MARTIN MARIETTA DENVER AEROSPACE

May 17, 1985 Number 10

Company shares Collier Trophy



Accepting the Collier Trophy at an awards dinner May 10 in Washington, D.C., are, left to right, Walter W. Bollendonk, MMU project manager for Martin Marietta; Jesse W. Moore, associate administrator for Space Flight for NASA; Charles E. Whitsett, MMU project director for NASA, and Astronaut Bruce McCandless II of NASA, who was the first to fly an MMU.

The Collier Trophy is awarded annually by the National Aeronautic Association for the "greatest achievement in aeronautics or astronautics in America demonstrated by actual use in the previous year."

The 1984 Collier Trophy celebrates the design, development, and successful operation of the Manned Maneuvering Unit. The trophy citation reads:

"The National Aeronautics and Space Administration and Martin Marietta Corporation for the development of the Manned Maneuvering

Unit and the National Aeronautics and Space Administration team which rescued three disabled satellites, with special recognition to Astronaut Bruce McCandless II, NASA's Charles E. Whitsett, Jr., and Walter W. Bollendonk of Martin Marietta, for adding and demonstrating a significant new dimension to man's capabilities in space."

The company shared the Collier Trophy in 1981 for the successful first flights of the Space Shuttle, and Glenn L. Martin won the trophy in 1932 for development of a high-speed airplane.

Innovative contract leads to minimized costs

The U.S. Air Force has awarded Denver Aerospace an operational provisioning contract valued at more than \$20 million over an estimated three-year duration.

The contract will provide operational spares in support of Peacekeeper transportation and handling (T&H) provided by Martin Marietta, and instrumentation and flight safety system (IFSS) equipment. John F. Dwyer, director of Peacekeeper logistics, Strategic Systems, will head the program.

With the award of this contract, Martin Marietta plans to use innovative approaches in the areas of spares acquisition and pricing to enable fair, equitable and reasonable prices.

The concept of having a dedicated acquisition/ support team is being developed. This team will consolidate the acquisition process and enable reduced manpower by crossing organizational disciplines. Other cost savings in the area of quality source/receiving inspections also are being evaluated. Spares prices will reflect these savings. All other areas of rates and factors are being reviewed for applicability.

This concept was presented to Maj. General Casey, Commander, Ballistic Missile Office, on April 2, and Martin Marietta received a positive response to this approach.

New centrifuge at CU most powerful in world

Colorado will have the most powerful geotechnical centrifuge in the western world when a new University of Colorado facility is completed in October.

Martin Marietta Corporation, through its Denver operations, has made a grant of \$100,000 to the CU College of Engineering and Applied Science to assist in funding the 400 g-ton centrifuge. Funding also comes from the U.S. Bureau of Reclamation, the U.S. Air Force, a departmental bequest fund, and the University's capital equipment funds. Chen & Associates of Denver contributed site preparation.

Designed to provide information that could contribute to the safety of earth-filled dams and other large structures, the \$1.6 million center will be located on the University of Colorado campus

in Boulder. Construction began on the new facility this month.

Whirling loads of up to two tons at speeds that will subject them to 400 times the pull of earth's gravity, models of dams and other earth structures will be subjected to these pressures to determine if they are vulnerable to slippage or water damage.

Data from the centrifuge testing may help to avert disasters such as those that occurred at Lawn Lake in Rocky Mountain Park and the Grand Teton Dam in Idaho.

The new centrifuge will be equipped with television cameras that ride the whirling arm and with flooding devices that allow study of water going through or over a dam. Later, the new centrifuge will be equipped with a device that will generate earthquake-type shocks.

I&CS featured at international convention

Martin Marietta Information & Communications Systems (I&CS) will be featured at this year's Armed Forces Communications and Electronics Association (AFCEA) International Convention and Exposition, June 4-6, in Washington, D.C.

More than one-third of the company's 20 by 50 feet of space will be devoted to the Standard Tactical Operations Facility II (STOF II), a multi-purpose communications system to provide tactical forces with an automated staff message processing capability. STOF II is designed to accelerate message processing and reduce personnel and equipment. The STOF II hardware

exhibited is the third generation shelter that has evolved from ASMPS and STOF I.

The display will also feature a nine-projector, three-screen multi-image slide show, describing the systems and capabilities of I&CS. Unusual in design, the multi-image presentation will be eight feet above the ground, in a circular, computer-driven projection theater.

Other products and systems displayed at the exposition will include ASAS/ENSCE, Navy Plotter, Air Traffic Control, MILSTAR, Small ICBM launch-control system, CNCE, Operational Intercom System-Digital, MSR, and Strategic Defense Initiative.

Retirees in 1985

Congratulations and best wishes to:

Dean L. Adams, F. Alvarado, Thomas E. Bailey, Robert L. Bett, Fred E. Bond, Joseph M. Borgerding, Robert G. Brown, James L. Burridge, Frank R. Clover, John S. Cochrane, Donald C. Cole, William D. Corbin, Fayetta Curry, Wilbert A. Dreitz, C. G. Englen, Thomas M. Flaherty, Lavern L. Gehringer, Ilene R. Goorman, Roy G. Gregory, George V. Harris, Robert W. Hazelwood, Charles W. Herman, George E. Heyliger, Robert L. Hildenbrand, Margerite R. Honly, Stanley Hutchins, Beverly B. Jones, Wayne F. Kellogg, James C. Lindeen, Donald J. Longtain, Mabel Marguerites, Eugene W. Marker, Robert P. Miller, Manuel R. Moreno, Joe M. Nakaoki, Rebecca R. Nelson, Albert J. Nelson, Stanley E. Nelson, William O. Olinger, Clarence J. Oye, Oney Padilla, Quentin L. Parks, John T. Polhemus, R. Dewey Rinehart, William C. Ringeisen, David F. Rusk, James B. Sanders, William H. Schreck, Ernest A. Schumacher, Chester R. Seese, Rolf W. Seiferth, Joseph J. Bartnick, John B. Shiner, Garnett L. Shipley, Robert S. Spurrier, Charles L. Stanley, Wesley E. Streiffert, Franklyn F. Talmage, George F. Thiel, C. B. Thomas, Kenneth P. Timmons, Erich Treidel, Vincent J. Trudeau, Solomon Trujillo, Marvin A. Trupp, Walter E. Watkins, Harlan E. Welch, Cecil B. Westfall, Donald W. Whiteside, Ursula S. Williams, Freda A. Wynne, and James A. Zimmerman.

Employee footwork eases summer job hunt

The Colorado Alliance of Business (CAB) seeks energetic, enthusiastic persons already employed for a 'loaned executive' program, which provides a free referral service for those seeking jobs.

Carol S. Romero, manufacturing and industrial engineering, and Sharyn L. Baker, human resources, represented Martin Marietta for two weeks in April to support the 1985 summer job hunt program. CAB, in conjunction with KCNC, channel 4 TV and the governor's office, have sponsored the program for five years for employers who wish to hire qualified workers ages 16-21.

Romero and Baker joined 15 others from various sponsoring companies in canvassing the Denver metro area, and located 5,210 job orders this year, compared with 1,400 in 1984.

"I found that footwork, a good map, and a few hours at the end of each day setting up appointments worked out well," Romero said. "It was a great experience; one I'd be willing to repeat."



Society thanks company's support—

Randall L. Williams, far right, manager of El Segundo, CA, operations, recently accepted an award on behalf of Denver Aerospace president Peter B. Teets, center. The award, given by the Mexican American Engineering Society following their 9th Annual Symposium, recognized Martin Marietta's support for the symposium and the society. Sal S. Calderon, co-chairman for the April symposium held in California, works on the TOS AMS program.

Logo contest seeks design for Titan 34D-7

A contest to design a logo for the Titan 34D-7 program began May 3 and will run through May 28, with judging completed by June 7. The contest is open to all employees of Denver Aerospace and employees of major subcontractors.

The winner will receive a \$500 U.S. Savings Bond and framed original final artwork.

Concepts might, but do not have to include assured access to space; delivery to geosynchronous orbit; large payloads to orbit; complementary expendable launch vehicle (CELV); responsiveness; Titan's 25-year heritage; most successful U.S. ELV system; and pictorial representation of the vehicle.

Design format may be round, oval or irregular in shape, but presented to fit inside a six-inch diameter circle, and include both words and art; single, two or full-color art, suitable for adaptation to one-color presentation; and suitable for reduction to a one-inch diameter size, with basic design still obvious.

A team of program personnel will chose the winners, and Denver Aerospace graphics department will perform detailed preparation of the final art.

Upon submittal of a concept, the candidate grants to Martin Marietta Corporation sole and exclusive rights to use and reproduce, in any manner and for any purpose, the submitted concept, including the right to seek statutory copyright or trade mark protection, as Martin Marietta Corporation deems appropriate.

Submit art to Joanie Shutts, Building 8100, GCF, mail stop G6010 (or, if by overnight express, to Shutts at Denver Aerospace, 8100 E. Maplewood Avenue, Englewood, CO 80111) by 4:00 p.m. MDT on May 28.

Awards program elects Forsyth

The Board of Advisors for the Outstanding Young Women of America awards program announced the selection of Trudy L. Forsyth for inclusion in the 1984 edition of Outstanding Young Women of America. The program honors exceptional young women who have distinguished themselves through dedication and service to and leadership in their communities, states and nation. Forsyth is an associate engineer with the thermal physics home shop at the main plant. She does thermal analysis of the external protection material on the Peacekeeper.



Briefing—

Resistor seminar offered

Employees will have an opportunity to attend a seminar on resistor technology at 1:00 p.m. on May 20 in the SSB Building's sixth floor conference room. Jerry Krebill of ULTRONIX, INC. and Marv Blair of WEST High-Tech, will conduct the seminar and answer questions and discuss applications.

New technical operations directors named

Robert G. Morra, vice president, technical operations, has appointed John D. Goodlette as vice president and chief engineer, technical operations, effective May 1. Goodlette will report directly to Morra, and replaces James L. Burridge who retired in May.

Morra also has named J. Carroll Curlander director of engineering operations, replacing R. Dewey Rinehart, who retired May 1.

Computer and graphics demonstrations in Denver for em-

ployees—Burroughs Corp. will have a "Burroughs Solution Fair" from 8:00 a.m. to 5:00 p.m. on May 22-23 at the Regency Hotel at I-25 and 38th St. exit, to demonstrate mainframe computer, microcomputer, small business systems, and professional graphics. For further information, contact Mark Yeun or Dawn Freimuth at 761-2570.

Employee's book published

Thomas A. Milligan, senior staff engineer for radio frequency systems and communications, has taught an evening school course on antenna design since 1980. In March, McGraw Hill published his first book, entitled *Modern Antenna Design*. Milligan, employed by Denver Aerospace for more than eight years, also is supervisor for the antenna lab.

Career planning workshop

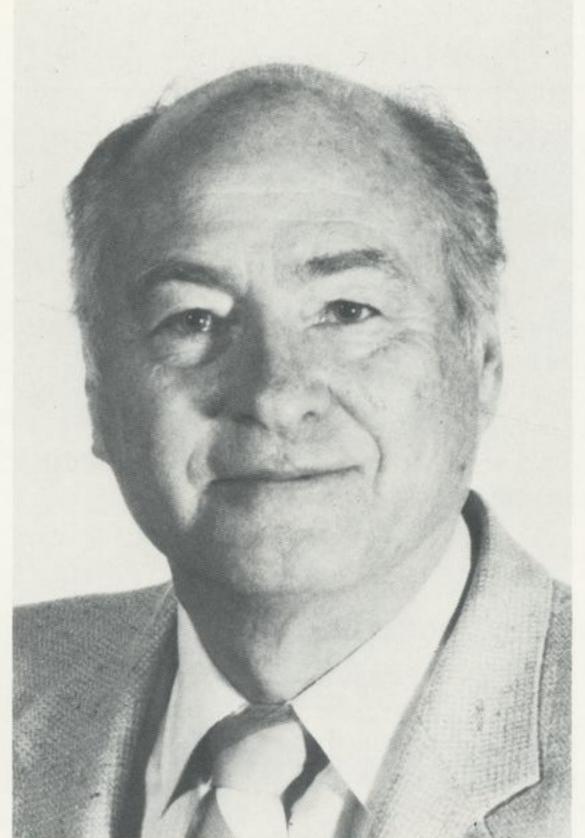
The Career Women's Association plans a workshop on career planning to be held at 5:00 p.m. on Thursday, May 23, at the Padre Restaurant, 8035 S. Quebec. Call Annie Rackowski, ext 7-4447, to make reservations, no later than May 21.

Employee purchase plan seeks

Owners—IBM has shipped parts to Data Systems. If employees purchased an IBM PC Jr. through the Martin Marietta employee purchase plan prior to October 31, 1984, they should claim their replacement part by calling either Vicki Castro, 790-3001, or Marvin Crandall, 790-3003.







Beery

Company promotes Morra to vice president, technical operations; Berry succeeds at Denver

Martin Marietta Corporation has announced the appointment of Robert G. Morra, veteran aerospace engineering executive, as vice president for technical operations. Morra, 50, who has had similar responsibility at Denver Aerospace for the past two years, will move to Bethesda where he will be responsible to the Executive Office for engineering, manufacturing, quality assurance, and research across the entire Corporation, and will direct the Corporation's developing roles in several strategic technologies. Also reporting to Morra will be Martin Marietta Laboratories and Martin Marietta Environmental Systems, both located in Maryland.

Succeeding Morra at Denver will be Warren G. Beery, most recently director of technical operations for Space Launch Systems. From 1978 until earlier this year, Beery was responsible for technical conduct of Titan 34D flight operations, design and test of the Peacekeeper missle, and ground support activiation for the space shuttle at Vandenberg Air Force Base, CA. Both appointments became effective May 15.

Recognition: How the company says "well done" to employees

The message is "thank you", and Martin Marietta hopes to communicate appreciation for employee excellence and innovative performance through a number of company and corporate recognition programs.

Company awards—Topping the list of formal recognition, the Jefferson Cup is the highest corporate honor, named for Thomas Jefferson. Each year employees throughout the corporation are awarded this honor. Locally, the company honors hundreds of employees each year; local Awards Nights recognize employees from every division, central organization and field office. The award distinctions fall into eight categories: operational performance, technical achievement, business development, quality achievement, IRAD excellence, new technology, publications and inventors.

Spot awards—This award recognizes an employee who demonstrates a creative or exemplary method of job performance. Last year more

than 1100 Denver Aerospace employees received cash awards for their efforts.

Employee commendations—Employees receive written commendations reflecting their work. The reports become a part of the individual's permanent record.

Meal tickets—More than 500 free meal tickets were given to employees last year by various departments for jobs well done.

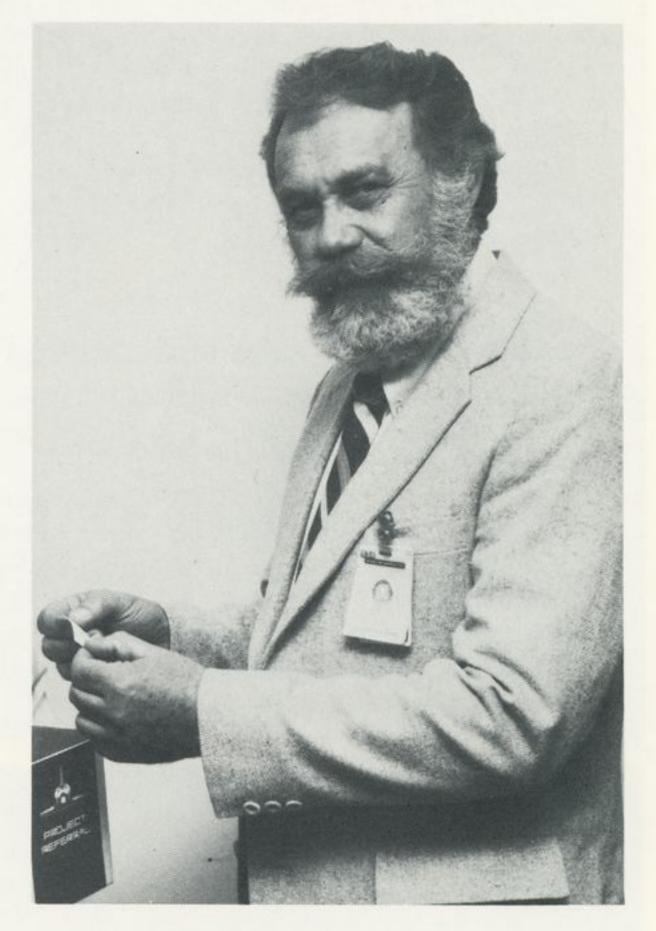
Company-sponsored activities and special events—In order to communicate a feeling of belonging to the aerospace team, the company sponsors events such as the family open house, the Shrine Circus, family picnics, Ice Capades, symphony concerts, and tickets to basketball and football games.

Travel—The recreation department offers special employee travel bargains this spring, such as cruises, trips to Scandinavia, Las Vegas, Mexico and Reno. See rec racks for more information.

Medical news

On April 15, the new Connecticut General Medical Guarantee Cards were mailed to the homes of all salaried employees carrying Martin Marietta group medical coverage.

The card may be used at hospitals and doctors' offices as evidence of participation in the company's group medical insurance plan. If an employee has not received the card, please contact the benefits office, Engineering Building, room 125 mail stop 1323.



Project Referral—

Donald J. Nickell, group engineer in the test department and the last winner of the monthly Project Referral drawing, picks the name of Arthur Inman. Nickell and his wife won a trip to see a recent launch of the space shuttle, and said it was a great experience "for both of us." Nickell's referral is now employed by Denver Aerospace.

Notes from security

Use proprietary envelopes—those with green or orange stripes—to send Martin Marietta-use-only documents or information.

Send regular interdepartmental mail in standard yellow inter-office envelopes.

For guidance, see standard procedure 6.1.

Corporate news

Martin Marietta "chair" goes to solar astronomer-

The Smithsonian Institution has selected a leading solar astronomer as its first occupant of the "Martin Marietta Chair of Space History" at the National Air and Space Museum in Washington, D.C.

Dr. Leo Goldberg, a principal participant in the history of solar physics, was appointed to the chair by the Smithsonian to serve a one-year term which began in April.

The Martin Marietta Chair, funded by the company, will bring leading figures in the nation's space program to the museum to research and publish their memoirs.

The museum hopes this will help "capture and record the recollections of these noted individuals, thereby expanding its own research capabilities in space history."

Michoud Division announces executive assignments—

The Michoud Division has named Thomas C. Wirth to director of development plans, and Jon A. Dutton to director of engineering.

Wirth was director of the division's external tank operations at Kennedy Space Center, FL, from 1973 to 1984. Under his direction, the group earned 14 consecutive "superior" performance ratings from NASA, an industry record.

Dutton joined the company in Denver as as stress engineer on the Titan II project in 1962. He transferred to Michoud at the beginning of the external tank program in 1973, and most recently was manager of analytical mechanics.

Company reports sales and earnings increases for first quarter—

Martin Marietta Corporation reported 1985 first quarter net earnings of \$27,753,000, or 70 cents per share, compared with \$21,994,000, or 56 cents per share from continuing operations in the comparable quarter of 1984.

Sales increased 24 percent to \$1,006,791,000 from \$810,364,000 in the first quarter of last year. "The strong first quarter results, best ever for the Corporation on a comparable basis, are largely a reflection of superior growth in our aerospace business plus a better than normal performance by the construction aggregates segment of our commercial enterprises," said Thomas G. Pownall, chairman and chief executive officer. "It strengthens our expectation that 1985 will exceed the Corporation's historical annual earnings growth rate of 15 percent."

Sandoz purchases Master Builders Division for \$190 million—

Martin Marietta Corporation and Sandoz Ltd. of Switzerland said they completed the previously announced sale of Martin Marietta's Master Builders Division to Sandoz. The purchase price was \$190 million.

The sale includes Master Builders' headquarters and laboratory in Cleveland, 12 plants in the U.S. and Puerto Rico, and its operations in other countries.

Powell and Peterson elected corporate vice presidents—

The Board of Directors of Martin Marietta Corporation has elected Robert W. Powell, Jr., and Dan A. Peterson corporate vice presidents.

Powell also is treasurer of Martin Marietta Corporation and Peterson is vice president for business development.

Corporation receives contract to produce laser targeting systems—

Martin Marietta Corporation was awarded a \$50.2-million subcontract by the McDonnell Douglas Corporation to build additional laser-tracker and camera systems for the Navy F-18 Hornet strike-fighter aircraft.

The new system helps F-18 pilots pinpoint and destroy ground targets, day or night. The contract extends production through October 1988. Martin Marietta builds the system in Orlando, FL.

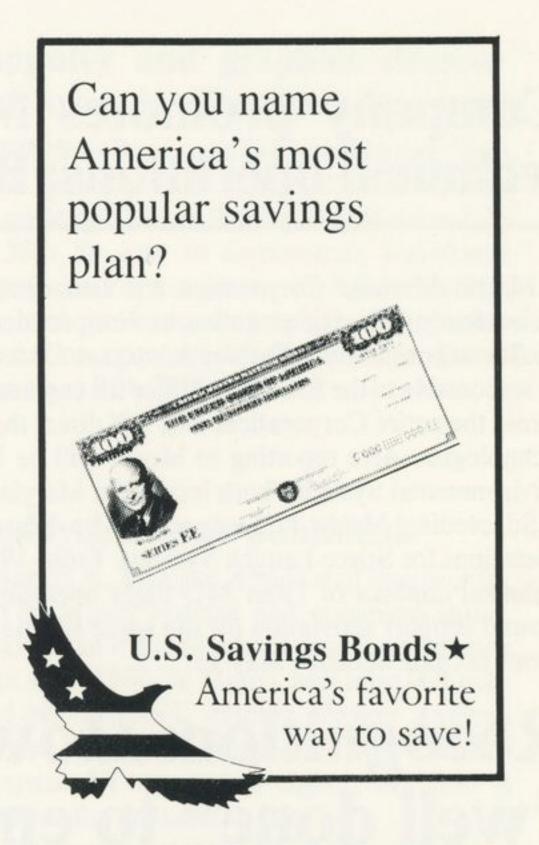
Next holiday: Monday, May 27 Memorial Day

PSP values

Unit values for the performance sharing plan (PSP) for March 1985, with February figures in parentheses for comparison, were:
-Fund A (indexed equity) 2.6765873263 (2.6685025775) -Fund B (fixed income) 2.0979874536 (2.0798521503) -Fund C (company stock fund) 3.4074203809 (3.5136335465) -Fund D (TRASOP) 1.3388245098 (1.3837800524)

IEEE seminar planned—

Jim Walker, space station program, will discuss launch dynamics of space vehicles at a seminar sponsored by the Institute of Electrical and Electronic Engineers (IEEE) on May 21 at the Landmark Inn. The presentation will include types of orbits (close earth, elliptical, geo-synch and deep space), effects of land masses on orbital trajectories, solar effects and other body effects on orbits. Those interested should call Henry Rackley, ext 7-7621, or Norm Sitter, ext 7-9928 by 4:00 p.m. today.



MARTIN MARIETTA NEWS

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Call Ext 5364 with information or suggestions for articles, or call one of the following coordinators.

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Michoud Division: Vandenberg Operations: Canaveral Operations:

Photography by Pat Corkery

Richard L. Kline 2202 Robert V. Gordon 9108

DENVER AEROSPACE P O Box 179—Denver. CO 80201

May 17, 1985

Recreation/employee services

Baseball—Exhibition game between Denver Zephrys and Cincinnati Reds, with Pete Rose, will occur at 7:00 p.m, Thursday, May 30 at Mile High Stadium. Plan ahead: discount tickets on sale through Friday, May 24, while supply lasts. Purchase in person at the recreation/employee service office, Eng. Bldg., 124G, or mail check, payable to Martin Marietta, with order form (available from rec racks), to mail stop 1321.

Archery—The Red Rock Bowmen plan spring family activities. Club meetings are on the second Tuesday of each month at 4:45 p.m. in the recreation clubhouse behind the softball fields at the main plant.

Corporate games—More women needed to try out for company's swim team. Selection made in late May for June 8 competition. Event categories include 50-meter free, back, butterfly; 100-meter free; 200-meter free relay; and medley relay and 100-meter master free relay (age 35 years plus). Those interested call Terry Heggy, ext 7-8043.

Corporate games—Women needed for 13-mile criterium bicycle race. Will select one woman. Contact Ken Billings, ext 7-7972. Also need women to try out for 1500-meter track event and women 35-40 years to try out for 5 K race. Contact Jeff Findle, ext 7-9576.



Employees and families enjoy recent Ice Capades event, sponsored by Martin Marietta.

Volunteers—Employees needed to assist with Corporate games on June 8, including tennis, raquetball, bicycling, bowling, golf, track and field, volleyball and swimming. All volunteers will receive a T-shirt for their efforts. Call recreation, ext 7-6605 to register.

Discounts—Zenith and U.S. Tech now offer discount sales, service to employees of Martin Marietta. Call 972-0300.

Walkers—Special walking tours of Roxborough State Park. Reservations needed one week in advance, 797-3986.



Quality circle teams work:

Quality Circle increases effectiveness— Members of the CAD/CAM Quality Circle presented a standardized checklist that covers information needed by CAD/CAM designers, and increases operator effectiveness by 13 percent, with a savings of about \$241,000 in the first and subsequent years. Circle members include, seated left to right: Mike Hreno, Nancy Boston, Dave Wood, Rowdy Messinger and Brad Locke. Standing, left to right: Jim Espy, Dave Nicholas, Mike Glanert, John McAllister and Fred Frey. Industrial engineering approved the cost analysis summary.