

MARTIN MARIETTA

news

DENVER DIVISION

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Mars
Mobile
Lander



\$37 per capita goal is set as '74 United Way division drive begins

An appeal to division employees for an all-out effort in individual contributions to United Way has been made by R. E. Weber, director, Professional and Industrial Relations.

The appeal was made on opening day of the division's 1974 Mile-High United Way fund raising campaign, scheduled September 11–November 15.

"We hope to obtain a 12% increase over last year in each employee's contribution," Weber said. "This would result in a goal of \$37 per capita contribution, up slightly from the 1973 per capita contribution goal of \$33."

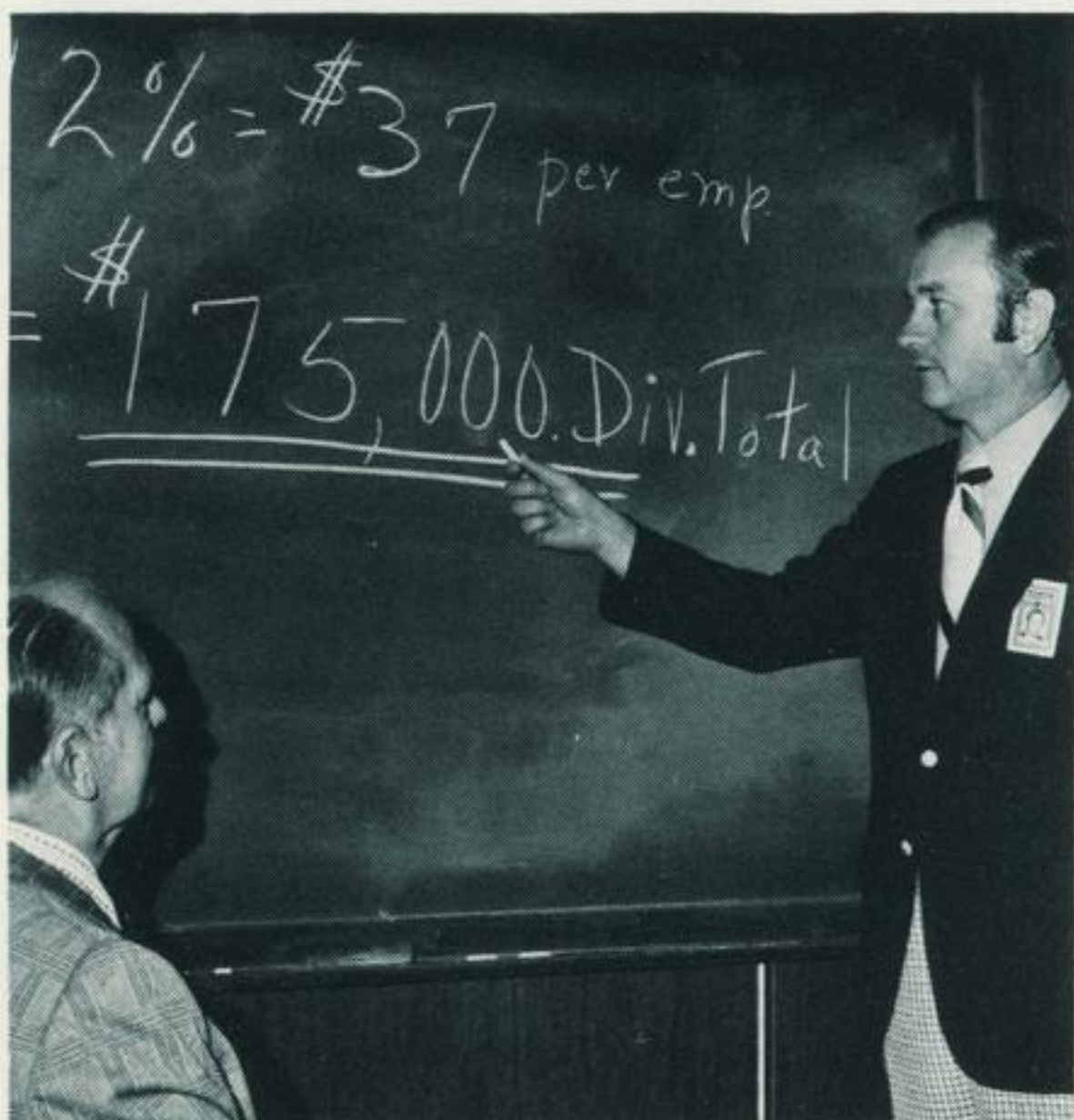
"If each employee would increase his or her contribution by just one cent each week per \$1000 of annual salary, we could exceed our 1974 goal of \$175,000," Weber noted.

Employee participation last year was 99%. "Their response in previous years has been outstanding," Weber said. "and, I know we can count on them again."

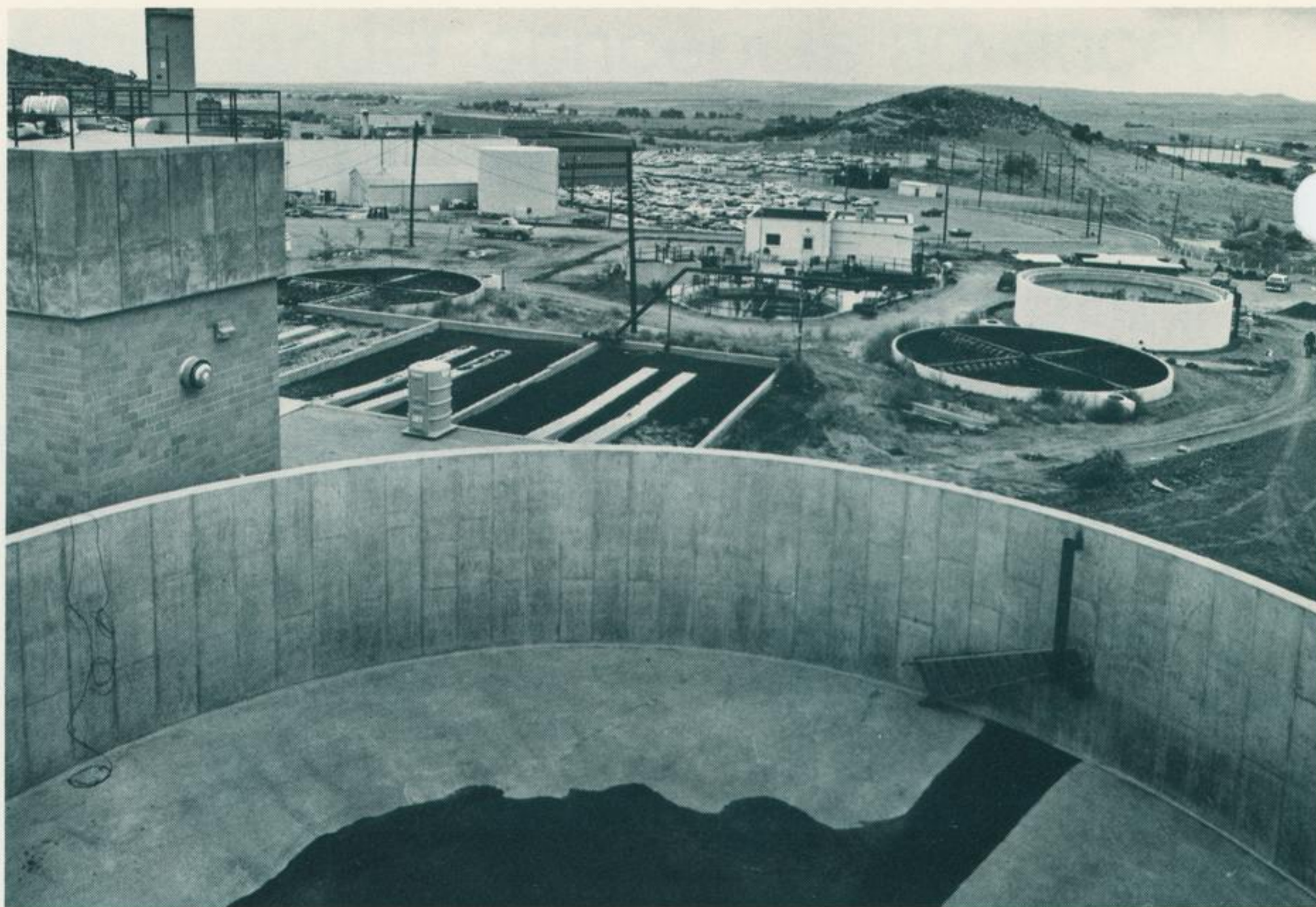
United Way is a consolidation of 74 non-profit, social service agencies serving Adams, Arapahoe, Boulder, Denver and Jefferson counties. A once-a-year campaign for all 74 agencies avoids a duplication of expense and effort for multiple fund drives. Of every dollar raised by United Way, 95.80 cents goes

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**Thanks to you
it's working**



Goals in the Denver division's 1974 United Way fund raising campaign are highlighted below by Al Ringhofer (left) and R. E. Weber, director, Professional and Industrial Relations.



The division's new tertiary treatment facility, which is scheduled for completion in November, will be the only one of its type in

the state. Quick, simple conversion to a zero discharge capability, if needed, is one of its prime features.

Tertiary treatment plant is scheduled to be operational by February, 1975

The new tertiary treatment plant, located behind the factory is planned for completion on November 1.

It is the only one of its type in Colorado and will be capable of handling between 600,000 to 800,000 gallons of waste water per day. Full operation is anticipated by February 1.

Completion of the plant will mark the final phase in up-grading the division waste treatment facilities. In addition, it will enable the division to meet the higher

standards for water treatment set by the State of Colorado and by the Environmental Protection Agency.

Water from the industrial and sanitary systems serving the division will be processed in the existing treatment plant then go through the new tertiary treatment facility. After heavy metal ions and other waste elements are removed, the water is passed on to a holding pond, located in the ravine just below the Electronic Manufacturing facility.

GPL labs relocating to six other buildings

An orderly, carefully pre-planned move of many of the laboratories now located in the GPL Building to other division facilities is now under way.

Purpose of the relocation is to effect greater operating economies and efficiency by moving existing GPL laboratories into the areas requiring most of their services.

The bulk of the laboratories being moved are going into six other division buildings, including Plasma Arc, the Factory, SSL, SSB, RDL and AVL.

Laboratories scheduled for relocation should be moved by the end of this year. The ultimate aim is to relocate between 60 and 70% of all operations now in the present facility.

All Denver division employees will receive a total of seven paid holidays between now and the end of 1974. Five of these holidays will be during Christmas and the other two will be at Thanksgiving.

The next official company holiday for employees will be Thanksgiving when they receive November 28-29 off. Combined with the November 30–December 1 week-end it gives them a four day holiday.

Again in December, the five day Christmas shut-down, December 23-27, combines with the week-ends of December 21-22 and December 28-29 to give each employee, nine consecutive days off.

3 New EWI officers join division for start of 10-month program

Three new Education With Industry (EWI) participants have arrived at the Denver division for a 10-month graduate level program sponsored by the U.S. Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio.

The division has participated in the EWI Management-Development Program for 12 consecutive years. Emphasizing on-site industrial experience, the program is designed to provide the student officer with a greater understanding of production, procurement, and management problems shared by industry and its customers.

The three officers include:

Captain Paul W. Crank, III, who has eight years Air Force service, holds a B.S. degree in mathematics from Texas A&M, and a masters degree in systems management from the University of Southern California. His most recent assignment was as a B-52 navigator at Dyess Air Force Base, Texas;

Captain Linda A. Lowe, has 10 years of military service. She holds B.S. and B.A. degrees from Colorado State University and a masters in business management from the University of Northern Colorado. Her latest assignment was squadron executive support officer, Khorat, Thailand;

Captain James W. Medford, who has a total of seven years military service, holds a B.S. degree from the University of Arizona in production management and a masters in education from the University of Northern Colorado. His latest Air Force assignment was as an instructor, Air Force and DoD Procurement, Lowry Air Force Base, Colorado.



Division engineer Jack Janelle (center) leans into a curve during one of the many bicycle

races in which he has competed this year. He placed seventh in the Aspen Alpine Cup race.

Bicycle racing employee travels far

The Labor Day weekend was a resounding success for Denver division aerospace engineer, John R. Janelle Jr., who bicycled 273 miles in 11 hours and 15 minutes, at times at speeds of 60 mph.

While that type of weekend would be unusual for most, it's nothing exceptional in Janelle's book. He averages riding his bicycle 22 miles a day, 365 days a year.

The division employee started bicycling seriously in 1968 and has been at it ever since. He now has his sights set on making the 1976 Olympic bicycling team.

Over Labor Day, Janelle placed seventh in the Aspen Alpine Cup distance race, biggest prize bicycling race in the United States for 1974. Of the 60 bicyclists starting the grueling 273 mile course, only 24 finished.

Married and the father of two, the 30 year old engineer is a 1971 graduate of the University of Arizona. He joined the division in 1973 and is assigned to Titan IIIB, mission operations and analysis.

During an average year, Janelle will enter

between 25 and 30 bicycling races throughout the United States. Since April he has only missed one weekend of racing and has covered more than 7,000 miles since January.

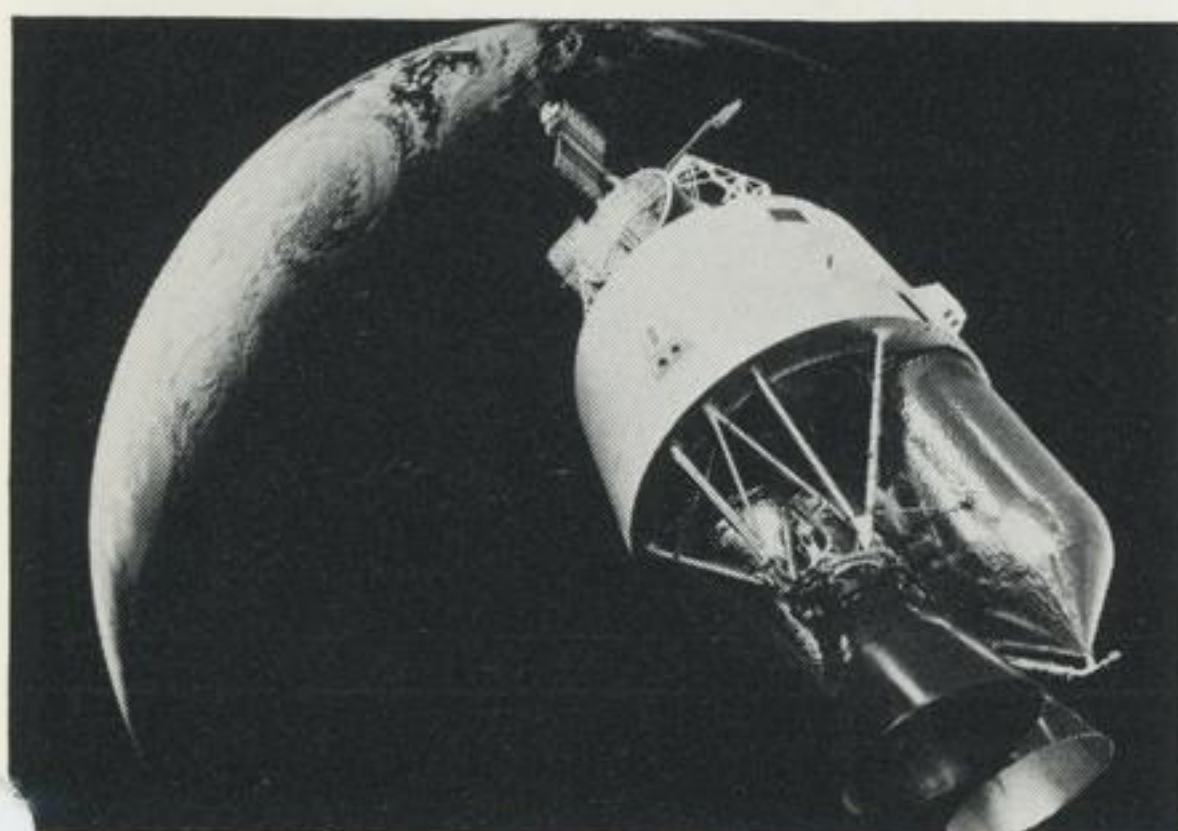
In his effort to land a berth on the 1976 Olympic team, Janelle and 19 other bicyclists from the Western region and 20 top riders from each of the other two regions in the U.S. qualified for the National Selection Races in Milwaukee, July 16-21.

The 10 top finishers won berths on the World Team and the 1975 Pan-American Teams. While he finished 10th in time trials in Milwaukee, he failed to win one of the top 10 berths.

Janelle says he has one more crack at making the team by going through the same procedure in 1975.

In addition to other bicycling laurels, Janelle holds the National Time Trials record for a 25 mile measured course, set June 13 near Bennett, Colorado. He covered the distance in 56:09.7 minutes, an average of almost 27 miles per hour.

IUS conceptual study authorization expected



The interim upper stage (IUS) as it will appear performing its orbit-to-orbit mission in space is shown. Under consideration for the Space Shuttle role are existing propulsion stages of five aerospace firms, including the Martin Marietta-produced Transtage.

U.S. Air Force authorization is expected shortly for the Denver division to commence a nine month conceptual phase study of the interim upper stage (IUS) for the Space Shuttle program.

The operational Space Shuttle will be limited to circular orbits of approximately 160 nautical miles or elliptical orbits of approximately 400 nautical miles.

The upper stage will deliver payloads from the Shuttle orbit to altitudes up to and including the synchronous corridor. It will also provide escape velocities for missions designated for planets in our

solar system. The IUS will be a modification of an existing propulsion stage, such as the Transtage used on Titan III C launch vehicles.

Martin Marietta is one of five aerospace firms selected for the conceptual phase studies, scheduled for completion in June, 1975. This will be followed by 12 to 18 month long validation studies awarded to two or more of the five original firms.

Following conceptual and validation studies, the Air Force will select a prime contractor for development and manufacture of the IUS.



Some of the 9720 division employees and families attending the special Pops Concert watch as the Denver Symphony Orchestra performs at the Red Rocks amphitheater. Division management is anxious to hear employee reaction to the Pops Concert and the Family Day at the Circus held during July. These responses will assist in planning possible similar events for employees in 1975.

Mobile lander concept is advanced to further Martian exploration in '79

A concept designed to further the exploration of Mars by giving mobility to a spare Viking lander, which would visit the Red planet in 1979, has been advanced by division engineers.

The basic concept calls for lander mobility enabling the vehicle to seek out and obtain Martian samples from areas of high scientific interest after landing in a relatively safe region.

The concept provides a movable laboratory which could be equipped with either the full science instrument package used on Viking 1975 missions or with new science instruments whose emphasis is tailored from Viking '75 results.

The 1979 concept modifies the spare Viking '75 lander by adding three elastic tracks in place of the three landing pads.

The tracks would be driven by electric motors at a maximum speed of 150 meters per hour. Range of the mobile lander would be 50 to 150 kilometers.

The track devices used in this concept were developed and tested at NASA's Marshall Space Flight Center and the Mississippi Test Facility, an effort which spanned approximately three years.

While mobility is a new concept for Viking, it is not new in Lunar exploration. Mobility was successfully applied on Apollos 15-17, using rovers, and on an unmanned rover (Lunakhod), used on two Soviet Lunar missions.

Engineering, fabrication and necessary testing on a mobile lander could be completed by 1978 with flight unit deliveries possible by mid-1978 for a late '79 launch. Program Manager for Viking '79 mobile lander is John M. McCorkle.

Executive Management Profiles

[Eleventh in a series of sketches of the division executive management.—Ed.]

The complex, demanding responsibility of administering and providing most of the division's technical and scientific resources rests in the hands of Richard M. Davis, director of Engineering, Research and Development.

A quiet, soft-spoken structural engineer, Davis' department has approximately 1900 employees in Denver with another 500 located at three off-site areas. These include Michoud in New Orleans, Canaveral Operations, and Vandenberg Air Force Base.

His basic philosophy is that new business is an extension of present capabilities. And, these capabilities come about through intense and continuing efforts at improving technological expertise and general knowledge in many areas.

Our primary responsibility, he explains, is to provide, assign and monitor the performance of the necessary technical and scientific talents required to successfully carry out division programs. These include major efforts such as Titan and Viking down through the smallest contracts being performed.

At the same time, the department must concentrate in two other major areas,

administration and planning. Department personnel total approximately one third of all division employment . . . requiring a major administrative function.

And, planning for the future is vital to ensure sufficient technical and scientific talent and facilities for proper staffing of future divisional programs.



Richard M. Davis

A native New Englander, Davis was born November 27, 1929, in Fall River, Mass. He holds a bachelor of science in aerospace engineering from the Massachusetts Institute of Technology.

After graduation from MIT, he entered the Air Force where he served until 1953 as a structural test engineer. He joined Martin Marietta Corporation in Baltimore following his discharge, continuing his studies at the Johns Hopkins University.

He is continuing his business management training by attending the Harvard Advanced Management Program. He will complete the two split sessions next summer.

From 1969 until being named Director, Engineering, Research and Development in 1973, Davis served as program manager for the Space Station Study and RAMS proposal, the MDA/Skylab program and the Skylab/MSSC.

\$37 per capita goal is set for United Way

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toward providing service for people in this five county area.

The total United Way campaign goal for 1974 is \$8,065,000, a \$547,199 increase over funds raised in 1973.

Signing of a payroll deduction card for United Way commits an employee to the contribution specified while employed by the division. Employees may, however, change their contribution at any time by filing a new card.

Employees will be contacted by department coordinators, who will take their payroll deduction pledges. The program will be headed this year by Al Ringhofer in place of Tom Rendler who is recovering from surgery.

On the cover --

Future Viking missions might see a mobile lander similar to the mock-up shown here. The crawler concept would greatly increase the scientific application of future Viking landers. The technology for the crawler was developed by NASA during the lunar rover program.

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