

RESEARCH PARK FOR NORMAN?



Viewing North Campus from the corner area where park will probably begin growth, one sees existing buildings, beyond which is Westheimer Field.

Every now and then a great idea comes along, and then it belongs to everyone. The idea for university research parks is such an item, and the University of Oklahoma now is using it so that a highly scientific dream might materialize.

JUST INSIDE the north entrance of the University's Research Institute is a vestibule hedged by stone-relief murals. Hacked into the stone are images of such scientific pioneers as Faraday, Mme. Curie, Pasteur, Euclid, Newton, Galileo, Archimedes, and even old Homo himself, the latter hairy as a beast of the fields, naked and studying a stone hammer which he evidently has only recently dreamed up.

There are two quotations inscribed alongside the images. "In nature's infinite book of secrecy," says one, "a little can I read." And the other: "Experience is the foundation of theory and the test thereof."

One recent morning when the campus was covered with snow, a congenial, dark-haired man of medium height shuffled through a stack of papers in his office in the Institute. Now and again he paused over a particular item, pulled his spectacles closer to his eyes as he studied it, and unconsciously relighted the pipe between his teeth. After a moment he said a few words to his

secretary, who left her typing long enough to hand him a folder. A bit of comparison, and he was back again, studying the item.

Very routine, it might seem, this picture of professor and secretary working in a college office. Yet this man—Laurance S. Reid, chairman of the School of Natural Gas Engineering—was wrestling with a brilliant idea, wondering if it were indeed workable, wondering how to make it come true. The idea was far from original, he realized, but in Oklahoma it is an entirely new concept.

Reid serves as spearhead of a group which is planning to build an industrial research park in Norman. Objective? "The surface objective is to provide choice, developed land to responsible industrial firms for the purpose of establishing research and development facilities of a permanent type."

If this remains less than clear, then here is what Reid means:

Oklahoma, a growing state just 50 years

young, needs and wants industry, and Sooners believe that industry needs Oklahoma. Except for water in great quantity, natural resources appear to be unlimited in this area. The weather is fine and workers are in abundance.

Still, many other areas have such advantages and are more than willing to offer them to industry. Therefore, there must be further inducement—ideally located research facilities to spark industrial growth; i.e., an industrial research park.

Generally speaking, the ideal research park comprises a large plot of land, fully developed with streets, roads, sewers and utility services, which is conveniently located in or adjacent to a pleasant, cultural community and to a major university. Spacious plots of ground are leased on a long-term basis to responsible firms for erection of research and development facilities subject to the approval of building and landscaping plans, specifications and the general type of research to be conducted.

Where, asks Reid, would one find a better site for such a park than in Norman, home of the University of Oklahoma? And where a better pinpoint than the University's North Campus, scarcely two miles removed from the main campus?

"We have an ideal climate, geographically and scientifically," he explained. "The University is located there, and it maintains very substantial interests in research at the graduate level. Residents of the Norman community have a high average level of mentality and capability.

"Too, we feel we have a great deal to offer in the general plan of industrial decentralization. Industry is apt to favor a location like this. We have people here who are inclined to do a day's work for a day's pay; the manpower situation is good. Speaking along these lines, the professional manpower pool at the University itself is a very attractive feature: Park occupants could retain faculty members as consultants, and graduate students and undergraduates could work part-time. Also, they would be in an excellent position to evaluate and hire University graduates as permanent employees. There is little doubt that having the University for a neighbor would be an advantage to industry.

"The University and Norman community would benefit from association with scientists and professional people who would be brought in to staff these facilities. Some might offer graduate instruction in highly specialized fields at the University, while others might complete work for advanced degrees while stationed in Norman."

Again, the idea for research parks is not new. Credit for conceiving the basic idea has been attributed to no less than a half-dozen persons, and it has been kicked around now for at least five years. It seems that interest in the Research Park has been heightened by announcements of similar projects, especially by the Stanford University Industrial Park, which is a stunning success.

"To an extent," said Reid, "the Stanford project is what we have in mind for Norman. Of course, in California land for industrial use or for homes is at a premium, and Stanford had the good fortune to find itself in possession of 9,000 acres of very desirable land."

Stanford has allotted about 200 acres for its Industrial Park to date. Last September some 18 occupants were located there, though only two of these were pure research units. A few combined research and light manufacturing. Others were light manufacturers and some of the land was

occupied by publishers' offices and warehouses.

The Stanford Industrial Park is an extremely high-level enterprise. Buildings are well-conceived and erected. Grounds are spacious and beautifully landscaped. There are adequate automobile parking facilities. All of these facilities were planned and approved before the leasing agreement was consummated.

Several months ago Reid and 17 others visited Stanford's park. Others included Horace Brown, dean of O. U.'s College of Business Administration; John Malone, manager of Norman's Chamber of Commerce, and Oklahoma civic and industrial leaders and educators. The tour was sponsored by Oklahoma's Frontiers of Science Foundation.

"We learned at Stanford," said Reid, "that effectively controlled planning is essential to the success of a project of this kind. We have to prevent the encroachment of undesirable facilities around a good park development. The enterprises allowed to come in must be of a kindred nature; that's one of the basic ideas."

RESearch PARKS do not take shape quickly.

First of all, a large amount of good information must be assembled in usable form. It has been suggested that the University of Oklahoma's faculty might serve as consultants to firms located at the Park. What can these people do? What are their professional interests? If a manufacturer found that there was a high level of interest and capability among certain faculty members in the development of his product, then he might be attracted to the Park. Many companies are aware of the benefits of liaison between industry and the nation's universities.

But there is no centralized "professional interest" file in existence at O. U.

So Reid and his secretary have found themselves saddled with a tremendous job, bulkwise. The first step, nearly complete, is to send forms to faculty members asking for professional interests, research experience, industrial experience, and other data.

"A basic job," said Reid.

Information is set up from the completed forms, as they return to Reid, on IBM machines for detailed access, and a coded file is to be created for reference.

The next step: "In the same vein, we need to know in detail what are the basic research facilities at the University. What departments have basic research equipment? You know, manpower and physical

facilities go hand in hand. All of this is plain old inventory work. We need to know these things before we 'go visiting.'"

"Visiting" means talking to corporations about O. U.'s Research Park, and this must include a rundown on what manpower and facilities the University and Norman area will be able to offer.

Thus far in this discussion it may appear that the University and Norman would be practically the only parties interested in the creation of the Park. This is not true. Both the state and the Greater Oklahoma City area have much at stake, too.

Reid and his colleagues need data concerning Norman, so far as residential requirements are concerned. For example, say that a firm located in the Research Park and immediately employs 100 persons, 25 of them Norman residents, 75 of them persons who must now move themselves and their families to Norman. This creates a demand for 75 additional houses, and the demand will probably grow as the years pass and more firms come to the Park. The situation creates a heavier load on the Norman public school system, on public utilities, on the sewer system, and so on. With this in mind, the Norman Chamber of Commerce is gathering data concerning what the city will be able to offer.

"Too, the Park would be an essential part of the industrial expansion of central Oklahoma," said Reid, "and this includes the Oklahoma City area. So the Oklahoma City Chamber of Commerce is vitally interested in it."

John Malone of Norman's Chamber of Commerce is enthusiastic about the Park. He has estimated that it would, within five years, attract industry employing at least 4,500 persons.

The University's North Campus has about 900 acres of land which eventually could be offered to industry. At this writing, only about 400 acres is available in any immediate sense. Reid figures that the southeast corner of the Campus would be the logical place to begin development; this portion is clear, unused. The entire area must be developed in phases. But it will not be so expensive as it might sound. During the past war the Navy built a primary flight training base on this site, erected buildings, graded roads, installed sewers. When the war ended the base was deeded to the University, along with all the improved facilities. So the University can now develop the land for the Research Park at a minimum of cash outlay.

As the project grows, the North Cam-

Continued on page 23

1957

Lieut. Thomas J. Kennedy, Jr., '57ba, Norman, graduated January 28 from a 16-week armor officer basic course at the Armor School, Fort Knox, Kentucky.

Lieut. Harold W. Powell, '57ed, Temple, Oklahoma, has been appointed chief of the welfare and recreation branch of Brooke Army Hospital, Fort Sam Houston, Texas. His wife, Lois, lives in San Antonio.

Kenneth R. Woodcock, '57journ, has taken up duties as news editor and photographer for the *El Sobrante* (California) *Herald Bee Press*, a weekly newspaper. He also works part-time as a public relations man for a local church.

Dr. Delbert H. McGinnis, '57med, is interning at the Queen's Hospital, Honolulu, Hawaii.

Lieut. Walter L. Young, '57eng, Tulsa, has completed the Army's 12-week basic officer course at the Quartermaster School, Fort Lee, Virginia.

Captain K. W. Cook, '57m.eng, transferred from duties in Spokane, Washington, to Albuquerque, New Mexico, in January.

Ron Thompson, '57fa, Oklahoma City graduate student, has directed a play, *The Fourposter*, with a cast of only two characters. Each graduate drama student at O. U. is required to direct two full-length plays.

Ensign Robert G. Case, '57, made his first solo flight recently at Pensacola, Florida. Case is from Oklahoma City.

MARRIAGES: Miss Ann Rule, '57m.lib.sci, Norman, and Walter Ferrell Coleman, '56geol, Bradenton, Florida, were married December 21, 1957, at St. John's Episcopal Church in Norman.

Miss Erma Ann Reid, '57, Oklahoma City, and F. Eugene Wyrick, '57, Tulsa, were married December 19, 1957, in Gainesville, Texas. They live in Norman, Oklahoma.

Miss Doris Anne Hartenberger, '57m.ed, El Reno, and Franklin D. Smith, Calumet, were married November 29, 1957, in the Wesley Methodist Church, El Reno, where they plan to live.

Miss Virginia Carolyn Jones, '57ba, and Russell Alan Mason, both of Peoria, Illinois, were married November 30, 1957, in the First Methodist Church in Peoria. The couple will be at home in Hermosillo, Sonora, Mexico.

Miss Carolyn Ratcliff, '57bs, and George E. Flanders were married November 30, 1957, in the Pilgrim Presbyterian Church, Vinita, Oklahoma. The Flanders live in Bartlesville.

Miss Wilma Daline Noak, Atoka, and Paul G. Taylor, '57, Oklahoma City, were married November 9, 1957, in the Muse Memorial Church, Oklahoma City. The Taylors live in Oklahoma City.

Miss Jean Corry, '57, Enid, and Lieut. Gerald Lee Woolington, Chicago, Illinois, were married November 30, 1957, in the First Presbyterian Church, Enid. The couple will establish a home at Mather Air Force Base, Sacramento, California.

BIRTHS: Bill Geren and Mrs. Geren (the former Martha Ellen George, '57bus), Norman, have chosen the name William Jeffrey for their son born December 26, 1957. They have another son, Hal Gregory, 1½.

RESEARCH PARK?

Continued from page 5

pus' old wooden buildings—today rented as apartments or occupied by offices and warehouses—will be cleared away from most of the remainder of the land.

Every project needs a rallying point, a sort of "totem pole." In this case the "pole" will be Maniac III, a huge electronic computer now being assembled at Rice Institute in Houston, Texas. About 18 months and more than \$400,000 will be needed to complete and house it, but it has already been called the world's fastest digital computer. University research needs such a machine; industry should flock to use it. Maniac III will have a "memory" of from 8,000 (minimum) to 32,000 (maximum) ten-digit numbers (referred to as "words") for use in mathematical problems. It will even be able to translate non-mathematical problems into figures and solve them in this manner.

By contrast, the IBM 650 computer, already at the University, has memorized only 2,000 "words." The average operating, or addition, speed of the IBM 650 is about 500 "words" per second. Maniac III will be able to reach an average operating speed of ten microseconds—or the addition of about 100,000 "words" per second.

Maniac III should especially attract the electronics industry, aircraft and missile development, said Reid, and the machine will give the Research Park prestige. "We plan to have the computer laboratory, an atomic reactor, a technical library, and other facilities at the Park."

Max Westheimer Field, the University's airport located on the North Campus, is a "must" for the Park's development. Easy access by air through this, the world's largest university-owned air base, will be needed by firms which locate there.

"Look for continued improvement and expansion in the airport," said Reid. Some of the airport's buildings could be moved to the opposite side of the airstrip, providing the Research Park became crowded and more space were needed. In any event, new hangars and other structures would materialize. In this manner the Research Park would contribute to the growth of Westheimer.

So the Research Park still is practically in the offing, barely in its first stage. Reid and Company did much traveling around the country, inspecting other facilities, before they took on the job. A carefully coordinated program is needed before Stage Two is to be reached. "We must get all our blocks in a row, have them properly assembled before we go out and try to sell. We cannot afford to make any mistakes."

The small organization planning the Park is amazed at the comprehensive scope such a project involves. At the same time, Stage One holds nothing spectacular. It is just hard work.

Reid realizes that the Park has one large advantage: the Russian satellite Sputnik I served to spark American interest in research to a point which it hadn't known in years. There is growing consciousness for better scientific endeavor.

"So far as this Research Park is concerned," he said, "we know that we need to do a good job in putting it together. We think we've got the horses." He blew a cloud of smoke into the air and watched it sail away to the ceiling, then continued: "Quite a job, and many people think it can't be done in Oklahoma. It can. All it needs is a little effort, talent, and a great deal of planning. If I didn't think so, I wouldn't have anything to do with it."

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