

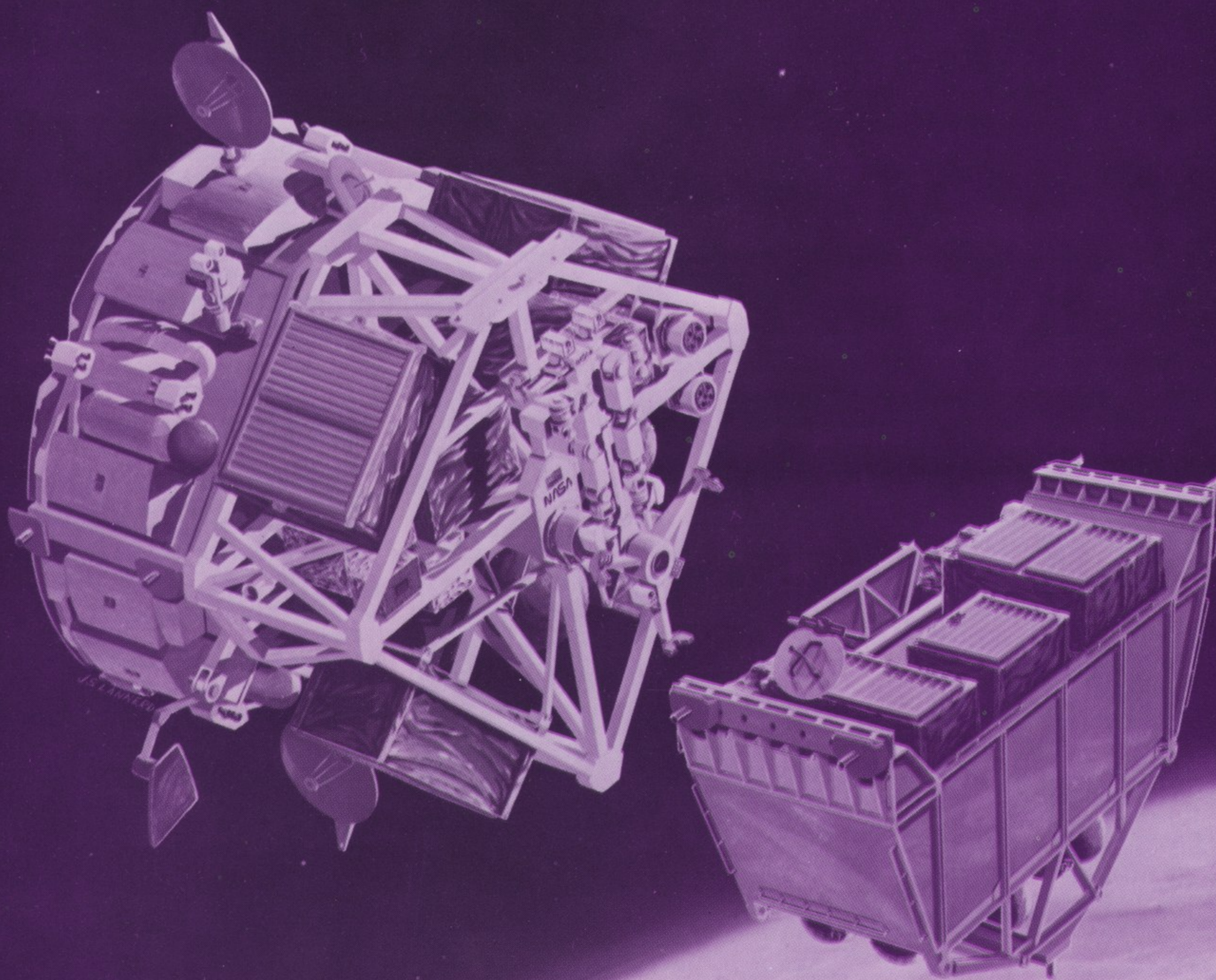
MARTIN MARIETTA

news

ASTRONAUTICS GROUP

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# Space Systems wins again



# Space Systems wins Satellite Servicer System contract

Space Systems has been selected for negotiation of a \$1.3-million contract by NASA's Johnson Space Center to study design concepts for a space-based "service station" that will refuel and repair satellites in space.

This Satellite Servicer System (SSS) will be a multi-element spacecraft that will autonomously rendezvous and dock with satellites operating in orbits beyond the range of the space shuttle. It will be able to transfer fuel to the satellites and replace components such as power units or science instruments. Although these functions will be autonomous, they will be supervised from both the ground and the space shuttle.

"The objective of the Satellite Servicer System is to provide a reliable method of onorbit maintenance, repair, and resupply of the

nation's satellites," said Dr. Mike Murphy, satellite servicing program manager for Space Systems. "This system will use proven or newly developed existing technologies to demonstrate the remote on-orbit satellite servicing capability."

The satellite servicer consists of an Orbital Maneuvering Vehicle (OMV), a support module, and selected Flight Telerobotic Servicer (FTS) elements.

The support module is the central component of the system, housing the docking hardware, replacement parts, fuel transfer system, and basic control systems for the satellite servicer. The FTS elements, including remotely operated robotic arms, sensors, and cameras mounted on the support module, will be used to carry out the servicing operations. The OMV, a remote

controlled, free-flying vehicle, is the transporter portion of the system.

The OMV currently is under development by TRW. Space Systems has a \$337 million contract with NASA to build and demonstrate the Flight Telerobotic Servicer.

"Martin Marietta brings its proven experience in telerobotics and spacecraft design to this project," said Murphy. "We expect our FTS knowledge to be a significant contribution to the success of the satellite servicer."

Under the 12-month contract, Space Systems will provide detailed preliminary designs for the servicer support module and a compatible target satellite vehicle to be used in flight demonstrations. TRW was awarded a similar study contract. ■



## Major Weld gets logo

John Adamoli, left, vice president of Production Operations for Space Launch Systems, presents Ryan Fitzgerald, right, a special award of recognition for creating a logo for the Major Weld High-Performance Work Team in the second floor of the factory. Ryan is the son of Bill Fitzgerald, a staff training specialist. The team's logo, shown on Fitzgerald's hat, features a Titan IV, a computer, and a weld torch. Joining the presentation are Fitzgerald's seventh grade classmates from Powell Middle School.

## On the cover

Space Systems was selected by NASA to study design concepts for a Satellite Servicer System, a space-based "service station" that will refuel and repair satellites in space. This artist's concept shows the Satellite Servicer System (left) and a target satellite (right) that will be used in rendezvous and docking flight demonstrations. The servicer consists of an Orbital Maneuvering Vehicle, the support module, and elements of the Flight Telerobotic Servicer.

## SIP

Unit values for the Savings and Investment Plan (SIP) for United Aerospace Workers (UAW) and United Plant Guard Workers of America (UPGWA) in April 1990 (March values in parentheses) are:

Fund A	1.2163727416
Indexed Equity	(1.2477930629)
Fund B	1.2122512365
Fixed Income	(1.2047531201)
Fund C	0.8238395915
Company Stock	(0.8754591440)

## PSP

Unit values for the Performance Sharing Plan (PSP) for salaried employees in April 1990 (March values in parentheses) are:

Fund A	5.9269174616
Indexed Equity	(6.0732352908)
Fund B	3.5379424681
Fixed Income	(3.5122390996)
Fund C	4.3639107419
Company Stock	(4.6340215381)

## Three-year-old asks employees to slow down

(Editor's note: The following letter was sent to the Astronautics Group by the Michael Orr family, of Waterton Canyon, asking employees to decrease their rate of speed when entering and exiting the Main Plant. The letter is written from the perspective of Maria Beatrice Orr, Mr. and Mrs. Orr's 3-year-old daughter.)

An open letter to all Martin Marietta personnel:

Hi, my name is Maria Beatrice Orr. I live in a really neat place, right beside the South Platte River. To get home, when we have been to visit grandma, or to get groceries, we have to make a left turn from South Wadsworth (Highway 121) to Waterton Road. The other day I got a really big scare 'cause a car coming out of Martin's plant was coming at us so fast, and the driver was honking the horn, and looking so mean. . . .

Anyway, the car almost hit us. When we got home, my mom held me real tight for a long time. She told me how I have a right to live and see lots more spring-times, Christmases, and birthdays. And how I should be able to experience grade school, high school, and college—in fact to experience all kinds of things for years to come.

All these things could have been taken from me if that car had hit us. . . .

So please, Martin Marietta people, please let me have my future to discover all these wonderful things.

Love, your friend,

Maria Beatrice Orr



## Astronautics Group accepts SBA award

The Astronautics Group last month formally accepted the Small Business Administration's 1990 Distinguished Prime Contractor of the Year award for Region VIII. Presenting the award to Astronautics Group President Peter B. Teets, right, on behalf of the Region VIII office is Jerry Carroll, deputy regional administrator, center, and C.B. Styron, assistant regional administrator, procurement assistance, left. James A. Sterhardt, vice president of Production Operations, second from left, and Herbert L. Watkins, manager of Materiel Support Operations, second from right, also joined in the ceremony.

## Galileo continues voyage to Jupiter

The Galileo spacecraft, launched from the Kennedy Space Center last October, represents "the grandest planetary mission of this century," William O'Neil, Galileo project manager at the Jet Propulsion Laboratory, said in a talk to the large staff on May 24.

Galileo's 2.5-billion-mile, six-year journey to Jupiter is a looping one that takes it past Venus, past the Earth twice, and past two asteroid belts. As it passes each planet, it uses the planet's gravitational pull to change direction and pick up the velocity needed to reach its destination.

Although the journey is long, the scenery is spectacular. Already, Galileo's high-resolution camera has collected picture postcards of Venus better than any ever seen before. And, for the next five years, scientists expect to catch some sensational glimpses of the Earth and its neighborhood—all of which are a bonus to Galileo's mission to explore Jupiter.

About a week before Thanksgiving—when Magellan is into its third month of mapping Venus—Galileo will cruise by Earth and beam

down 80 television images of Venus taken during the spacecraft's February Venus flyby.

Until then, the images and the science data collected by Galileo's bank of instruments will remain stored on the spacecraft's recorder. Only one of the Venus pictures has been transmitted back to the JPL, where, according to O'Neil, scientists were very excited about its extremely high resolution.

"The images were very good," O'Neil said. "There is virtually no distortion with Galileo's camera."

O'Neil said that Galileo's long, indirect trajectory to Jupiter—made necessary by shuttle launch system changes that required planetary gravity assists to build up speed to reach Jupiter—will also bring scientists views of the solar system never seen before: lighted images of the back side of the moon, a movie of the full rotation of the Earth, photographs of the Gaspia asteroid belt, an "unprecedented" look at the polar region of the moon, and a movie of the the moon crossing the face of the Earth. ■

## Command Media continues to make improvements

The Command Media group is using the results of a recent survey to identify areas for improving user services.

Among improvements identified for Command Media users, the most important item is training. Survey results show that 85 percent of the users desire training. The group is devising a training plan for implementation soon.

Other items addressed in the survey for improvements include documentation, automation and availability.

While Command Media focuses on improving user services, its logo contest deadline, June 15 at 3 p.m., is drawing closer. Questions can be directed to Joan Wise at Ext. 7-7557.

## AFPRO to change to DPRO

On July 1, the Air Force Plant Representative's Office (AFPRO) will become the Defense Plant Representative Office (DPRO), reporting to the Defense Contract Management Region (DCMR) headquartered in St. Louis.

The DCMR operates in nine regions under the Defense Contract Management Command (DCMC) within the Defense Logistics Agency (DLA).

Creation of the DCMC allows the Department of Defense to consolidate contract administration operations for all military services. It also presents one face to industry in implementing and interpreting contract administration policy. This centralization also simplifies contract administration matters for industry because contractors will now deal with only one set of procedures for payment and administration.

Col. John B. McCabe, currently commander of the AFPRO, will continue to oversee the Astronautics Group but as commander of the DPRO beginning on July 1.



## Van Dewerker gets ASQC award

Nicholas J. Van Dewerker, right, director of Product Assurance, accepts the American Society for Quality Control (ASQC) Denver chapter's 1990 Quality Professional Award from Wells B. Lange, the 1989 Denver chapter chairman. Van Dewerker received the award last month at an ASQC recognition dinner.

## Corporate news

### Corporation purchases two Missouri quarries

The Corporation has completed purchase of the operating assets of McKee Quarries, Inc., of Greenwood, Mo., for an undisclosed price.

The cash purchase includes the property, plant, equipment and inventories of two limestone quarries at Greenwood and Peculiar, Mo., both south of Kansas City.

"These quarries, along with being an excellent strategic fit with our existing locations in Kansas and Missouri, provide us with an established entry into the expanding Kansas City construction market," said Stephen P. Zelnak, president of Aggregates.

### Corporation to develop concept for autonomous vehicle

The Corporation has been awarded a contract to develop a concept for autonomous control of an underwater vehicle.

Aero & Naval Systems of Baltimore will perform the work for the Naval Coastal Systems Center, Panama City, Fla. Advanced Decision Systems of Mountain View, Calif., will be Martin Marietta's principal subcontractor in the nine-month study.

Three other companies also received

contracts, and competition for a multiyear follow-on contract valued at up to \$15 million will follow completion of the current contract.

Currently, Martin Marietta is involved in several autonomous systems projects, including the first mission package for the Defense Advanced Research Projects Agency's unmanned underwater vehicle, and has developed a mobile underseas systems test laboratory for testing-related technologies.

### Corporation continues 33-3/4-cent quarterly dividend

The Corporation's board of directors authorized a quarterly cash dividend of 33-3/4 cents per share on the company's common stock, payable June 29 to holders of record at the close

of business on June 4. The action continues the rate on Martin Marietta common, effective in the third quarter of last year, of \$1.35 per share on an annualized basis.

### Sheehan elected corporate secretary

The Corporation has elected Kathleen T. Sheehan as secretary of the Corporation. She succeeds Janice K. Henry, who has become director of Business Management for Space Systems.

Sheehan joined the Corporation in 1982 with the Denver Legal department and has held a

number of increasingly responsible positions, becoming assistant General Counsel for Martin Marietta in 1989.

A native of Pueblo, she is a graduate of the University of Colorado and holds a juris doctorate from the University of Denver.

## Corporation tops DOD's research list

The Corporation finished fiscal year 1989 as the Department of Defense's (DOD) top research, development, test, and evaluation (RDT&E) contractor. The Corporation earned nearly \$2 billion in DOD RDT&E contracts for that year.

The Pentagon last year awarded a total of \$23.2 billion research and development contracts to nearly 400 U.S. and 14 foreign contractors.

The biggest share of the \$23.2 billion—30 percent—went to contracts for missile and space systems.

McDonnell Douglas finished second in funding with \$1.7 billion.

## Macintosh training for experienced users continues

One-hour training sessions for experienced Macintosh users continue to be offered through the Internal Information Systems' Training and Education department.

Training on Word, MacDraw II, Excel, PowerPoint, and HyperCard can be scheduled through training administrators or by contacting Shirley Gombor at 790-3634.



### Employees turn out to beautify

Suzanne Averman, of the Denver Botanic Gardens, left, joins Astronautics Group employees, continuing from left to right, Vicki Denny, Jim Denny, and John Hubert last Saturday to plant 6,000 wildflowers around the Martin Marietta sign outside the Main Plant. The special mix of wildflowers, developed during the past three years under Martin Marietta funding, is designed to be planted along Colorado highways for beautification and to help control erosion. More than 20 volunteers helped plant the flowers.

## Research library offers new database services

The Research Library now provides users the ability to perform on-line electronic searches for bibliographical information.

Thanks to TECHLIB, an electronic card catalog database, employees can research a variety of topics by simply typing a subject into the system.

In return, the system will list all publications available to employees with information on the topic alphabetically by title and author.

To help employees use TECHLIB, several information processing centers have been established as focal points for users to pick up and drop off library material.

Locations and phone numbers are: Deer Creek Facility, Room AC105, Ext. 7-4969; Engineering Building, Room 114, Ext. 7-6258; Littleton Systems Center, Room 252, Ext. 7-2448; South Park West I, Room 195B, Ext. 1-6069; and Space Support Building, Room 408, Ext. 7-3987.

For more information on TECHLIB, call Ellie Reiter at Ext. 7-6363.

## United Way sports new mission statement

Mile High United Way President and Chief Executive Officer John Jaco recently explained the organization's new mission statement in preparation for the 1990 campaign.

The Mile High United Way mission statement says: "To lead a concerted community effort to solve human problems and enhance the quality of life."

Jaco's proud of the new statement because it's "new and simple," and because "working to enhance the quality of life, is a phrase we all can do something about," he said.

In addition to creating a usable mission statement, the organization also has produced a vision for the 1990s, long-range strategies, and priorities for this year.

For 1990, the Mile High United Way is rallying around: corporate planning; internal operations and planning; funds development; funds distribution; community services; and marketing and communications. Within each of those operating units specific goals, tied into the long-range strategies, have been created for guidance and direction.

Jaco's optimistic about the upcoming years and feels that the Mile High United Way now has a way to control all support functions, while obtaining a concerted front for all operations.

The Astronautics Group pacesetter campaign gets started next month.



### Watkins honored by DOD

Herbert L. Watkins, center, manager of Materiel Support Operations, recently received a Department of Defense certificate of appreciation for support of the Naval Reserve. The award is part of a national effort to recognize supportive employers of guardsmen and reservists. Presenting the award is Cmdr. Van L. Benedict, second from right. Joining the ceremony are Albert P. Firmin, right, Small Business Development administrator for Space Systems and member of the Naval Reserve; Bob Lines, left, manager of Central Materiel Operations; and Sam J. Catanzaro, second from left, manager of Materiel Estimating and Cost Management.

## Your Employee Store continues improvements

Employees are reminded that they can select video movies for rental at the Deer Creek, South Park West I, and Engineering Building store locations. And film processing is no longer pre-paid at South Park West I, LSC, and Deer

Creek, as film can be picked up and paid for at the company stores.

The employee stores also have many unique gifts for Father's Day, June 17.



## Employee services/recreation

**Colorado Corporate Games**—The tenth annual Colorado Corporate Games are slated for today and tomorrow. More than 120 employees will participate as athletes or volunteers at several locations. Spectators are encouraged at these events:

- Track, 5:30 p.m. today at Jefferson County Stadium, W. Sixth Avenue and Kipling;
- Volleyball, 5:30 p.m. today at Green Mountain High School, 13175 W. Green Mountain Drive, and tomorrow at the Colorado Sports Complex, 5555 W. Evans (Evans & Sheridan);
- Tennis begins at 6 p.m. today and continues tomorrow at Morris Park, 20th and Allison, and Lakewood Park, Kipling and Cedar;
- Bowling, 9 a.m. tomorrow at Holiday Lanes, 10350 W. Colfax;
- Bicycle time trials, 8 a.m. tomorrow at the Denver Federal Center, Second and Kipling, followed by the criterium races at 10:30 a.m. (Enter through Gate 1);
- 5K Race and Racewalk, 9:30 a.m. tomorrow at the Denver Federal Center, Second and Kipling (Enter through Gate 1);
- Swimming, 9 a.m. tomorrow at Green Mountain Recreation Center, 13198 Green Mountain Drive;
- Trap Shoot, 9 a.m. tomorrow at Mile Hi Shooting Park, 1745 Highway #7, Erie, Colo.;
- Golf, 10 a.m. tomorrow at Foothills Golf Club, W. Hampden and S. Carr Street; and
- Racquetball, 1 p.m. tomorrow at The Point Athletic Club, 533 VanGordon St.

For additional information, contact the Employee Services office, Ext. 7-6605 or 7-6750.

**Classic Car Exhibit**—A classic car exhibit of vehicles owned by Martin Marietta employees will take place from 11:30 a.m. to 12:30 p.m. and 4:30 p.m. to 5:30 p.m. today at the Deer Creek Facility in the south center level parking lot.

**Smoking Cessation Classes**—Nicotine causes heart rates to increase, requiring more oxygen and reducing the amount of oxygen the heart is able to obtain. This combination causes injury to the heart muscle. Smoking cessation classes continue this month and in July at Deer Creek Facility, Monarch Room. This month's class consists of four meetings from 5 to 6:30 p.m. June 11, 14, 18, and 21. This American Cancer Society "Fresh Start" program is free to all Martin Marietta employees, spouses, dependents, and Air Force personnel. Call Ext. 7-6605 to register.

**Fathom Dive Club**—All interested employees, members, and guests will meet at 6 p.m. Monday, June 11, at Greenwood Point Clubhouse, 5324 S. Broadway Circle in Englewood. Guest speakers Steve Morton, president of Colorado Scuba Club, and Walt Stark will discuss local diving opportunities. For more details, contact Mike Deffenbaugh, Ext. 7-8697, or Kristy Allison, Ext. 1-2265.

**Hunting and Fishing**—The group will meet at 5 p.m. Monday, June 11, in the clubhouse at the recreation area. For more information, contact Mel Smith, Ext. 1-8682.

**Red Rock Bowmen**—Archery club members and prospective members are invited to meet at 4:45 p.m. Tuesday, June 12, in the clubhouse at the recreation area. For details, contact Dave Unruh, Ext. 7-0477.

**Crab Feast**—The Martin Marietta Chapter of the National Management Association is planning an old-fashioned crab feast for the afternoon of June 16 at Sterne Park in Littleton. Food will be served from 1 to 3 p.m., and \$12 tickets must be purchased from a club booster before end of business on June 14. For contacts, check the flyer in the information racks.

**Photography Club**—Platte Canyon photo club members, guests, and interested employees can attend a meeting at 7 p.m. Monday, June 18, at the Public Service building, 10001 W. Hampden Ave. Professional wildlife photographers, Bob Rozinski and Wendy Shattil, will present a slide show. Contact Bill Privratsky, Ext. 7-4969 or 7-3728, for details.

**Hunter Education Classes**—Classes are set for 7 to 9:30 p.m. June 18, 20, and 21 at the VFW Hall, 3860 S. Jason St., in Englewood. The range date is from 8 a.m. to 1 p.m. June 23 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.

**Commodore Users Group**—All interested employees can attend the group's meeting from 5 p.m. to 6 p.m. Tuesday, June 19, in the recreation area clubhouse. Contact Dan Whittemore, Ext. 7-6324, for more information.

**Martin Marietta Ada Working Group—Ada/Software Engineering**—Interested employees will meet at 5 p.m. June 20 at Littleton Systems Center, Presentation Room. The group will not meet during July or August. Monthly meetings will resume Sept. 19. Contact Robert Lewis at Ext. 1-6731 for more information.

**Parapsychology Club**—The group will meet from 5 to 7 p.m. Thursday, June 21, at South Park West I, MIC Room. Jim Henry, founder of the club, will describe club history and development from the late 1970s. All employees and guests, age 16 and older, are welcome. To reserve a guest badge or obtain more information, call Helen Davis at Ext. 1-6887.

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

**Grand Prix of Denver**—Forms to order discount tickets by mail are in the information racks. Order forms must be postmarked by July 1. Tickets for Aug. 25 are \$21 and are good for any grandstand seat. Weekend package tickets are \$53 and include open grandstand seating on Aug. 25 and a reserved, regular grandstand seat on Aug. 26. Employees are advised to mail in order forms as soon as possible.

**Country Western Musicians**—Employees interested in forming a country western band should contact Johnny Ferry, Ext. 7-4127.

**Barber/Styling Shop Hours**—Convenient, professional, low-cost haircuts are available to all employees and Air Force personnel at the following locations: Deer Creek Facility, A Level, south elevators, Monday and Friday 6:30 a.m. to 3 p.m., and Tuesday through Thursday from 6:30 a.m. to 5 p.m., Ext. 7-9157; Waterton, Engineering Building, basement, Monday through Friday 6:30 a.m. to 3 p.m., Ext. 7-3029; and Littleton Systems Center, west and south of cashier, Tuesday through Thursday 6:30 a.m. to 3 p.m., Ext. 7-0560.

**Martin Marietta Ladies Golf League**—Ladies interested in playing golf at 4:30 p.m. on Wednesdays should call Phyllis Bulock, Ext. 1-4242.

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