

The Village Crier



fermi national accelerator laboratory

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FLYING FERMILAB SKIES

Assignment: Lay three 5,000-foot electrical cables, each weighing 7,500 pounds, in water.

Solution: Hire a helicopter!

That's what Accelerator Division did last week to improve 15,000 volt feeder cable lines between service building D-2 and C-Zero on the Main Ring. Three aluminum cables, each $1\frac{1}{4}$ inch in diameter, were laid in the ring's inner ditch and the connecting inner ring lake in that area.

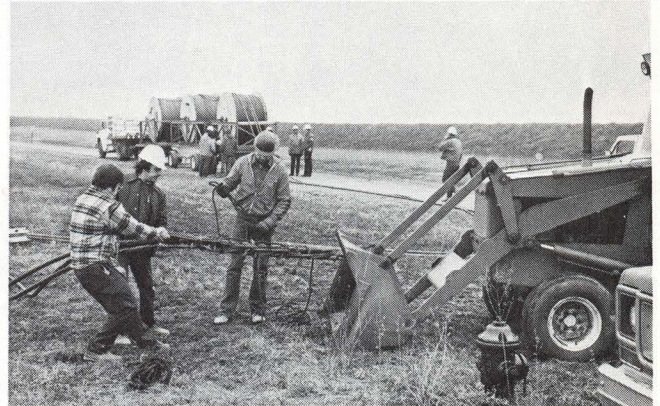
"Zero" hour was 7:30 a.m. Monday, March 14. Under a cold overcast prairie sky, project manager Jan Ryk and other personnel assembled. Capt. John Hays of security had sealed off general access to the work area, issuing red "emergency" badges for workmen and authorized observers. They included Ed Kessler, accelerator support power supply; Bob Adams and Bob Scherr, safety engineers; and The Village Crier.

A 15-man crew represented the contractor, Premier Electric Co. of Aurora. And the star performer, the chopper, was supplied by Midwest Helicopter Airways, Inc. of Lyons. Pilot Bob Gaylord did the flying with radio directions from the ground by two other pilots, Jeff Hennard and Bill Kelly. Gaylord had flown in on two earlier days to scout the proposed route of the cable. The day of the event, he arrived early enough to walk the path. Since the rated load of the helicopter is 4,000 lbs., it could not handle a reel of cable. So the approach was to move the reels along the road on carts, unreel some of the cable along the road and move this un-reeled cable by helicopter toward the inner ditch.

Looking like a circus-wagon procession was a string of three farm wagons, each mounted with a cable reel boxed-in on the wagon bed. The wagons were pulled by a truck. A tire company truck loaded with spare rubber for the farm wagons stood by.

According to Jan Ryk, Accelerator Division Head Russ Huson and the contractor came up with

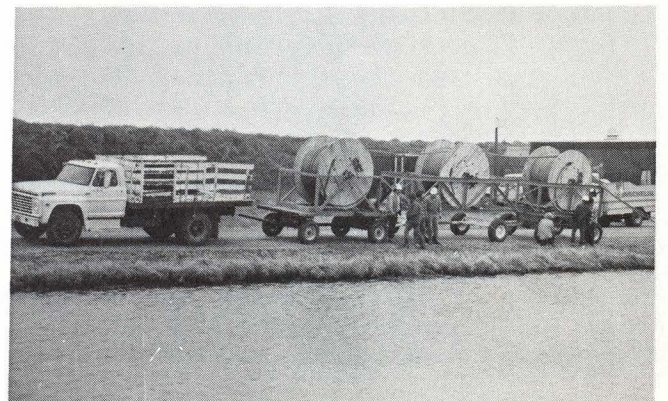
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...Tying down cable to a tractor before takeoff...

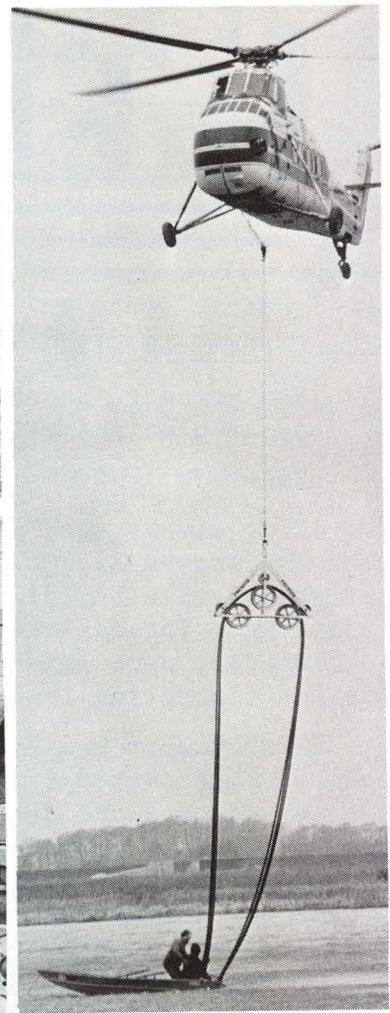


...Helicopter crosses main ring cooling ditch to pick up another load...



...A cable caravan preceded "air drop" by helicopter...

FLYING FERMILAB SKIES (Continued)



PHOTOS ABOVE: (clockwise from lower left) "Chopper" strains to drag heavy wire into main ring lake; Cable handlers pull strands from reels...J. Ryk, D. Underwood, Pilot B. Gaylord, F. Jahnke plan strategy...Boatmen secure cables being laid in main ring's lake..."Brake" men using timbers to control cable removal from reels...

the helicopter idea simultaneously. Original strategy had been to lay the cable on ice in the cooling ditch and lake--then wait for the ice to melt, dropping the cable under water. The plan went awry when: 1. An early spring thaw melted the ice, and 2. The cable arrived behind schedule from the manufacturer, Phelps Dodge Cable and Wire Co.

Before the helicopter lifted off, the cable was tied to a tractor stationed near D-2 service building. This was done to give the pilot a stationary object to pull against. Pilot Gaylord went up initially for 30 minutes, taking the wires across the cooling pond and the inner ditch to another tractor awaiting on the inside of the ring. After another tie-down, the copter trailed the cable in the inner ditch to the inner lake near the C-4 service building area. Here the protruding pump station had to be encircled by an excursion into the lake. This operation turned out to be rather tricky. The main battle here was fought by two laborers in a row boat on the lake. They tried to tie down the cables while fighting the fierce down draft of the helicopter.

This part of the operation was accomplished by running a tie line to a tractor inside the ring, then the cable was airlifted into the lake and the inner ditch to the C-zero area.

The project was completed in three hours' flying time. "It went very smoothly," Ryk said later. "nobody got hurt. The cables were tested at 55,000 volts after the installation. Even so, there was a little bit of tension during the operation because we had never tried anything like this before and everything was moving quite fast."

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SPECIAL INSERT

Our readers' attention is directed this week to a special insert in the Crier containing the remarks of Robert R. Wilson, Fermilab director, before the Congressional Sub-Committee of the Science and Technology Committee on March 3 in Washington, D.C.

GRADUATE STUDENT TOUR

The third graduate student tour will be Thursday, March 31, at 1:30 p.m. at the portakamp of di-lepton experiment 288. It will last about one hour and no sign up is required. Previous tours were in the Tagged Photon lab, experiment 25, and in the accelerator itself. Plans for further tours include charm search 369 and photoproduction 401. The purpose of the tours, which any student may attend, is to acquaint graduate students in an informal way with the hardware systems, counter designs, electronics and computer software of various experiments around the lab. If anyone would like to give a tour of their experiment, or there is some particular facility someone would like to see, please contact Maury Goodman at ext. 3790 or drop him a note at CL-11W.

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YOU CAN HELP

Want empty drums and gas cylinders picked up? Call Gene Guyer, material supply, on ext. 3825.

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ENGINEERING LECTURES BEGIN

The first of four 1977 engineering lectures will be offered on Wednesday, March 30, from 4-5 p.m. in Conference Room 1-W of the Central Laboratory. The topic will be "Engineers & Scientists - How to tell them apart." The speaker will be Dr. William Brobeck of Brobeck and Associates, Berkeley, California. Dr. Brobeck, before starting his own consulting firm, was chief engineer at the University of California Radiation Laboratory. He had engineering responsibility for projects such as particle accelerators, 60-inch cyclotron, 184-inch synchrocyclotron, the Oak Ridge Calutron, the Bevatron and the MTA linear accelerator.

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DOCTORS VISIT FERMILAB



About 100 DuPage County Medical Society members and guests visited Fermilab last week for a general orientation and tour of the Cancer Treatment Facility. Above left, Fermilab physician Dr. Charles Lang (R) greets (L-R) Dr. Kenneth Hood, Dr. Norbert Leckband, Mrs. Leckband and Mrs. Hood. In right photo, Dr. Frank Hendrickson, CTF deputy head for medical affairs, explains accelerator control room operations.

BALLET HISPANICO HERE MAR. 27



Tickets are available for a performance by Ballet Hispanico of New York in the Fermilab Auditorium. First in a series of three dance programs to be offered in the Fermilab Art Series, Ballet Hispanico will perform at 7:30 p.m. on Sunday, Mar. 27. The group's repertoire has roots in cultural traditions of Spain, Puerto Rico and Latin America with some Caribbean influence. The troupe combines classical flamenco and other traditional dance forms with contemporary works by leading choreographers. For tickets or information contact the Guest Office, Ext. 3440. Admission will be \$3. All seats are reserved.

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'TIS THE SEASON FOR TORNADOS

Floor warden training for tornado emergencies began Wednesday. A repeat session for those who missed the first will be held Tuesday, March 29, from 10:30 to 11:30 a.m. in the CL-1W conference room. Since the tornado season is looming, floor wardens are urged to attend, said Gene Plant, Central Laboratory emergency supervisor.

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ORIGINALS AVAILABLE

Many of the original copies processed through the Duplicating Facility in recent months have been left behind, Sybil Krebs reports. Sybil has gathered them in a box just to the left of the door of Duplicating and she suggests that some missing documents may well be found there. Duplicating will be moving in the next few months and Sybil would like to have these papers picked up before then.

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THANK YOU

Thanks, to everyone at Fermilab from Alice Davidson, Food Services, for the many remembrances during her recent hospitalization and recovery.

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ENERGY DEPARTMENT PROPOSED

President Carter sent to Congress on Mar. 1 his proposal to create a Department of Energy. The proposed bill would abolish the Federal Energy Administration, the Federal Power Commission and Energy Research and Development Administration (ERDA). Fermilab is operated by Universities Research Association, Inc. under contract with ERDA. The three independent agencies would be consolidated in the new department. There would be about 20,000 employees and a FY 1978 budget of about \$10.6 billion.

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ELECTRONS CLEAN SLUDGE

Electrons from an accelerator are making sludge from a Boston area wastewater treatment plant less harmful. According to Science News (Mar. 5), the process is in use at the Deer Island plant. Viral and bacterial pathogens in sludge are killed by an electron stream from a 50-kilowatt accelerator able to deliver between 100,000 to 1,000,000 rads. The sludge is not made radioactive the report said. Presently, the irradiator handles a third of daily production, 380 cubic meters of sludge.

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