scores for the projects presented during the two days were the highest he'd ever seen at a government on-site review. The Astronautics Group received a score of 8.42 out of a possible 10.

During the review the government evaluators from the Army, Navy, Air Force, and National Aeronautics and Space Administration were briefed on 18 Astronautics Group IR&D projects, representing 30 percent of the total dollar value of the Group's program. These presentations were grouped into eight technical sessions.

IR&D Program Manager Ronald Bena said, "The quality of technical work accomplished in our IR&D program can lead directly to new contracts (such as the survivable power subsystem recently won by Space Systems), and gives us a technical base of knowledge that can place us ahead of competitors."

"Another important factor from the review is our score," Bena said. "A high score is a good indicator that the government has a high regard for the technical quality of our work and that can translate into more IR&D dollars down the road."

Bena said four projects scored a 9.0 or above this year. The principal investigators for those projects are: Brent Cullimore, Advanced Active Thermal Control, 9.4; Mohan Misra, Materials Technology, 9.1; Ken Richards, Control of Large Space Structures, 9.1; and Troy Tack, Weldalite Characterization, 9.0.

Corporate news

Corporation receives \$145.7 million Navy contract for towed array sonars

The Corporation has been awarded a \$145.7 million contract from the Navy to develop and produce advanced model towed array sonars for U.S. submarines.

The work will be performed at Aero & Naval Systems' Glen Burnie, Md., facility.

Towed array sonars consist of large numbers of sensitive listening devices, called hydrophones, embedded in long hoses that are towed behind surface ships and submarines. They are used to detect other vessels.

The initial \$42.6 million full-scale engineering development contract includes delivery of two engineering development models of the TB-12X towed array and signal receiver and various test equipment items. The award also includes six production signal receivers. Options in the five-year contract call for production of an additional 40 arrays and 38 receivers to be delivered by 1995. ■

Homeless group hosts benefit run

The Colorado Coalition for the Homeless is sponsoring a benefit "Home Run for the Homeless" 5k race Sunday, July 15, in central Denver and needs 30 volunteers to assist with logistics the day of the race. Interested employees should call Ext. 1-5000 and leave their name and telephone extension. They will be contacted by a representative of the Colorado Coalition for the Homeless with more details.

The race begins at 4:30 p.m. and ends in Mile High Stadium. Runners may then stay and watch a Denver Zephyrs baseball game at 7:15 p.m. Tickets for family runners will be available at a discount. Martin Marietta is co-sponsoring the race.

Employees asked to buckle up

The company is sponsoring a 1990 Seat Belt Pledge Campaign to help generate employee awareness about seat belt safety.

All employees who sign a seat belt pledge card will receive a free windshield sunscreen for their automobiles.

Envelopes containing information about seat belts and a pledge card will be sent to employees through interoffice mail.

Employees who sign their cards, pledging seat belt use, can exchange them for the sunscreens between 10:30 a.m. and 1:30 p.m. June 25 through 29 in the cafeterias at the Deer Creek Facility, Engineering Building, Littleton Systems Center, and the Space Support Building. ■



Martin Marietta boosts Mi Casa development

Herbert L. Watkins, manager of Materiel Support Operations, left, presents a \$3,000 check to Cecelia Ortiz, executive director, Mi Casa Resource Center for Women, middle, and Elsa Holguin, coordinator for the Business Center for Women, at their new building site in Denver. The final donation to Mi Casa will total \$6,000, thanks to a Small Business Association matching donation.

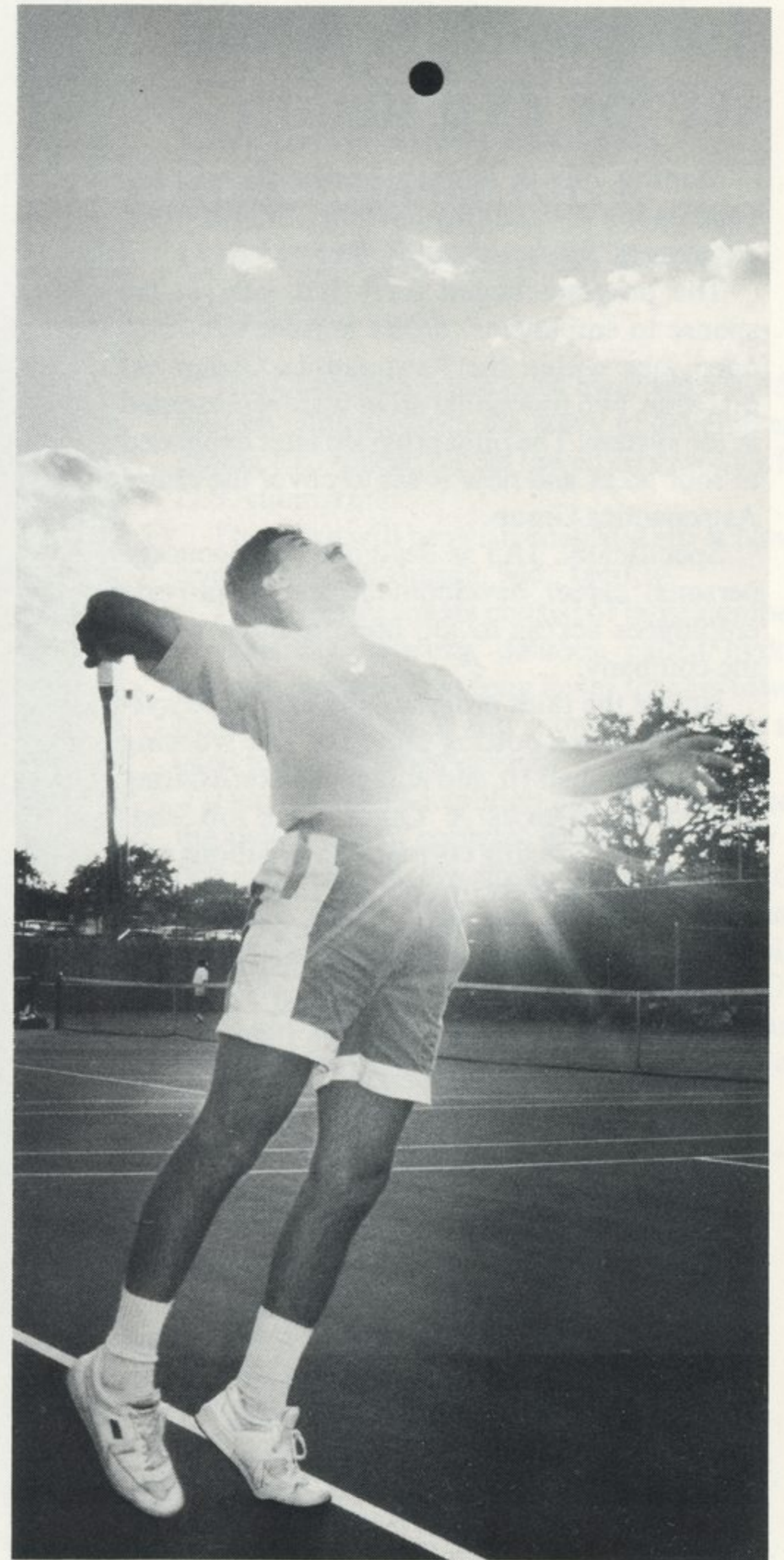
Martin Marietta employees

For the second straight year Martin Marietta employees won the "A" division at the annual Colorado



Capture Corporate Games again

Marietta has won first place in
10 Corporate Games.



Job posting system set for expansion

Starting July 2, Human Resources will expand its Job Availability System (JAS) to cover all areas of the Astronautics Group.

The program began early last year in response to employees' desire to have access to open jobs within the Astronautics Group. At that time, two functional areas were represented in the system. The pilot program later expanded to four areas and now is set to cover the entire Astronautics Group.

Specifically, JAS is designed to encourage personal career development and to provide employees access to job opportunities within the company.

Unlike the pilot program, the expanded system will have a posting period of five working days, rather than 10, and will expand on existing information sources. A "Quick-Look Job Summary," summarizing current JAS positions will be published weekly, in addition to the more detailed job listing available at current resource centers. This summary will be distributed in special JAS information racks near all cafeterias; the employee store at South Park West I; the vending area at the General Purpose Laboratory; the main lobbies at the Advanced Computer Lab, Integrated Robotics Facility, Electronic Manufacturing, Facilities I and II; and the Advanced Test Bed.

The program also has a new FAX number, Ext. 1-2201, for completed job applications.

As in the past, JAS control advises employees to discuss career desires with their supervisors before applying for new positions.

For more information on the expanded JAS system, call Ext. 7-1003 and watch for more details in future issues of the *Martin Marietta News*. ■

History of Ken Caryl to be aired, distributed

"Hoofprints," a video history of the Ken Caryl Ranch, will be broadcast Sunday, July 1, at 1:30 p.m. on KBDI, Channel 12. "Hoofprints" was produced by the Ken Caryl Ranch Master Association with significant assistance from Martin Marietta Video Productions and the participation of several volunteers.

It is an interesting 30-minute documentary covering the history of the ranch area from the time when dinosaurs roamed the property, through the periods when Native Americans hunted in the valley and the Bradford and Schafer families lived here, to the present.

The Ken Caryl Ranch Master Association and Martin Marietta will distribute copies of the video tape to schools, libraries, universities, and other groups.

Copies of the tape will be available to the public for \$10 by calling 979-1876 after July 2.



Teets in the woods?

Jeff Strickfaden, of the Video Productions department, adjusts a microphone for Peter B. Teets, president of the Astronautics Group, in preparation for a videotaping session near Brush Creek at the Waterton facility. Teets is preparing a mid-year video communication to employees. Copies of the video tape will be available by mid-July. Teets has asked all managers to arrange for their employees to see the tape, then discuss its message with them.

Space Systems to build science instruments for NASA space exploration missions

Space Systems company has been selected to build science instruments for two major National Aeronautics and Space Administration (NASA) space exploration missions in the 1990s.

The company will build an \$11.6-million Cometary Ice and Dust Experiment (CIDEX) instrument for the Comet Rendezvous Asteroid Flyby (CRAF) mission and a \$13.1-million CCD Imaging Spectrometer for the Advanced X-Ray Astrophysics Facility.

The CRAF spacecraft, scheduled for launch in 1995, will study the Comet Kopff for 2.5 years as that comet approaches the sun between the orbits of Jupiter and Mars. The CIDEX instrument will use two powerful analytical chemistry techniques—x-ray fluorescence spectrometry and gas chromatography—to determine the elemental and chemical

composition of the comet's dust and ice grains. Space Systems is building the instrument under contract to NASA's Ames Research Center.

The Advanced X-Ray Astrophysics Facility, scheduled for launch in 1997, is a NASA observatory that will study x-rays from celestial objects such as quasars, starburst galaxies, supernova remnants, and neutron stars. The company will develop the AXAF CCD Imaging Spectrometer (ACIS) under a contract with the Massachusetts Institute of Technology for NASA's Marshall Space Flight Center. ACIS will be 100-1000 times more sensitive than previous x-ray telescopes and will produce x-ray images of celestial objects 10 times sharper. It will enable astronomers to precisely measure the energy level of x-rays received from extremely faint celestial objects. ■

Employees benefit from Food Services' expansion, remodeling

During the first half of this year, the Food Services department has taken huge steps in their continuous effort to provide employees a comfortable break from the work day.

In fact, Gene Byron, chief of Food Services, says all changes are made for specific reasons.

"We have specific goals we work from to serve the employees," Byron said. They are:

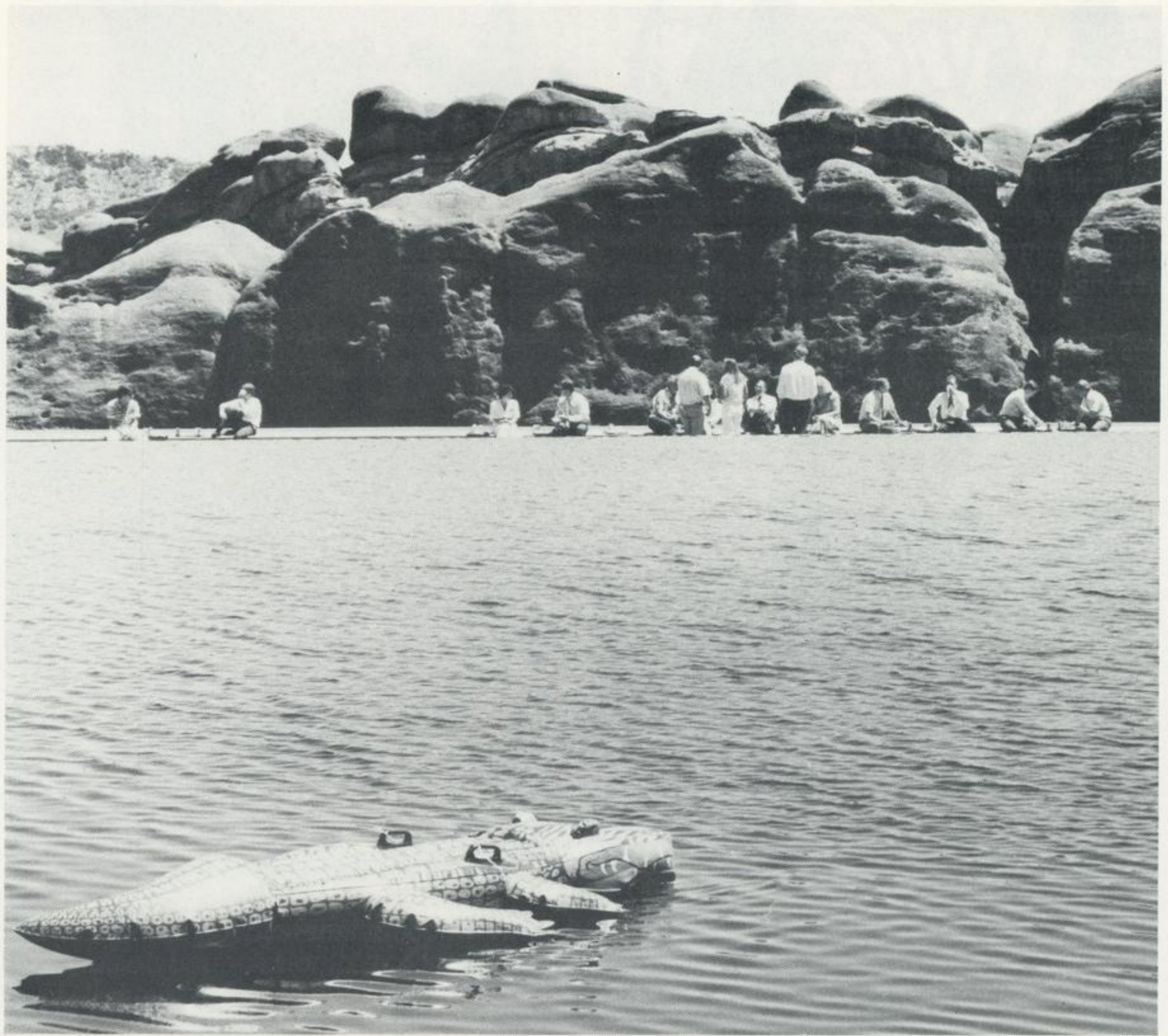
- Provide a quality nutritious meal at a fair price
- Work quickly and efficiently
- Strive hard to make employees leave with a smile
- Provide something for everyone
- Provide a pleasant break from the grind of everyday work

"Our low turnover rate has enabled us to do some things that otherwise could not be done."

—Gene Byron

Noticeable changes already in place this year include new hot dog carts at the Main Plant, special-event lunches at all five cafeterias, six new vending machines, and expanding menus.

The 75 employees who make up Food Services have all spent time on the weekend participating in High-Performance Work Team training. Byron said the training focused on communicating with customers and with each other to improve the work they do. Also, Byron, an industry veteran who came to the



Pool parties begin

A strange object joins employees at the Deer Creek Facility's reflecting pool for a Friday afternoon party. More than 450 employees attended the first party early this month. Food services plans to conduct parties every Friday through the summer, featuring food, music, and a variety of entertaining events.

Astronautics Group from Coors, said that his crew has very little turnover.

"This is no longer a 'ma and pa' operation."

—Gene Byron

"Our low turnover rate has enabled us to do some things that otherwise could not be done," he said. "We offer our employees a competitive salary and good hours, conditions, and benefits, and in return we have a stable workforce dedicated to implementing innovative ideas. Everything we do is a direct result of our employees' commitment to doing their job."

"This is no longer a 'ma and pa' operation," Byron said. "During the past couple of years, we've obtained the support and proper personnel to make some changes."

Other changes this year include forecasting menus; catering special events for breakfast, lunch, or dinner; and new quality assurance programs for measuring performance.

For the rest of 1990, Food Services has plans to add a mobile food vehicle, remodel the cafeteria at Littleton Systems Center, use more hot dog carts, and upgrade the cafeterias in the Engineering Building and at the Space Support Building to increase seating and ease the flow of traffic.



Waterton services expand outside

John Lopez, left, purchases lunch from Ginger Jurek, right, at one of the Astronautics Group's new hot dog stands near the Electronic Manufacturing Facility. During the summer, the stands will feature salads, hot dogs, and a mixture of food entrees every day, Monday through Friday.



Classic cars take stage

More than 50 employees proudly displayed their automobiles at the Astronautics Group's first Classic Car Exhibit in the Deer Creek Facility's parking lot. Cars ranging from old Cadillacs and Fords to a new Ferrari provided entertainment for all employees.

Employee store plans expansion

Your Employee Store plans to open new locations at South Park West III and the Space Support Building in the near future.

A "Christmas in July" sale, featuring Christmas cards, gift baskets, ornaments, and many other items at 20-50 off, is planned for next month. ■

Hornbostel joins Wellness Center staff

Karen Hornbostel, exercise physiologist and health educator, has joined the Wellness Center staff.

She has a master's degree in exercise physiology and 10 years of experience. Hornbostel has worked for Flatiron Athletic Club in Boulder and most recently for HealthMark Centers, Inc. in Denver. She has also been a competitive cyclist for 11 years, is the manager/coach for the Alfa's/Zinn women's cycling team, and is the current National Master's (35-39 age group) time trial champion and best all around rider.

Wellness Center staff members are available for health education presentations at department meetings. Also, departments may arrange a program or tour at the Wellness Center. Call Diane Nolly or Hornbostel between 11 a.m. and 5:30 p.m. at Ext. 7-7576 or Ext. 7-7575 for more information. ■

Employee services/recreation

Beat the Heat—Exercise this summer in the cool, scenic setting of the Wellness Center at Deer Creek. Aerobic and body sculpting classes are offered at 11:15 a.m. and 4:30 p.m. Monday through Friday. Employees can purchase a class card, good for 20 classes. The cards do not have an expiration date and can be used for any class. They can be purchased by mail or between 11 a.m. and 5:30 p.m. at the Wellness Center. A fitness class registration form is in the information racks. Exercise equipment at the Wellness Center can be used by employees free of charge. The center has treadmills, bicycle ergometers, Concept II rowing machines, bioclimbers, paramount weight machines, free weights and benches, and punching and speed bags. Shower, locker, and sauna facilities are also available.

Mile High L5—The group will meet at 7 p.m. Monday, July 2, in the first floor meeting room of the Public Service Building at Kipling and Hampden. For details, contact Mark Schloesslin, Ext. 1-9057 or 779-5692.

Motorcycle Club—The Aerorider Motorcycle Club will meet at 5 p.m. Thursday, July 5, in the recreation clubhouse. Contact Steve Taylor, Ext. 7-2731, or Paul Betthausser, Ext. 1-5574, for information.

Hunting and Fishing—The group will meet at 5 p.m. Monday, July 9, in the clubhouse at the recreation area. For more information, contact Mel Smith, Ext. 1-8682.

Waterton Amateur Radio Society—All hams and those interested in learning more about amateur radio are invited to attend the meeting at 5 p.m. Tuesday, July 10, in the hamshack at the recreation area. For more information, call Tony Kehayas at Ext. 7-2013.

Red Rock Bowmen—Security briefings are scheduled at 4:45 p.m. July 10 and August 14 in the recreation area clubhouse. All members must attend this briefing. Prospective members are encouraged to attend and join the club. For more information, contact Dave Unruh on Ext. 7-0477 or Mark Lyons on Ext. 7-5722.

Breathe a Sigh of Relief—This summer get a 'FreshStart' and break away from nicotine dependency. Smoking cessation classes will be offered in July at Deer Creek, Monarch Room—R Level. Each class consists of four meetings from 5 to 6:30 p.m. Class dates are July 16, 19, 23, and 26. This American Cancer Society 'FreshStart' program is offered free to all Martin Marietta employees, spouses, dependents, and Air Force personnel. Call Ext. 7-6605 to register for the July class or complete the flyer in the information racks.

Hunter Education Classes—Classes are set for 7 to 9:30 p.m. July 16, 18, and 19 at the VFW Hall, 3860 S. Jason St., Englewood. The range date is from 8 a.m. to 1 p.m. July 21 at the club's shooting range. Students must attend all class sessions. Registration will be

taken at the first class, and a minimum of 10 students is required to continue meetings. The cost is \$7. Employees, family members, and friends are welcome to attend.

Amusement Park Discounts—Discount coupons are available for Lakeside and Elitch's from company store locations, the Employee Services offices, and from volunteer recreation representatives. The Lakeside coupon is valid Monday through Friday and Sunday. The Elitch coupon is valid Monday through Friday.

Funplex Discount—Coupons offering one free activity (bowling, roller skating, miniature golf, or bankshot) with the purchase of the same activity at full price are available from the Employee Services offices at Deer Creek and Waterton, the company stores, and from volunteer representatives at the Space Support Building, South Lincoln, Viewpoint I, and Greenwood Commons. Individuals are limited to one coupon per person per day.

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