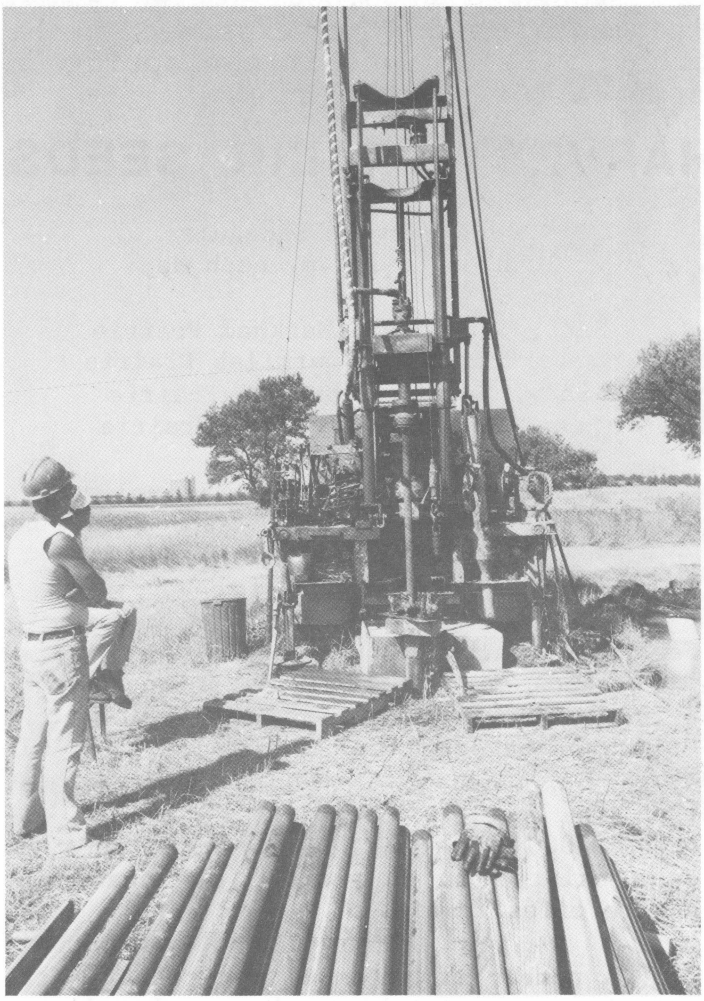
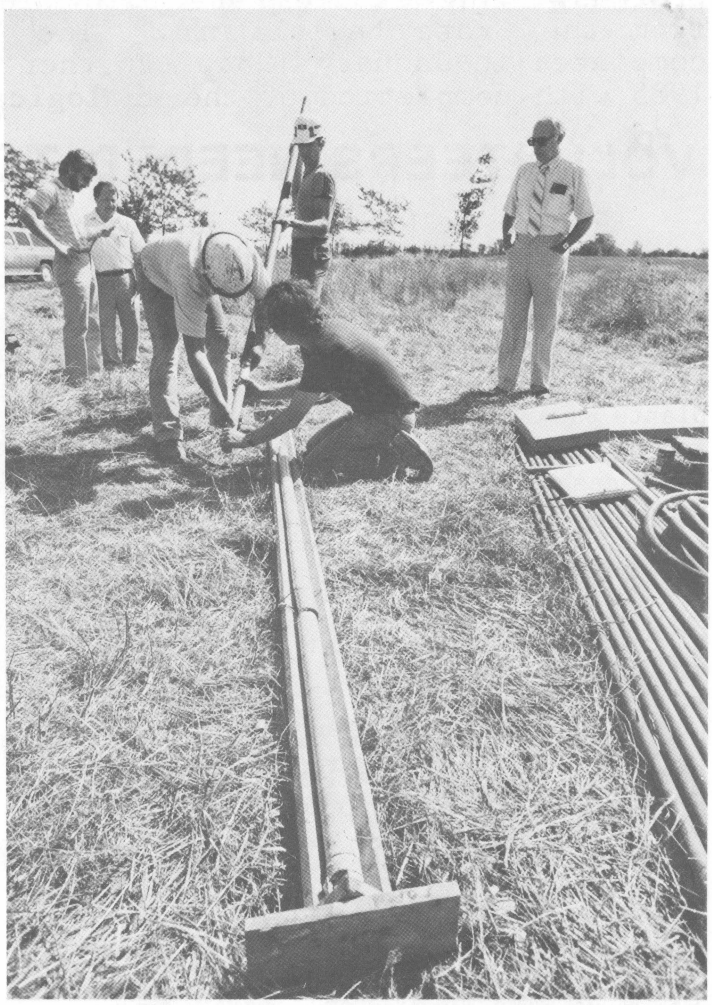
September 20, 1984
FERMI NATIONAL ACCELERATOR LABORATORY
FermiNews

STATE DRILLS--FLINTSTONE FLEES BEDROCK



Drilling rig boring a 500-ft deep hole near the corner of Batavia and Eola Roads on the Fermilab site.



State Geological Survey team removes 10-ft long bedrock core with assistance from D&G Drilling, Inc.

by Sam Baker

Silurian dolomite, chert, packer tests, vugs--Fermilab physicists are learning a new vocabulary as they watch the Illinois State Geological Survey (ISGS) obtain cores from the bedrock formation beneath the Fermilab site. The boring hole near the corner of Batavia and Eola Roads is the first of ten to be drilled this fall in the counties around Fermilab to further characterize the underground materials to demonstrate that they are suitable for construction of the Superconducting Super Collider (SSC).

The drilling at Fermilab, which was just completed, follows the feasibility study phase of the geological study by John Kempton and his collaborators at ISGS which determined that locating the SSC underground in this region is indeed feasible. The study was based on existing well drilling records and some ISGS cores obtained earlier for other purposes. The drilling is being done to verify the findings of the study and yield information necessary for engineers to design an accelerator tunnel and estimate costs.

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In addition to the geological study, the State is also funding an environmental study to assess the environmental impact of such an undertaking. The study area includes portions of DuPage, Kendall, DeKalb, and Kane counties since at this stage the magnetic field strength of the superconducting magnets has not been selected. The lowest strength under consideration would require a 30-mile diameter tunnel to contain 20-TeV protons. The studies are being funded through a $500,000 appropriation from the State Legislature. The environmental study is expected to be completed in January 1985. Further drilling will be done in the spring of 1985 with completion of the geological study a few months later.

VOLUNTEERS NEEDED TO HARVEST PRAIRIE SEEDS

Fermilab is looking for volunteers to help harvest seeds for its prairie restoration project. Volunteers will go to the Morton Arboretum, the Markham prairie, Illinois prairie, or the Fermilab prairie on certain dates to pick seeds of prairie plants which will then be planted in Fermilab's 600-acre restoration. No experience is necessary and simple instructions will be given to anyone who comes to pick seeds.

It is not necessary to stay the entire day; clippers and gloves are handy for those who can bring them. Van transportation will be available from Wilson Hall to the Markham prairie. Reservations are necessary for transportation; call ext. 3353.

1984 Harvest Schedule
10 a.m. to 3 p.m. each day

Sat., Sept. 29 - Markham Prairie
Sun., Sept. 30 - Fermilab Prairie
Sat., Nov. 3 - Markham Prairie
Sun., Nov. 4 - Fermilab Prairie

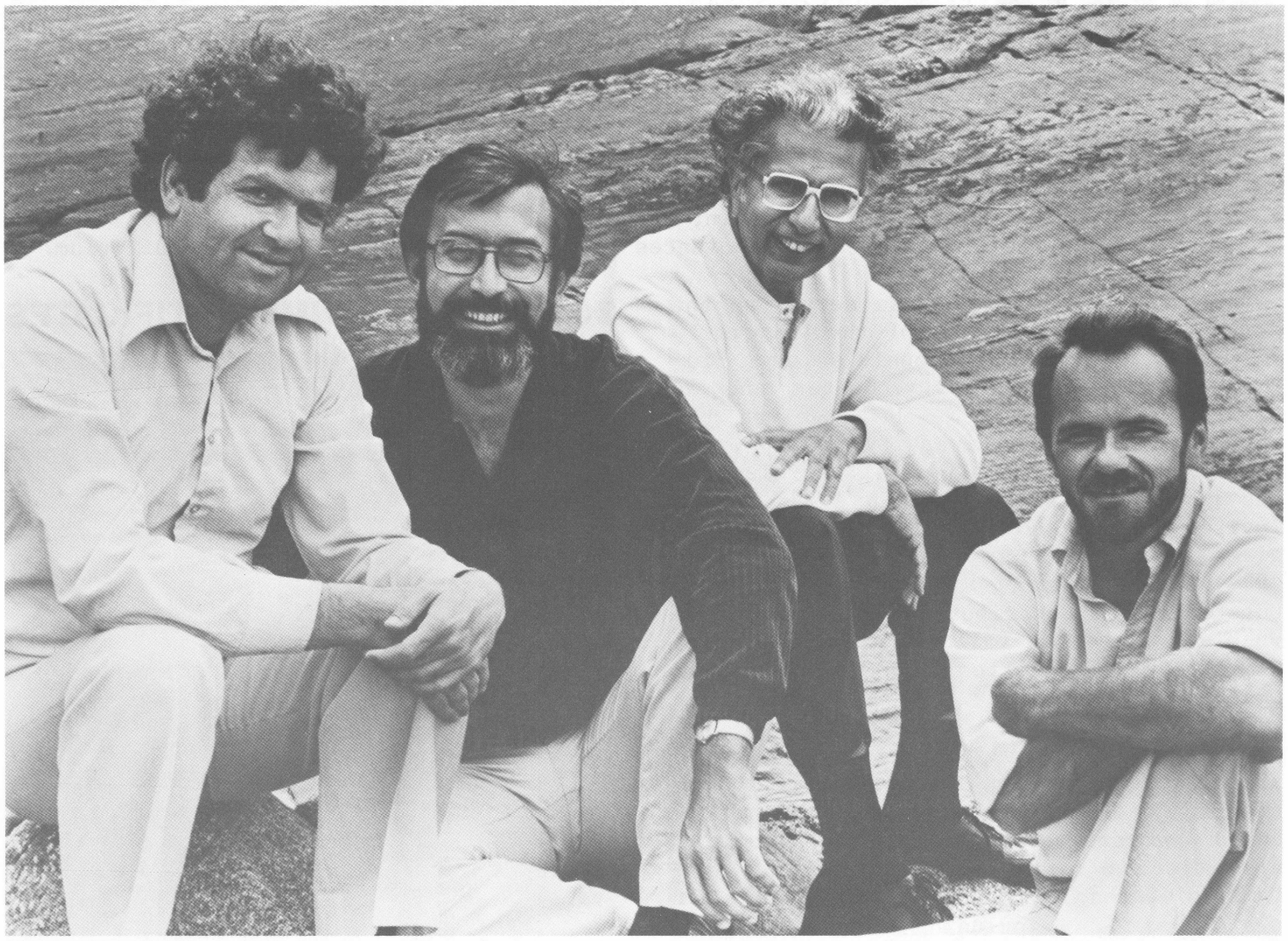
This is the 11th year that volunteers have harvested for Fermilab, and more than 300 people have participated.

Since 1974, 350 acres in the center of Fermilab's accelerator have been planted with seeds of plant species known to have existed in northern Illinois before the area was converted to agriculture. Prairie ecology is much different than the vegetation in Illinois countrysides today. Of the 40,000 square miles of prairie that once existed in Illinois, less than four square miles remain.

A number of attempts to "restore" the prairie are now taking place. Fermilab's project is one such effort. Each year since 1974, a few acres have been planted using the seeds collected by volunteers at such places as the Markham prairie which is a remnant of the original Illinois prairie. Volunteers can then concentrate on the rarer seeds which greatly enhance the diversity of the plantings, bringing them closer to the mix of the original prairie.

A companion project at Fermilab is the introduction of trumpeter swans and sandhill cranes to the prairie areas where they have not been seen for more than 100 years. The young birds recently placed in the prairie have clipped wings and are therefore confined to this area. But as they mature and mate, their offspring will migrate and return to the area. In time, a substantial number may call the Fermilab prairie "home."

ILLINOIS' VERMEER STRING QUARTET PERFORMS HERE



Vermeer Quartet

by Jane Green

Acclaimed around the world, Illinois' own Vermeer Quartet brings its "polished string quartet playing" and "intense, vigorous style" to Ramsey Auditorium on Saturday, October 13, at 8 p.m.

Resident artists at Northern Illinois University, the members of the Vermeer Quartet include violinists, Shmuel Ashkenasi and Pierre Menard; violist, Bernard Zaslav; and cellist, Marc Johnson. Since their begining in 1970, the Quartet has appeared at many of the world's international music festivals, including Marlboro, Spoleto, Edinburgh, and Mostly Mozart. As one critic noted, "There are a number of young quartets that have a luscious tone and hairline precision to spare. The Vermeer has that and soul, as well."

For their concert at Fermilab, the quartet has chosen to play: Haydn, "Quartet in F Major, Opus 74, No. 2"; Shostakovich, "Quartet No. 7"; and Schumann "Quartet in A Major, Opus 41, No. 3."

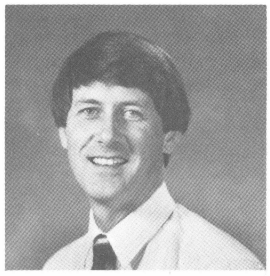
Don't miss this opportunity to hear the "top-ranked" Vermeer Quartet. Admission is $6 and tickets are available at the Informtion Desk in the atrium of Wilson Hall, ext. 3353. Phone reservations are held for five days, but due to ticket demand, those reservations not paid for within five working days will be released for sale.

Congratulations To . . .

GENETIC ENGINEERING EXPERT LECTURES OCT. 19

by Jane Green

Is genetic engineering a boon or a menace? Are we headed for a world where cloning replaces nature? How will the recent advances in biotechnology affect our lives, and what are the potential uses for genetic engineering in the years to come? For answers to these questions, join us on Friday, October 19, at 8 p.m. for the next Lecture Series presentation. Dr. Richard R. Burgess of the University of Wisconsin, Madison, will give a talk entitled, "Genetic Engineering: Recent Advances and Future Promise" at Ramsey Auditorium.



Richard Burgess

Burgess serves as the Director of the University of Wisconsin's new Biotechnology Center and as Professor of Oncology. He received his Ph.D. from Harvard University in 1969. He has authored numerous journal articles and has given many seminars. In 1979, he was invited by the Soviet Academy of Science to give a series of lectures in the USSR. In 1982, Burgess received the Pfizer Award for Outstanding Contributions in Enzyme Chemistry, and the following year, he was a Guggenheim Foundation Fellow studying monocloning antibodies.

In his lecture, Burgess will describe protein biotechnology. He will explain how the basic genetic material can be reproduced and deliberately altered. He will also discuss current applications of protein biotechnology and possibilities for the future, including medical and agricultural uses.

Admission to the lecture is $2, $1 for senior citizens, and tickets are available at the Information Desk in the atrium of Wilson Hall, ext. 3353. Phone reservations are held for five days awaiting payment.

REGISTER TO VOTE NOW !

David Sachs, ext. 3942, is a voter registrar for Kane County. He is willing to register any employee living in Kane County, providing they meet the voting requirements. To vote in the presidential election in November, one must register at least 30 days before the election.

Are there registrars for any other counties employed at Fermilab?

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30 RECEIVE SWIM CERTIFICATES

On Friday, August 10, 30 of the 47 children who participated in the 1984 swim classes at the Fermilab pool received their Red Cross certification. The various classes offered this year included beginning swimmer, intermediate swimmer, and junior lifesaving. In addition to these classes, next year we will offer swimmer, advanced swimmer, and senior lifesaving. The classes were conducted by Fermilab lifeguards Dana Carpenter and Inger Gibson, assisted by Diane Carpenter from the Children's Center. The instructors helped the children celebrate the end of classes by providing cookies and juice after awards were distributed.