

In this issue. . .

ORGD's Marion Randolph describes the thrills of alpine climbing on Page 4.

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question box. . .

If you have questions on company policy, write the Editor, **Nuclear Division News** (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

Parking for handicapped

QUESTION: A lot of provisions have been made around the plants for handicapped persons. In Y-12's North Portal, however, parking is allowed to block one of the ramps. Is this not illegal? Or unfair at the least?

ANSWER: Yes, special parking and related access facilities have been provided at Y-12's North and East Portals for handicapped employees, applicants, and visitors requiring wheelchair access via these portals. Similar accommodations are anticipated elsewhere as actual need arises.

You are correct that parking should not be allowed to block ramps, and the situation at the North Portal seems to be corrected. We find employees to be cooperative and respectful of these special accommodations when it is brought to their attention. However, Y-12 particularly does continue to experience parking in violation of other designated restricted zones, traffic lanes, and pedestrian lanes and is taking appropriate steps to minimize violations.

Theft of property

QUESTION: I know theft of government property is inexcusable. On several occasions, we have seen government property being taken from Y-12 at 11 p.m. What action, if any, would you recommend?

ANSWER: As an employee, you have an obligation to report suspected theft of government property. Any employee observing or having knowledge of unauthorized removal of government property from the installation should immediately notify one of the following: supervision, installation shift superintendent, the installation security department, or the Federal Bureau of Investigation. In the employee handbook, **You at Union Carbide**, the Appendix outlines the criminal penalties imposed by the United States Code, Title 18, Section 641, for the theft or receipt of government property and materials. The assistance of each employee is appreciated because it improves the control of government property.

Corporate world of Union Carbide. . .

UNION CARBIDE CORPORATION has announced its 1979 net income was \$556.4 million, 41 percent above last year's \$394.3 million. Earnings per share for 1979 were \$8.47, compared to \$6.09 in 1978.

Worldwide sales for the year were \$9.18 billion, 17 percent above 1978 total sales of \$7.87 billion. Sales volume rose five percent in 1979; average selling prices increased 11 percent.

Net earnings for the fourth quarter of 1979 were \$131.9 million, or \$1.99 per share, compared to 1978 fourth quarter earnings of \$127.9 million, or \$1.97 per share. Fourth quarter 1978 earnings include a \$24.7 million after-tax gain (38 cents per share) from the sale of the corporation's European petrochemical businesses.

Encouraged by the results, William S. Sneath, chairman and chief executive officer of the Corporation, said, "Near-capacity operations plus some pricing relief in many of our product lines enabled us to increase our profit margin over those of last year. However, the cost-price squeeze is still with us, especially in view of rapidly accelerating costs of precious metals, fuel and feedstock."

A MAJOR INTEGRATED ETHYLENE OXIDE GLYCOL facility will be built by Union Carbide Corporation, Chairman William S. Sneath has announced. Scheduled for

completion in late 1983, the plant will have an annual capacity of 650 million pounds of ethylene oxide and more than 900 million pounds of monoethylene glycol.

"The new plant is another major step in Union Carbide's continuing expansion plans for ethylene oxide and reflects our dedication and commitment to the support of our customers for ethylene oxide, ethylene glycol and antifreeze," Sneath said.

Union Carbide's recent catalyst innovations and retrofit projects have increased its capacity by 500 million pounds per year with substantial further capacity increases expected over the next three years. These additional facilities will provide adequate supply to Union Carbide customers until the new facility comes on stream.

New site opportunities are being evaluated, and a final site decision will be made later.

251st Dividend

The board of directors of Union Carbide has declared the corporation's 251st consecutive dividend. The amount is 75¢ a share, payable March 1, to stockholders of record on February 1. This is the same amount paid a share on December 1, 1979.

Job bidding

QUESTION: How long must an employee work at a level 2 job before he can bid to a higher job?

ANSWER: The Job Opportunity System requires that any full-time, weekly salaried employee acquire a minimum of six months' company service before becoming eligible to bid to a different job classification. Accordingly, an employee who comes on the payroll at level 2, or any other level, must work at least six months before bidding to a higher job.

Credit Union phone

QUESTION: Is there a problem with K-25 Credit Union's telephone? It rings from 15 to 25 times before it is answered.

ANSWER: According to credit union officials, the credit union has undergone many changes and has experienced problems with its telephone system during the past year. While some of the problems have been mechanical, another problem has been attributed to their rapid growth and expansion beyond their limited facilities.

The K-25 Credit Union is now moving part of its operation to another location and is reorganizing its staff. Credit union officials feel these changes will eliminate most of the problems and wish to apologize for any inconveniences experienced by their members.

Civic duty discrepancy

QUESTION: Why is it that Oak Ridge city officials who work for UCC-ND are allowed to go to the yearly National League of City Convention using the "Civic Duty" account when Clinton city officials are not allowed to use this account and must use their vacation? Clinton officially has the same number of votes at the convention as does Oak Ridge.

ANSWER: UCC-ND's policy permits employees who serve on the governing bodies of the cities and counties in which its installations are located, and where most of its employees live, to utilize a reasonable amount of time for this purpose with protection against loss of pay. This means that members of the Oak Ridge and Paducah City Councils and of the County Courts of Anderson, Roane, or McCracken Counties are protected in this manner.

There are numerous employees who hold similar positions in many other counties and many other cities who do not receive this same consideration. While we recognize there is an inconsistency, we are unwilling to expand this coverage to cover all areas; to bring about a consistent arrangement would require our taking away from a number of employees privileges they have enjoyed for sometime, which we do not think would be wise at this time.

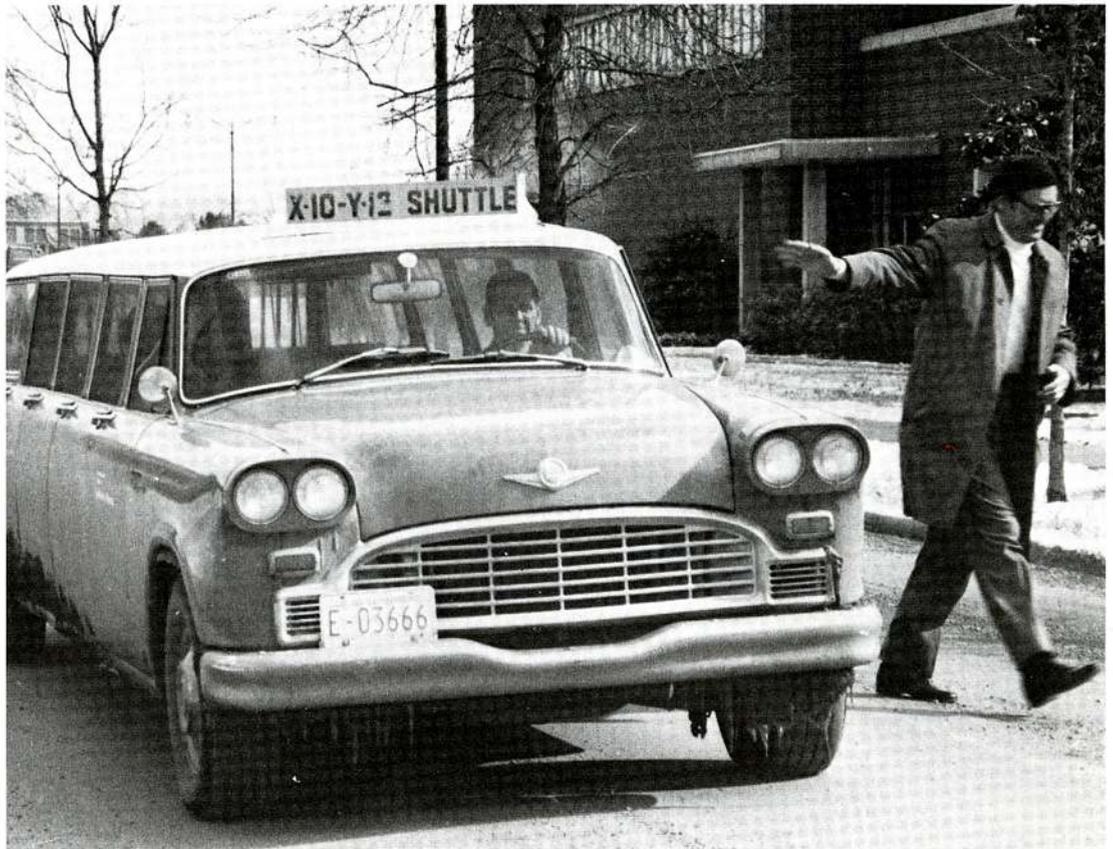
OR sites see improved shuttle service

Oak Ridge employees who need to travel from one site to another are finding life a little easier since the interplant shuttle service was upgraded at the end of January.

The improvements, made in response to continuing reductions in gasoline allocations, include:

- * the initiation of a new ORNL/ORGDP shuttle, which will make seven round trips each day;
- * the inclusion of an additional pickup—at the Biology area at Y-12—for the ORNL/Y-12 shuttle; and
- * the addition of two extra round trips to the ORGDP/Y-12 shuttle schedule, making a total of seven daily. An additional stop—at Y-12's North Portal—has also been added to this shuttle.

The new shuttle schedules are printed here in compact form, suitable for tucking into a wallet, purse or shirt pocket so they're always handy. In an upcoming issue of **Nuclear Division News** we'll also be printing the routes for the in-plant buses at each site, which provide continuous transportation between buildings on a regular schedule.



OUTWARD BOUND—An employee disembarks from the ORNL/Y-12 shuttle in front of Building 4500N. Two buses on an alternating schedule make a total of 16 runs between ORNL and Y-12 daily; the ORNL/ORGDP and ORGDP/Y-12 shuttles each make seven round trips per day.

CLIP AND SAVE

ORNL/Y-12 SHUTTLE

Bus	ARR E. Ptl.	LV E. Ptl.	7600 Area	Bldg. 4500N	7900 Area	Bldg. 4500N	7600 Area
1				8:15	8:21	8:27	8:33
2	8:15	8:23	8:37	8:45	8:51	8:57	9:03
1	8:45	8:53	9:07	9:15	9:21	9:27	9:33
2	9:15	9:23	9:37	9:45	9:51	9:57	10:03
1	9:45	9:53	10:07	10:15	10:21	10:27	10:33
2	10:15	10:23	10:37	10:45	10:51	10:57	11:03
1	10:45	10:53	11:07	11:15	11:21	11:27	11:33
2	11:15	11:23	11:37	11:45	11:51	11:57	12:03
1	11:45	11:53	12:07	12:15	12:21	12:27	12:33
2	12:15	12:23	12:37	12:45	12:51	12:57	1:03
1	12:45	12:53	1:07	1:15	1:21	1:27	1:33
2	1:15	1:23	1:37	1:45	1:51	1:57	2:03
1	1:45	1:53	2:07	2:15	2:21	2:27	2:33
2	2:15	2:23	2:37	2:45	2:51	2:57	3:03
1	2:45	2:53	3:07	3:15	3:21	3:27	3:33
2	3:15	3:23	3:37	3:45	3:51	*3:57	
1	3:45	3:53	4:07	4:15			

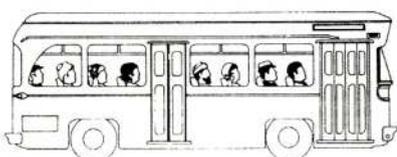
*Will wait at 4500N until 4:05 for trip directly to Y-12, if requested.

CLIP AND SAVE

ORNL/ORGDP SHUTTLE

Run	LV K-1007	LV Ptl. 2	ARR Bldg. 1000	ARR W. Ptl.	ARR Bldg. 4500N	LV Bldg. 4500N	LV W. Ptl.	LV Bldg. 1000	ARR Ptl. 2	ARR K-1007
1	8:00	8:01	8:18	8:20	8:22	8:26	8:28	8:30	8:48	8:49
2	8:59	9:01	9:18	9:20	9:22	9:26	9:28	9:30	9:48	9:49
3	9:59	10:01	10:18	10:20	10:22	10:26	10:28	10:30	10:48	10:49
4	10:59	11:01	11:18	11:20	11:22	11:26	11:28	11:30	11:48	11:49
5	12:59	1:01	1:18	1:20	1:22	1:26	1:28	1:30	1:48	1:49
6	1:59	2:01	2:18	2:20	2:22	2:26	2:28	2:30	2:48	2:49
7	2:59	3:01	3:18	3:20	3:22	3:26	3:28	3:30	3:48	3:49

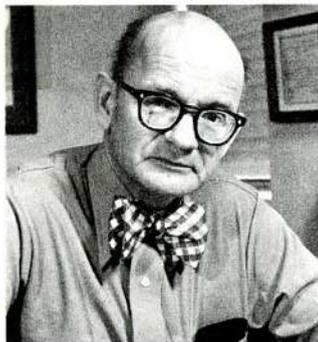
TAKE THE BUS



CLIP AND SAVE

ORGDP/Y-12 SHUTTLE

Run	LV 9711-5	LV 9733-1	LV East Ptl.	LV North Ptl.	LV West Ptl.	LV P. Ridge Ptl.	ARR Ptl. 2	LV Ptl. 2	ARR P. Ridge Ptl.	ARR West Ptl.	ARR North Ptl.	ARR East Ptl.	ARR 9733-1	ARR 9711-5
1	8:00	8:02	8:05	8:08	8:11	8:13	8:28	8:30	8:45	8:47	8:50	8:53	8:56	8:58
2	9:00	9:02	9:05	9:08	9:11	9:13	9:28	9:30	9:45	9:47	9:50	9:53	9:56	9:58
3	10:00	10:02	10:05	10:08	10:11	10:13	10:28	10:30	10:45	10:47	10:50	10:53	10:56	10:58
4	11:00	11:02	11:05	11:08	11:11	11:13	11:28	11:30	11:45	11:47	11:50	11:53	11:56	11:58
5	1:00	1:02	1:05	1:08	1:11	1:13	1:28	1:30	1:45	1:47	1:50	1:53	1:56	1:58
6	2:00	2:02	2:05	2:08	2:11	2:13	2:28	2:30	2:45	2:47	2:50	2:53	2:56	2:58
7	3:00	3:02	3:05	3:08	3:11	3:13	3:28	3:30	3:45	3:47	3:50	3:53	3:56	3:58



Medicine Chest

Treating kidney stones

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 21, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

QUESTION: "I read recently that doctors in France have reported success in preventing kidney stones. The treatment involves magnesium oxide, which is thought to counteract the uric acid that supposedly helps precipitate the little 'demons.' Since I would give my kingdom (which, admittedly, isn't much) for such a treatment, I was wondering if you have any late literature on this development?"

ANSWER: The recurrence of kidney stones can be extremely capricious. Many studies tend to overestimate the frequency of recurrence and may, therefore, give too much credit to prevention programs. Nevertheless, anyone who has suffered the severe pain of kidney stone colic probably would like to do whatever is reasonable to prevent another attack.

'Studies show only half of patients develop another stone.'

In several studies where patients were examined for five or more years after passing their first stone, only about half developed another stone. Most of these patients had neither x-ray evidence of calcium deposition in the kidneys or infection, conditions which are known to increase the likelihood of recurrence.

Knowledge of the causes of kidney stones and the development of new ways to prevent them have increased greatly in the past 10 years. Any physician who has not kept abreast of the medical literature on this subject will be amazed at what has been learned.

Kidney stones are most common in the Southeastern U.S., with New England close behind. The "stone quarries" have no common denominator on which to establish the cause of stone formation. Men are affected four times more often by uninfected stone disease than women, but women have many more stones with infections, so the total incidence is about the same. In addition to being a fairly common malady (about 2 per 1000 adult population per year), it can be dangerous. About one-third of the

patients who have recurrent kidney stones, especially if the stones are related to a chronic kidney infection, will eventually lose a kidney.

Several stresses are known to increase the tendency to stone formation. Chronically inadequate intake of fluids, especially plain water, and hot weather that increases perspiration may cause the urine to become supersaturated with various calcium salts and encourage precipitation. In some people, eating too much calcium or too much meat can be important. Several medications, such as probenecid for the prevention of gout attacks, Diamox for the treatment of glaucoma or even excess Vitamin C to prevent colds, can cause stones.

About 95 percent of kidney stones are composed of calcium oxalate, calcium phosphate, calcium carbonate and magnesium-ammonium-phosphate. The last compound is found in infected stones. About four percent of stones are composed of uric acid and urates and about one percent of cystine. Obviously, then, knowing the chemical composition of the stone and whether there are any metabolic or physiologic peculiarities with excretion is a necessary first step in trying to devise a method to prevent new stone formation.

'Even excess Vitamin C can cause stones.'

Three major abnormalities are fairly easy to detect. Excessive excretion of calcium or high blood calcium levels may be the result of abnormal resorption of calcium from the bones caused by an overactive parathyroid gland. Overactive absorption of calcium from the intestine or impaired resorption of calcium in the kidney tubules, for unknown reasons, may cause excessive excretion. This last condition is called "calcium leak" syndrome. Excessive excretion of oxalic acid is associated with diet and an abnormal absorption from the intestine. Many overweight people who had intestinal bypass surgery to lose weight have developed this problem. Excessive cystine excretion is largely genetic in origin.

Once the specific defect has been found, various prevention strategies can be used. Dr. Lynwood Smith claims that the Mayo Clinic can now prevent recurrence of stones in over 85 percent of the patients they treat providing they follow instructions.

Although the original stone may have been caused by some metabolic abnormality, if it has subsequently been complicated by a chronic infection and more stones, cure may never be possible. The stones must be removed surgically and the infection cured. The latter may require the use of antibiotics and other medications continuously for several or more years. It may also involve a long and complicated treatment program.

'Once the defect is found, various preventions can be used.'

Magnesium, unfortunately, is not of much value. It has been tried in patients who excrete excessive oxalic acid. Magnesium, when excreted in large amounts, may bind oxalate into a magnesium-oxalate complex and prevent it from combining with calcium to form a stone. Unfortunately, it doesn't work very well and many patients are bothered with diarrhea. Other treatments, such as allopurinol, work better for patients with uric acid stones.

Most recurrent kidney stones can be prevented. Many, if not all of the diagnostic studies can be done on an outpatient basis if they were not done while the patient was in the hospital "delivering" the stone.

'Allopurinol works better for patients with uric acid stones.'

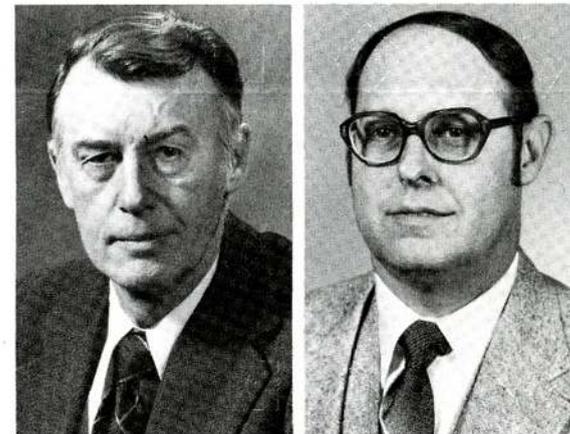
Find up-to-date specialists in urology and internal medicine, get your studies done and then follow their advice.

What is gasohol?

"Gasohol" is a fuel mixture of gasoline and ethyl alcohol (ethanol or "grain alcohol"). Mixed in proportion of 90 percent gasoline and 10 percent alcohol, it can be burned in an internal combustion engine without carburetor modification. Grains and starchy plants are commonly used for ethanol production.

Also termed "gasohol" are gasoline blends with methanol (methyl alcohol or "wood alcohol") and gasoline mixtures with varying concentrations of alcohol. Methanol can be produced from different source materials such as coal, wood and natural gas and is currently less expensive to produce than ethanol.

about people



Gardiner

Jones

Donald A. Gardiner, ORNL Computer Sciences Division, has been elected a Fellow of the American Association for the Advancement of Science.

Gardiner, head of the Mathematics and Statistics Research Department, was honored for "successful applications of experimental designs, contributions to response surface methodology, and distinguished service in teaching, administration, statistical society activities, and journal editing."

A native of Buffalo, New York, Gardiner joined Union Carbide in 1956. He received bachelor's and master's degrees in business administration from the University of Buffalo and holds a PhD in statistics from North Carolina State University.

Gardiner previously was head of the statistics section and assistant director of the former Mathematics Division.

He and his wife, Marie, live at 108 Mason Lane, Oak Ridge. They have three children.

C. Gordon Jones, Enrichment Technology Division, ORGDP, is serving as chairman of the East Tennessee Section of the American Chemical Society. This year marks the 50th anniversary of the section, which was chartered at the University of Tennessee. The section has a current membership of 624 chemists and chemical engineers from the academic, research and industrial fields from 13 East Tennessee counties.

Jones joined the Nuclear Division in 1956 as a research chemist in the Technical Division at ORGDP after receiving the BA degree from Berea College. He received the MS degree in chemistry from the University of Tennessee. In addition to membership in the American Chemical Society, he is also a Fellow in the American Institute of Chemists. He and his wife, Jean, live at 147 Nebraska Avenue, Oak Ridge. They have two children, Beverly and Kenneth.

A Different Drummer. . .

'Climb every mountain,' says alpinist Randolph

(Editor's Note: Marion H. Randolph Jr., a development engineer in ORGDP's Enrichment Technology, is an outdoorsman from the word go and has provided us with a different Different Drummer. . .alpine climbing. A native of North Carolina, Randolph is a chemistry graduate from the University of North Carolina, as is his wife, Helen, who teaches at Roane State Community College.

The Randolphs live in Oak Ridge, and have two children, Lisa and Herb.

Randolph came with Union Carbide in 1951 at ORGDP, transferring to the Paducah Plant in 1952. He returned to ORGDP in 1963.

He got his first taste of local mountaineering by climbing Mt. LeConte in the winter of 1947, and has a birthday tradition of hiking there every October. His hiking companion on that trip is Rufus Morgan, a retired minister, who has been to LeConte 174 times, despite the fact that he is 94 years old and nearly blind.

Randolph has scaled Pike's Peak, the Grand Tetons and Mt. Ranier and hopes to scale the tops of mountains in Ecuador as well as others in the western part of the United States.)

by Marion M. Randolph Jr.

It isn't entirely clear to me why a transplanted East Tennessean (used to be West Carolinian) hill-stomper is writing an article on mountaineering but, due to the overwhelming influence of the press and a few questionable friends, I'll attempt to relay a few thoughts on the subject—not a technical treatise, however, just some low-key rambling thoughts.

The term mountaineering certainly can mean many things—from a solo scramble up to an outfitted expedition costing several hundred dollars. The key word to distinguish mountaineering from hiking might be "climbing." The demands of mountaineering usually calls for some fancy climbing in one form or another—technical rock climbing, snow and ice climbing, or both. The climbing problems bring technology into the scheme of things because the specialized climbs depend upon climbing equipment developed specifically for the problems involved. The advancements made in climbing equipment in recent years have had a marked influence on modern climbing—permitting safe climbs with lighter hardware and successful climbs of more difficult mountains.

Thinking back a few years on some of my earlier experiences with climbing and technology, I repeat, things have changed. My early mountain years were spent in a little western North Carolina town, Saluda, with a population of about 500 scattered over many hills and valleys. Saluda did not have a theater, skating rink, bowling alley, disco club, swimming pool, tennis court, etc., so for recreation I used to throw a peanut butter sandwich in my back pocket (messy), take my dog and spend Saturdays roaming the hills and streams.

Today, I understand, this is called cross-country hiking. Not being



LONELY SUNSET—Al Bedinger, a climbing companion of Marion Randolph, enjoys the lonely sunset from Ixtaccihautl, elevation 17,343 feet. The volcanic mountains of Mexico offer the alpine climber ideal environments for climbing above the clouds.

entirely satisfied on the ground, I also climbed trees. I started out rather sanely and simply on trees that I could reach the limbs on, and then I'd go on up to the top to sway in the breeze. Pretty soon, technology and climbing equipment got into the picture. I used a rope with an iron hook on one end and a seat-stick on the other for more advanced climbing—this way I could throw the iron hook over a high limb that I was unable to reach. Then, when the hook came down over the limb, I would sit on the stick and pull myself up to the limb and on up the tree. This was working great until one day I gave my iron hook a mighty heave, only to have it quickly come back and cut my forehead rather badly—my foot was on the rope! This incident almost ended my tree climbing, because after Dad doctored my head with wood alcohol from the high school chemistry lab (we didn't have a doctor in Saluda either), he told me to do no more hook and rope climbing.

New methods

Well, again technology came to the rescue. Since the school grounds weren't too busy in the summer, several cows were usually staked out to graze there, and I thought of a new, more-advanced climbing method. I unfastened the cow chain from the stake and tied my seat-stick onto this end—with the cow still on the other end of the chain. With a little coaxing, I persuaded the cow to come over the tree I wanted to climb. After throwing the chain over the limb, I sat on my seat-stick and started throwing rocks at the cow—this worked real well, the cow took off running and I started rapidly rising toward the limb—too rapidly, in fact. One thing I hadn't calculated was, how to stop the cow when I reached the limb. Naturally, the cow kept running and I was flipped over the limb, narrowly

missing a head-on collision with the limb. As soon as I got my breath back, I got up and went home. I think the cow did too—it wasn't anywhere in sight. After this last experience, I decided not to discuss it with Dad and that I would wait for further and safer advancements in the technology of climbing. This showed good judgment, an important factor in mountain climbing. More on equipment and techniques later.

So far, we have established the fact that mountaineering has something to do with climbing mountains, but perhaps we can add to this a bit. Mountaineering, to date, has not been incorporated into organized sports and cannot be evaluated by tournaments, matches, rodeos, handicaps or the point system. Yet it is

a highly competitive sport and offers any degree of challenge that one chooses. Here, though, the challenge is not with people but with mountains, weather and the climber. To reap and enjoy the rewards of sports and mountaineering, it is necessary to train, condition, gain experience and execute your game plan with sound judgment. So, perhaps, one of the most exciting aspects of mountaineering is that of challenge. To go on, though, there are many parts that make up the whole of mountaineering.

Since this is the outdoor activity that it is, it brings one into many areas. For those interested in plants and animals, it offers a firsthand opportunity to study and enjoy

(Please see Page 8)

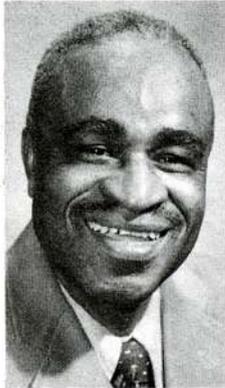


ON TOP OF OLE PICO—Herb and his father, Marion Randolph, rest atop Pico de Orizaba, elevation 18,885 feet. Mexican climbers are quite religious and mark the mountains with crosses in memorium to accident victims. "We were lucky; we made it," Randolph said.

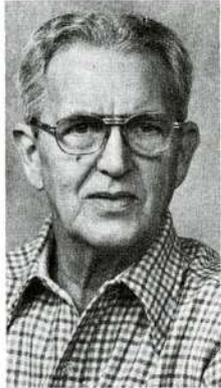
retirements. . .



Carl M. Jones
Special Services
Y-12
35 years service



Willie R. Walker
Janitors' Department
Paducah
27 years service



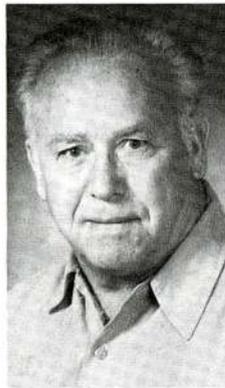
James C. McKinney
Maintenance
Y-12
28 years service



Wilburn L. Tipton
Special Services
Y-12
10 years service



Clarence W. Mee
Plant and Equipment
ORNL
29 years service



Lester W. Young
Plant and Equipment
ORNL
18 years service



William T. Collins
Enrichment Technology
ORGDP
25 years service



Robert H. Wilkerson
9215 Rolling Mill
Y-12
20 years service



William E. Elmore Jr.
Maintenance
ORGDP
34 years service



Billy F. Early
Operations
ORNL
33 years service



Resilotte Lisser
Information
ORNL
25 years service



Joseph N. Hix
Metals and Ceramics
ORNL
33 years service



Robert E. Moore
Health and Safety
Research
ORNL
29 years service



Gwen C. Wicker
Information
ORNL
34 years service

Patents granted

Casimer J. Borkowski and Theron V. Blalock, both of ORNL, for "High Level White Noise Generator."

Loucas G. Christophorou, David R. James, Marshall O. Pace and Robert Y. Pai for "Gaseous Insulators for High Voltage Electrical Equipment."

WATtec conference to be held at Hyatt Regency

WATtec-80, the seventh annual energy conference and exhibition during National Engineers' Week, will be held February 20-22, 1980, at the Hyatt Regency Knoxville.

Organized on the theme, "Energy in the 80's: Decade of Decision," the conference will feature 25 specialized half-day sessions on energy topics during its first two days, followed on Friday, February 22, by the full-day Symposium for Public Awareness on Energy.

WATtec is sponsored by 30 Knoxville-Oak Ridge area chapters of national technical and professional societies, many of which organize technical sessions in their own specialties as part of the conference.

The public-awareness symposium, now in its fifth year, is a WATtec innovation designed to open new avenues of communication between specialists and non-specialists on energy-related issues.

Featuring nationally recognized authorities and presented at a popular level, it aims to stimulate the interest and participation of business and governmental leaders, special interest groups and the public at large in discussions related to national energy policy and the social and economic impacts of energy choices.

This year, "The Politics of Energy" will be the theme of discussions by six noted speakers from the academic, industrial, governmental and public-interest sectors: Richard Wilson, Harvard University; Barbara Keating, Consumers' Alert, Inc.; Frank Clemente, Pennsylvania State University; Bernard J. O'Keefe, EG&G, Inc.; Peter Brennan, New York State Committee for Jobs and Energy; and Hans H. Landsberg, Resources for the Future, Inc.

The exhibition of energy-related products and services that accompanies WATtec will include displays and demonstrations by more than 40 industrial participants in the conference.

Climaxing the week-long Engineers' Week observance in the East Tennessee area, also on Friday, February 22, will be the annual WATtec/Engineers' Week banquet. Harold M. Agnew, president of the General Atomic Company, San

Diego, and former director of the Los Alamos Scientific Laboratory, is to be the principal speaker on the topic, "Nuclear Power—A Perspective."

Another WATtec feature is the Students' Program, through which 40 outstanding seniors in engineering invited from institutions throughout the U.S. will be hosted by the Nuclear Division and other area technical organizations.

On Thursday, February 21, national presidents, executive officers and staff of the WATtec sponsoring societies will participate in informal discussions and briefings culminating in the Presidents' Reception and activities with their local chapters.

One of the sponsors, the American Society of Mechanical Engineers, this year celebrating its 100th anniversary, will be honored at a banquet Wednesday, February 20, hosted by the Knoxville and Oak Ridge chapters of ASME.

General chairman for WATtec-80 is Norbert J. Ackermann, president of Technology for Energy Corporation, Knoxville. The vice chairman is Gordon G. Fee, director of the Nuclear Division's Operating Contractors' Project Office for the Gas Centrifuge Enrichment Project.

Nuclear Division members of the WATtec Executive Committee include Paul F. Boyer, Engineering; Domenic A. Canonico, ORNL; and George R. Jasny and F. S. Patton, Engineering. Robert Stepp, Engineering, serves as assistant to the chairman and Fred D. Mundt, Operating Contractors' Project Office, as secretary-treasurer.

Serving as committee chairmen are: Philip G. Shipp, Engineering, Exhibits; Herman Postma, ORNL, Public Awareness; Susan J. Buhl, ORNL, Information Activities; Edward H. Krieg, Engineering, Arrangements; Margaret J. West, Engineering, Registration; George F. Flanagan, ORNL, Students' Program; L. M. Cuddy, ORNL, Engineers' Week; and Susan K. Whatley, ORNL, Society Presidents' Program.

Further information on the WATtec program and registration can be obtained from any of the above.

Getting stuck in auto calls for special actions

What do you do when your car gets stuck in a rut? The action you take depends on how badly you are stuck, but whatever you do, avoid spinning your wheels since this will only aggravate the problem.

If the snow you're hung up in is deep, shovel out as much snow from underneath the car as possible.

If you have it, spread some salt or sand in front and in back of your driving wheels (or use traction mats if you have them).

Be careful about people standing directly behind the rear wheels. While a little pushing assistance from a friendly passerby will often add that extra momentum needed to get going, individuals standing back there could be injured by rocks or

objects thrown by the spinning wheels.

If possible, try to keep the front wheels pointed straight ahead until the car is moving. The rolling resistance of the front wheels is lessened when they are not trying to move sideways. If your wheels keep spinning and the vehicle doesn't move, stop and let the tires cool.

If nothing works, try to rock the vehicle out of the rut by alternately shifting from reverse to second gear (cars with manual transmissions) or reverse to drive (cars with automatic transmissions). In cars with automatic transmissions, check your owner's manual to make sure such a procedure can be followed with your particular car.

NUCLEAR DIVISION NEWS

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recreationotes. . .

Bowling League highlights. . .

Y-12 Classic. . .

The Kingpins have a two-point lead over the Ridgers and Eightballs in the Classic League. Ray Winnie, Eightballs, rolled a high handicap game of 260. The Cubs took the high team game of 1070. The Eightballs rolled a 3011 for high handicap series. Rip Lowery, Splinters, took high handicap series, posting a 641.

K-25 Tuesday. . .

The All Stars took the lead back from the Fearless 5 recently by one and one-half points in the Tuesday Men's League. G. J. Marrow, All Stars, took scratch and handicap highs in singles with 232/258. R. K. Johnson rolled a 614 scratch series; while R. S. Leete took high handicap series with a 704.

UCC Monday. . .

Charlie's Angels, Good Luck 4, and Four's Company are all tied for first place in the Monday Mixed League. Mike Emery rolled a triplicate 135 series recently.

Family Mixed. . .

The Second half began as the Hits & Misses took four right off, with the Oops and Strike-Outs tying for second place with three points. The weekly highs went to John Brown with a 564; and to Edith Duckworth with a 520 scratch series.

UCC Mixed. . .

The Go Getters have grabbed an early lead in the UCC Mixed League, after three weeks of rolling. Weekly highs went to Al Adams with her high game and series of 193/530; and to Jim Thompson for his 220/586.

ORNL A. . .

ORAU took the lead in the ORNL A League away from the Woodchoppers. Weekly highs went to them for their high series of 2959. ORAU's Urso rolled a 692 high handicap series. Gerald Case, Fireballs, rolled a single game of 249; while Cecil Higgins, Woodchoppers, rolled a 220 scratch game.

Y-12 C. . .

The Rollmasters keep a one point lead over the Mini-Strikes in the C League. The Anodes moved up from fifth to third place. Al Gladson continues to hold season high handicap game of 248. Terry Hansford's 686 keeps him up there in high handicap series rolling.

ORNL C. . .

The Cellar Dwellers posted a 2960 handicap series to hold onto first place in the ORNL C League, four points ahead of the Pin Heads. Fred Kitts, Hit Men, rolled a 644 handicap series. Jack Moneyhun, Knuckleheads, took a high handicap game of 248. Tom Akin, Remkeys, rolled a 213 scratch game.

QA Week, contest announced

March 2-8 has been proclaimed Quality Assurance (QA) Week by the governors of Tennessee and Kentucky, and the event will be observed with special activities at all Nuclear Division facilities, according to Ed Gambill, head of the UCC-ND Office of Quality Assurance.

Quality Assurance Week, promoted by the American Society for Quality Control, is observed to emphasize the importance of quality, quality attitudes and acceptance of individual responsibility for achieving quality work and to recognize the role of quality assurance in assuring quality objectives.

The QA Week slogan, "The Hallmark of Quality—QA," implies that the appropriate application of quality assurance provides additional confidence that quality objectives will be obtained.

A feature article on QA objectives and benefits will appear in the March 6 issue of *Nuclear Division News*.



As part of the week-long observance, employees may participate in a QA message contest designed to increase their awareness of quality assurance and its value in achieving Nuclear Division objectives. Contributors of the winning messages from each facility will receive an award, and a grand prize winner will also be selected. Contest rules and prizes will be announced.

wanted. . .



Y-12 PLANT

CAR POOL MEMBERS from Asheville Highway, East Knoxville area, to any portal, J Shift. William Petty, plant phone 4-3485, home phone Knoxville 546-3139.

RIDER or will form CAR POOL from Sutherland/Papermill/Lonas Road area to North Portal, 7:30-4 p.m. shift. Hal Clift, plant phone 4-1797.

JOIN CAR OR VAN POOL from Norris to West or Central Portal, straight day. Jerry Sanders, plant phone 4-3590, home phone Norris 494-0864.

VAN POOLRIDERS from Maryville, Alcoa, South Knoxville to East, North or Central Portals, straight day. Darrell Coppenger, plant phone 4-1380, home phone Maryville 983-5939.

RIDE or will JOIN CAR POOL from Gallaher View Road, West Knoxville, to Central Portal, 7:30-4 p.m. shift. Catherine Mattice, plant phone 4-2595, home phone Knoxville 690-5682.

RIDE or WILL JOIN CAR POOL from Sugar Grove Valley, Blair Road, area, to Central Portal, E Shift. Ruth Drewery, plant phone 4-2109, home phone Harriman 882-8753.

RIDE from Michigan, Tennessee Avenue section, Oak Ridge to K-1007, 7:45-4:15 p.m. shift. Madeline Franklin, plant phone 4-2592, home phone Oak Ridge 483-8824.

RIDE from home in Cherrybrook Subdivision, Clinton Highway, Knoxville to East Portal, straight day. W. M. Elmore, plant phone 4-0532, home phone Knoxville 947-6725.

RIDE from Northshore Drive/I-40 intersection to Pine Ridge Portal, 7:30-4. Ted Newman, plant phone 4-3807, home phone 577-5604.

RIDE from Halls or Powell sections to West Portal, C Shift. Stephen George, plant phone 4-2465, home phone 922-2147.

ORGDP

RIDE from Norris, at Green Valley Truck Stop on I-75 to Portal 4, 7:30-4 p.m. shift. Bernice, plant phone 4-8850, home phone Norris 494-7341.

VAN POOL RIDERS from Andersonville, Norris or Clinton to Portals 2, 3, or 4, 7:45-4:15 p.m. shift. Larry Galyon, plant phone 4-8607, home phone Norris 494-0502.

JOIN CAR POOL from West Knoxville/Cedar Bluff area to Portal 5, 8-4:30 p.m. shift. Larry Ubry, plant phone 6-2320, home phone Knoxville 690-0665.

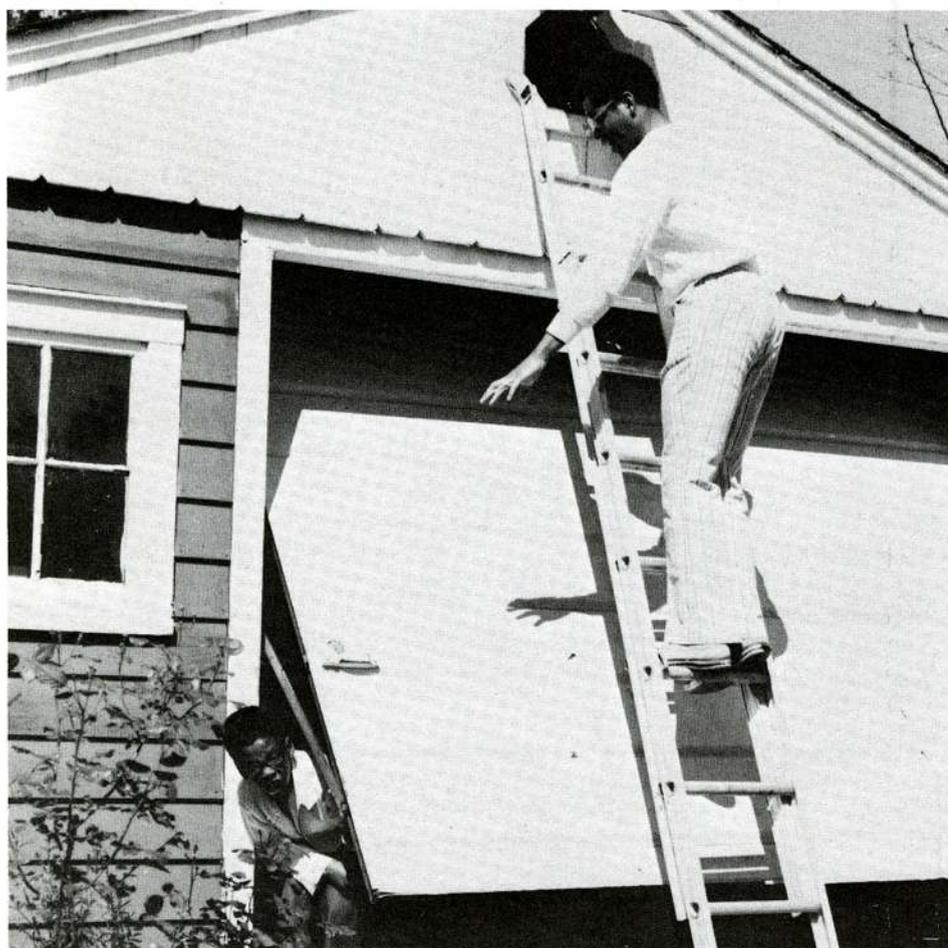
VAN POOL RIDERS from South Knoxville/Chapman Highway area to any portal, D Shift. John Ross, plant phone 4-9321, home phone 577-0692.

ORNL

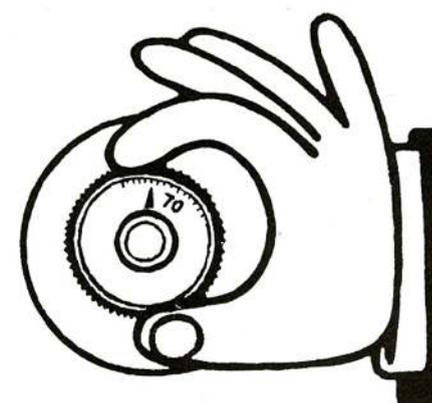
JOIN CAR POOL from Pikeville Lane area, Oak Ridge, to East or South Portal, 8-4:30 or 8:30-5 shift. Mohammed Khan, plant phone 4-5014.

CAR POOL MEMBER from Walker Springs Road, Cedar Bluff area, Knoxville, to East Portal, 8:15-4:45. E. L. Fair, plant phone 4-5723, home phone 693-3211.

FORM or JOIN CAR POOL from Marlow-Dossett communities to East Portal, straight day. Gail Cooper, plant phone 4-1287, home phone Clinton 457-1627.



POSED HAZARD—Alvin Moore posed this situation at his Paducah home recently with his son, Alvin III, demonstrating some of the hazards involved in home work. The Paducah Plant Engineering Division recently devoted a program to subtle errors that are easily encountered around the house even by those with the best of safety attitudes.





National Guard, Reserves honor Paducah for outstanding support

MILITARY MEMBERS—Paducah Plant members of the 1st Battalion 123rd Armor Kentucky Army National Guard in the front row, from left, are Staff Sergeant Gary E. Brooks, Quality Evaluation Department; Sergeant Gordon R. Heider, Cascade Operations; Sergeant First Class Marty Curtis, Safety Department; Clay Zerby, plant manager; Sergeant William J. Sharp, Compressor Shop; Private William J. Bass, Utilities Department; and Sergeant Jerry Crossett, Fabrication Shop. In the back row are Sergeant Gary D. Johnson, Plant Services; Specialist Roy V. Lipscomb, Fabrication Shop; Sergeant Donny Brewer, Quality Evaluation Department; and Sergeant Palmer G. Edwards, Quality Evaluation Department. Not shown are Lieutenant David Stansberry, Finance and Budget Department; Private Gary A. Faulkner, Machine Shop; Sergeant Trent Griffin, Process Maintenance and Equipment Change Department; Sergeant Marvin Watkins, Pump Shop; and Sergeant Bruce L. Williams, Cascade Operations.



MILITARY RECOGNITION—The Paducah Plant was recently honored for outstanding support of the National Guard and Reserve programs in Western Kentucky. Major General Billy Wellman, left, adjutant general for the Commonwealth of Kentucky, presented a special award to Clay Zerby, Paducah Plant manager.

anniversaries. . .

PADUCAH

35 YEARS

William G. Canfield, Employee Relations.

ORGDP

35 YEARS

Irene Moore, Employee Relations; Virgil J. Silver, Barrier Operations; Loren M. Lund, Barrier Operations; Gordon J. Ramey, Maintenance; and Clarence G. Mowell, Finance, Materials and Services.

25 YEARS

James A. Stanton.

20 YEARS

Charles R. Levenhagen and Joseph D. McCarthy.

Y-12 PLANT

35 YEARS

Willie J. Fowler, General Can Fabrication Shop; Roy L. Luttrell, General Shops; and William S. Caruthers, Electrical and Electronics.

30 YEARS

Alice W. Gibson, Buildings Services; and Horace M. Monday, General Shops.

25 YEARS

Mary L. Miller and Charles R. Settles.

20 YEARS

Norman B. Parks, Charles G. Gaylor, James A. Kilby, Lynn D. Williams, Jerry A. Huckabey, Lamar T. Royer and Andrew Denny.

ORNL

35 YEARS

Albert A. Wiseman, Operations.

30 YEARS

Roger S. Carlsmith, Central Management; and Norman C. Bradley, Instrumentation and Controls.

25 YEARS

Grady W. Clark, James V. Brock, James Macres, Leonard C. Williams and Roy E. Thomas.

20 YEARS

Cecil B. Chitwood and Felix E. Obenshain Jr.

Safety Scoreboard

Time worked without a lost-time accident through January 31:

ORGDP.....	415 Days	13,010,735 Employee-Hours
ORNL	94 Days	2,453,443 Employee-Hours
Paducah	252 Days	2,681,000 Employee-Hours
Y-12 Plant.....	58 Days	1,574,000 Employee-Hours

'Climb every mountain'

(Continued from Page 4)

wildlife closely. The mountains are a study of geology. The crystal clarity of high-altitude nights opens up a whole new magnitude of stars, so one interested in astronomy has a new perch. The weather, ever changing, is an integral and challenging part of mountaineering and demands attention, whether you have meteorological interests or not.

Throughout the many complexities of mountain experiences, photography can be a binding theme. It can put it all together and permit sharing your observations and experiences with others, serve as a trip record and challenge your photographic ability with unusual lighting conditions. The range from close-up photography of wild flowers to the corn crystalline white of the mountain tops is a broad one. The scenic beauty, along with the brilliant sunsets and sunrises, certainly calls the photographer, whether he be rank amateur or professional—it's just too pretty to pass up. Navigation also comes into mountaineering. While it may not be too difficult to follow a 4-foot-wide cleared and graded trail with white blaze marks on the trees at frequent intervals (like the Appalachian Trail in the Smokies), it's a somewhat different scene on the big mountains, particularly if bad weather comes in on you. And finally, for those who like to travel and meet people, mountains seem to be scattered over most of the world, providing ample opportunity for interesting travel experiences. This list could probably go on, but perhaps I had better move along and get into what it's all about and how to do it.

No appropriate words

If you were to ask the sky diver to express his thoughts as he floats through space with the wind tearing at his body, the white water enthusiast to tell what it's like to go crashing through the rock and water of a Class V rapid, the skier to relate a

fast downhill run, or a pilot to explain the sensations of drifting over an ocean of clouds with dark blue sky above and the first rays of a sunrise penetrating the horizon, they all would have a difficult time finding appropriate words to describe a sensation—one that is perhaps unique to that individual at that particular moment and will never be exactly the same for another. (Ever thought how tricky it would be to really define "love?")

Feeling of freedom

Well, through the jungle of words that may arise in an attempt to explain these sensations, the word freedom might occur more frequently than we would have thought—the feeling of freedom. Some famous philosopher once said that "freedom was the product or reward of a well-disciplined appetite." Perhaps the freedom feeling is somewhat related to the comfortable feeling of having accomplished something through effort. Apparently, people like to face challenges. Also, they are not ashamed of the fact that they like to accomplish something.

Mountaineering does present challenge, and the successful mastery of technique, knowledge and discipline does have its rewards. In some ways it is a solo effort but in others a real experiment in group therapy. Teamwork is absolutely essential, as well as obedience to leadership. One learns to trust a friend in a different way (particularly when your life hangs in his hands on a 7/16-inch-diameter piece of rope). Certainly there are risks, and a new definition of the word fear has to be established. After having made a rather scary traverse across a rock face with "exposure" (that's when there is nothing below you but lots of space) on the Grand Teton, I asked my expert rock-climbing son if he ever got scared. He said he got scared every time he climbed, so I felt better,



ALMOST THERE—The two Randolphs near the top of Ixtaccihautl. Another equally as-high mountain, Popocatepetl, looms in the background. The corniced ridges are fairly easily climbed and offer spectacular views, the climbers said.

realizing I wasn't the only chicken-hearted climber on the mountain. I guess it was some time later that I realized that fear was one of the driving factors for safety and that safe climbs were generally happy climbs. So, mountaineering sort of comes out as a great life experience of challenge, discipline and effort, with a feeling of accomplishment—a reward of freedom—freedom of the hills.

Other excitements

In addition, mountaineering is probably one of the most adventuresome sports, offering excitement in so many ways—the changeable weather, high-altitude effects, physical demands, high-angle glacier ice, a questionable snow bridge over a deep crevasse or a "souvenir rock hotel" (that's one you take home with you but would have

preferred that it remain a part of the mountain while you were hanging on), the battle of stamina, judgment, skill and safety against the elements—all a part of climbing the hills. If the old cliches "you get what you pay for" and "the reward is in preparation to the effort invested" are true, the feelings of exhilaration, joy, happiness, accomplishment, fatigue, reverence and spiritual awareness that one experiences when he finally reaches the top make it all worthwhile.

Since I'm quickly getting in way over my head in this area, let's take a little break, allow the fog to clear a bit and continue in another issue. Maybe we can cover a few more tangible subjects like the mechanics of mountain climbing, some do's and don'ts, a little about the tools of the trade, some considerations on the bumpy spots of the business and a word or two about safety.

division deaths. . .



Mr. Drake

James D. Drake, Computer Sciences at ORGDP, died at his 109 Waddell Place, Oak Ridge, home January 29.

A native of Memphis, he joined Union Carbide 27 years ago. He was active with the Boy Scouts and the Masonic Order.

Survivors include his wife, Ann Jeffress Drake; daughter, Charlotte D'Agostino; son, James D. Jr.; mother, Mrs. John R. Drake; sister, Charlotte Campbell; and brother, Richard Drake.

The funeral was held at the United Presbyterian Church, with burial in the Oak Ridge Memorial Park.



Mr. Horton

The family has asked that any memorial be to the charity of the donor's choice.

William T. Horton, a supervisor in ORGDP's Operations Division, died January 18 in the Oak Ridge Hospital. A native of Anderson County, he joined Union Carbide at the Y-12 Plant in 1956 and transferred to ORGDP in 1975. He was a veteran of the U.S. Army.

Survivors include his wife, Jane Ford Horton; mother, Lona Horton; brothers, Milo, Carl, Ray and I. E. Horton Jr.; and sisters, Marie Hatmaker, Edna Hannah and Sybil Seiber.

Funeral services were held at the Holly-Gamble Funeral Home, with burial in the Tennessee Valley Memory Gardens.

The family has requested that any memorials be in the form of contributions to the American Cancer Society, c/o Mrs. Mary McClanahan, 408 Greenwood Drive, Clinton, 37716.



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