

MARTIN MARIETTA

news

DENVER DIVISION

NUMBER 4/1980

Titan 34D
delivered



Successful referral program is being improved

More than 40 percent of the experienced professional employees hired so far this year are the result of the employee referral reward program.

And, division employees have earned more than \$50,000 for suggesting that their friends, acquaintances, and relatives apply for positions.

"The program has been successful and we have obtained highly qualified employees who otherwise might not have applied for work with us," said R. E. Burnett, director of professional and industrial relations. "We appreciate and encourage the continuing efforts of all employees."

Because of the success, the program is being expanded to include referral of new college graduates and the reward payment is being increased.

For experienced candidates in salary grade 43 and up who are hired and report to work within 90 days of the referral, employees will be paid \$725 (less taxes). Formerly, the payment was \$500 (less taxes).

For the first time, employees may refer candidates in salary grade 41, including new college graduates. If the candidate is hired and begins work within 90 days, the employee will receive \$215 (less taxes).

"We are planning special recognition for employees who have multiple successful referrals," said Burnett.

Special application forms have been prepared to more clearly identify employee referrals and to expedite action on these applications. The applications will be available from staffing offices from personnel and department administrators, and from all mail rooms.

All employees are eligible for the referral rewards except: vice presidents and directors; professional and industrial relations personnel involved in or directly supporting the staffing function; and management personnel for people hired to work under their supervision.

The new program begins April 1.



Two employees who have been responsible for 10 successful hirings under the employee referral reward program discuss improvements in the program with R. E. Burnett, center, director of professional and industrial relations. At left is Frank Roe, mechanics engineering, who became an employee in November 1979. He has been active in the referral program since the beginning of his own employment. Richard Dreith, right, systems engineering, a division employee 21 years, has participated in the program since it began.

Skill category requirements

The following are the skill category requirements for which new employees are being sought by the division's staffing department. Employees are urged to make referrals in these categories.

Software

Software systems analysts/programmers

Test

Test requirements/planning/conduct

Mechanical

Propulsion requirements/design/analysis
Thermal analysis
Aerodynamics/gas dynamics
Stress analysis
Structural/mechanical/mechanism design
Structural dynamics analysis/design/test
CAD/CAM design engineers

Systems

Logistics-trade studies/planners/ILS
Human factors
Design checkers
Reliability/maintainability
Mass properties/weights
Nuclear hardening and survivability
Systems requirements and integration

Electronics

Communications and radar systems engineers
Electronic packaging
Material and process engineers
Electrical power engineers
Cable and distribution engineers
Instrumentation and sensors
Electromagnetic compatibility
TEMPEST

Manufacturing/Quality

Manufacturing engineers
Industrial engineers
System safety engineers
Quality engineers

Business Operations

Program Planners
Configuration and data management
Contracts technical requirements/administration
Procurement and subcontract administration
Program estimators
Cost management

New college graduates (bachelors and graduate degrees) are needed primarily in mechanical engineering, electrical engineering, aerospace engineering, civil engineering, industrial engineering, manufacturing engineering, and in business accounting.

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Denver Division

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March, 1980

\$26.6 million to be spent on improvements

With construction under way on the 142,000 square foot addition to the division office building at Hampden and Wadsworth, a key part of the 1980 capital improvement program has begun.

The building is scheduled for occupancy early in 1981. The \$7 million structure is being built by Martin K. Eby Construction Co. It is being constructed of precast aggregate concrete panels to match the existing facility. It was designed by the division's facilities engineering department to meet or exceed all current standards for energy conservation.

While the four-story addition is new from the ground up, another major construction project is a remodeling of an existing structure. The plasma arc facility is being converted to a mechanisms laboratory. The new lab consolidates mechanisms testing in a central location, reducing set up time, handling, and equipment duplication.

The new lab increases the division's ability to compete for new contracts and to meet requirements on current contracts.

In addition, orders have been placed for \$600,000 worth of desks, chairs, and bookshelves. The furniture is the latest modular style, integrating the desk and bookshelf.

A new computer controlled access system is being installed at locations where entrance to work areas is limited. The access system uses a magnetically coded card and an individual employee code number.

Parking lot paving, landscape improvements, and equipment updating are also included in the plans for 1980.



L. J. Adams, president of Martin Marietta Aerospace, was a speaker when the Viking lander proof test capsule was installed in the Milestones of Flight Hall of the National Air and Space Museum of the Smithsonian Institution last month. At left is Dr. Noel Hinners, director of the Smithsonian Institution's Air and Space Museum. The Viking mission to Mars has been called a "notable historical achievement in the annals of space flight."



Ann R. Melle, who earned a degree in forestry with the aid of a Martin Marietta scholarship, poses with a friend at the Black Hills National Forest where she is a recreation forester.

Scholarship winner completes studies, thanks division

Ann R. Melle in 1975 was chosen to receive a Martin Marietta Corporation Foundation college scholarship. Recently, C. B. Hurtt, division vice president and general manager, received this letter from Miss Melle:

"Along with writing to the . . . scholarship people in Rockledge following my graduation, I thought it would be good to let those of you closer to home, and those who might work with my father know what has become of one of your . . . scholarship students.

(Her father, Charles F. Melle, is contract administrator on the manned maneuvering unit.)

"It's still hard to believe that I've finally graduated. I received my bachelor's degree in recreation administration and forestry from CSU in . . . December. The . . . scholarship was honestly a driving force behind my degree. I can't thank all of you and the Corporation enough for the promise that you saw in me over four years ago, and the confidence that stayed with me through four years of school and a professional training program with my present employer.

"I've received a permanent appointment with the U.S. Forest Service. I'm working as a recreation forester on the forest supervisor's staff at Black Hills National Forest in Custer, SD. I'm planning a career with the Forest Service - an agency that faces many challenges in the future.

"Thank you again and best wishes."



Earth-moving equipment is at work at the site of the four-story addition to the division's office building at Hampden and Wadsworth. The addition is to be completed in early 1981.



Mr. and Mrs. George Lawrence opened account number 1000 with the Red Rocks Federal Credit Union. Charles E. Richards, center, manager of the credit union, said 100 more employees have joined since the Lawrences signed up. Mrs. Lawrence is a statistician and Lawrence is a chief in space launch systems manufacturing. Assets in the credit union are more than \$100,000 and loan applications will be accepted beginning about mid-April. Annual meeting of the credit union will be March 27, 5 pm, SSB sixth floor presentations room. The meeting is open only to credit union members.

Recreation

The recreation office, ext. 6750, is in engineering building module 125.

Mixed Doubles Bowling: A mixed doubles bowling tournament will be held April 12 at Belleview Bowl. One team member must be an employee or serving with an armed services unit assigned to the division. All participants must be 18 or over. The tourney is open to 72 teams (144 bowlers). Entry deadline is April 1.

Photography Club: Those interested in a photography club should contact the recreation office. The club is open to employees and their families at any level of photographic interest and experience. With sufficient interest, an organizational meeting will be scheduled.

Softball Leagues: The organizational meeting for the men's, women's, and coed softball will be Monday, April 14, 4:30 pm in the sixth floor SSB presentations room. Team captains and all those interested should attend. Officials also are needed.

Discount tickets for many events are available from the recreation office or from recreation representatives.

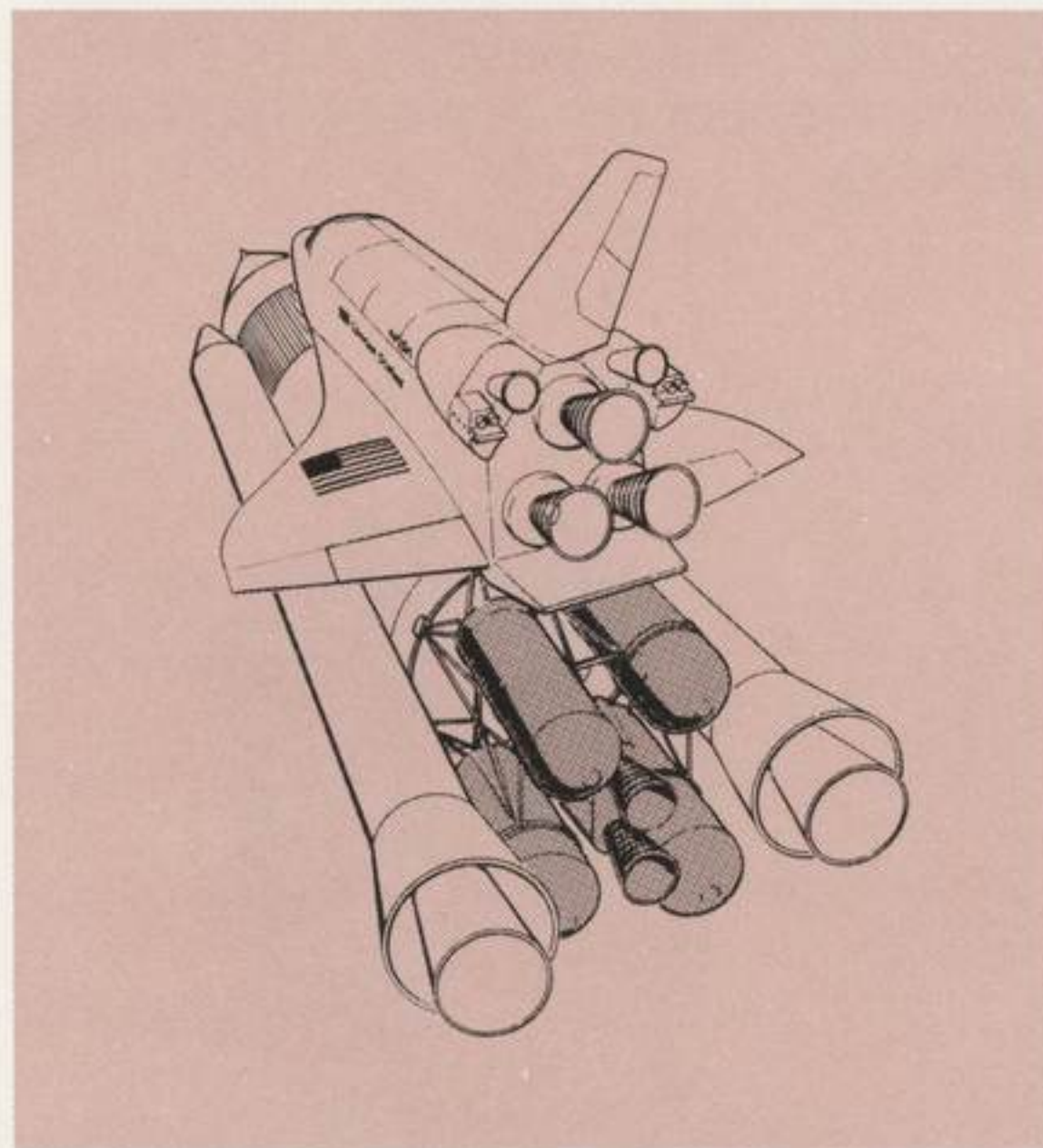
Division wins contract for Space Shuttle liquid boost module

The division has been awarded a study contract to define a propulsion system to provide additional thrust for Space Shuttle.

Under the contract with NASA's Marshall Space Flight Center, the division will perform studies, analyses, and preliminary design activities to define a liquid boost module to increase Shuttle's payload-carrying capability from 24,000 pounds (10,800 kilograms) to 41,000 pounds (18,450 kilograms) when launched into certain prescribed orbits.

The Space Shuttle will be launched from both Cape Canaveral, FL, and Vandenberg Air Force Base, CA. Currently, NASA plans to use the boost module on Shuttle launches from Vandenberg.

The boost module is comprised of four 10-foot (3 meter) diameter modified Titan rocket propellant tanks, a steel support truss, a Titan stage one rocket engine set, and a circular structure connecting the module to the Shuttle external fuel tank.



A liquid boost module (shaded area) is shown attached to the external fuel tank of the Space Shuttle in this artist's concept. The boost module will provide approximately 529,000 pounds of additional thrust for Space Shuttle.

PIC earns award fee

The Payload Integration Contract (PIC) has received an excellent rating in the third award-fee period, earning more than a \$1 million award fee.

In awarding the fee, the U. S. Air Force Space Division said, "The award fee . . . is indicative of the increased task activity . . . as well as your response to the management responsibility such an effort imposes. (Your) performance was excellent."



Ronald W. Lewis, left, chief of the material control section, discusses incorporation of purchase requisition items in data bank backup tapes with Timothy E. DeWeese, finance and contracts department programmer. Lewis has developed a time and labor saving system for hardware acquisition.

GSS procurement paperwork reduced

With the rapid evolution of system design and facility construction, hardware requirements for the Space Shuttle ground support system Vandenberg operations have started the hardware procurement process.

While working on plans for the transition from design to engineering release, Ronald W. Lewis, chief of the material control section, proposed a way to reduce the paperwork required for procurement. The basis of his concept is to automatically transfer hardware descriptions from the engineering computer files to the procurement computer files. He also proposed revision of the method of printing purchase requisitions and computing estimates.

Implementation of the plan eliminated hours of manual paperwork preparation, keypunching and computer file updating, preparation of purchase requisitions, and other operations. The plan also eliminated other manually produced documents, replacing them with an acquisition order.

Jack L. Withrow, manager of material and support department, said members of other departments helped to analyze the new system and to develop procedures to incorporate the Lewis plan.

Programming and testing of the chase requisition printing is complete and the acquisition order printing system is nearly complete. The final link in the system, engineering file to procurement file, is planned for implementation soon.

Titan 34D delivered to U.S. Air Force

The Denver Division delivered the principal elements of the newest model Titan space booster to the U.S. Air Force in roll-out ceremonies February 28.

The new model, the Titan 34D, will serve the Air Force as its main launch vehicle until Space Shuttle becomes operational in the mid-1980s.

Turned over to the Air Force were the two liquid-propelled core stages. The stages will be shipped by airplane to Cape Canaveral, FL, to begin a lengthy series of pre-flight and readiness checks in a newly redesigned launch stand.

The two stages, mated with twin solid rocket motors, and the Inertial Upper Stage, will make the maiden flight in mid-1981.

In the ceremony, the Air Force presented a plaque to Titan program personnel for "their efforts in producing the liquid core stages of the new space booster ahead of the original schedule."

Receiving the citation on behalf of the 1200 members of the Titan program were Roberto A. Garcia, mechanic; Ruben E. Vigil, mechanic; and Harve S. Bradford, quality assurance inspector. This is the 100th Titan delivery in which this trio has participated.

Presenting the plaque was Brig. Gen. Joseph D. Mirth, deputy for space launch systems of the Air Force Space Division headquartered in Los Angeles, CA. The Space Division has executive management responsibility for all Air Force space programs, including the Titan family of launch vehicles.

Col William Villines, Space Division deputy for expendable launch vehicles, also presented a plaque signifying the acceptance of the Titan 34D to C. E. Carnahan, vice president of the Denver Division's space launch systems.

Development functions to be consolidated

The management and organizational development function is being consolidated with the education, training, and employee development function under the management of Roy S. Yamahiro.

Henry J. Baum, former manager of management and organizational development, has been named director of staffing and development at Aerospace headquarters.

Yamahiro and Baum began their new responsibilities March 17.

On the cover

A plaque marking the delivery of the first Titan 34D launch vehicle to the Air Force is presented three employees following roll-out ceremonies. Presenting the plaque is Brig. Gen. Joseph D. Mirth, deputy for space launch systems, Air Force Space Division. From the left are Harve S. Bradford, quality assurance inspector; General Mirth; Roberto A. Garcia, mechanic; and Ruben E. Vigil, mechanic. The ceremony marked the 100th delivery of a Titan for Bradford, Garcia, and Vigil.

Corporation declares 53-cent dividend

The Martin Marietta Corporation board of directors has authorized a quarterly cash dividend payment of 53 cents per share on the Corporation's common stock, payable on March 31, to shareholders of record at the close of business March 10.

Better Business Bureau membership to benefit division employees

"Martin Marietta's membership in the Rocky Mountain Better Business Bureau adds an important benefit for employees," according to Charles T. Dolan, business relations specialist for the BBB. "The membership can help employees get their money's worth when they buy or invest."

The Denver Division became a BBB member earlier this year.

Dolan said services available to employees include free consumer-experience reports on business firms; assistance in resolving problems with a purchase; buy-guide literature on many products and services; and a central point to which they can report deceptive advertising and unfair business practices.

"Employees may call the BBB for information or with complaints and receive special attention by giving the Bureau the division's membership number, 1921," said Dolan. "The BBB has two phone numbers for member use, 629-0127 and 629-0128. These numbers are unlisted and are for member use only."



Mr. and Mrs. Otes E. Englen are shown putting the final touches on the paperwork for their retirement from Martin Marietta. The couple left the division February 29 and will be moving in early April to Missouri to raise livestock on their 217-acre farm. Englen began his Martin Marietta career in 1956 at Denver in the machine shop. He later was a supervisor in the test support group and was a technician in the engineering propulsion laboratory when he retired. Mrs. Englen (whom everyone calls Maxine) started work in 1962. She has worked in the industrial relations housing group, security, as a cashier, and was in material control for CCMS when she retired.

At Michoud



Amateur and professional artists alike recently exhibited their skills during the first Michoud Assembly Facility art show. Employees from almost every department presented nearly 40 examples of imaginative sketches and paintings.

Five complete degrees with tuition aid

"Having Martin Marietta help me with my education is the greatest thing in the world. There is no way I could have done it otherwise."

That is how Ronald J. Waguespack of Michoud operations feels about the company's tuition assistance program.

Waguespack, who completed his BA in accounting at Loyola University in New Orleans in December, believes that his education has afforded him deeper insight into his position as supervisor of the labor costs area. He is also keenly aware of the money involved.

"Over the years, the program contributed thousands of dollars to my education," said Waguespack, who can be considered somewhat of an expert when it comes to the costs of education.

"With eight children of my own whom I'm putting through school, I understand both the importance and skyrocketing costs of education today. I really couldn't have completed my

degree without help," he added.

Waguespack, employed at Michoud since 1974, plans to work towards a master's degree in accounting.

"This opportunity is really a great asset to all employees," he concluded.

Another employee who recognizes the benefits of the tuition assistance plan is Bobbie J. Hilliard of the engineering department.

"My degree has prepared me to advance myself in this office," Ms. Hilliard said. "It definitely helps me on the job."

Ms Hilliard completed her degree in business administration at Southern University in New Orleans last fall.

Other recent graduates aided by the tuition assistance program include Joseph K. Winkler, engineering department; Cheryl Searcy and Leon Richard III, production operations.

Winkler earned BS in civil engineering

at the University of New Orleans. Searcy and Richard received degrees in business administration from Southern University.

Shuttle engines undergo second full-duration test

The Space Shuttle took another step closer to its first launch with a successful three-engine cluster, 550-second test firing at the Bay St. Louis, MS, National Space Technology laboratories on February 28.

"It was a full-duration test at 100 percent of rated power," said Mack Herring, a NASA spokesman.

The test was a repeat of one attempted unsuccessfully earlier this month. After having been delayed by weather and mechanical problems, that test came to an end 4.6 seconds after initiation when one engine overheated causing an automatic shutdown.