

THE ATOM

Los Alamos Scientific Laboratory

April, 1966

LOS ALAMOS NATIONAL LABORATORY



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THE ATOM

Published monthly by the University of California, Los Alamos Scientific Laboratory, Office of Public Relations, P. O. Box 1663, Los Alamos, New Mexico, 87544. Second Class Postage Paid at Los Alamos.

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COVER:

LASL Shop personnel, like machinists in many other places, are using the electric discharge method (EDM) to work wonders with extremely hard metals. Here a hole .009 of an inch in diameter has been machined through tungsten by EDM. See story beginning on page 10.

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Office: D-113 Administration Building. Telephone: 7-5236. Printed by The University of New Mexico Printing Plant, Albuquerque.

Los Alamos Scientific Laboratory, an equal opportunity employer, is operated by the University of California for the United States Atomic Energy Commission.

short subjects

The population of Los Alamos County reached a record of 15,600 in 1965, according to estimates prepared by the Bureau of Business Research of the University of New Mexico. Percentage growth since 1960 was 20 per cent, equaling that of Bernalillo County (Albuquerque) and exceeded only by Dona Ana County (Las Cruces), where the 1965 estimate of 73,600 was a 22.5 per cent increase for the 1960-1965 period. The Bureau said Los Alamos had a "natural" growth of approximately 1,300 persons (births minus deaths) and an "inferred migration" (move-ins minus move-outs) of another 1,300.

Frederick Reines, 48, former LASL staff member and co-discoverer of the free neutrino, has been named *Dean of Physical Sciences* at the new Ir-



REINES

vine Campus of the University of California. Reines, who came to Los Alamos as a group leader in T Division in 1944, left in 1959 and has been head of the Department of Physics at Case Institute in Cleveland, Ohio. The neutrino discovery in

1956 was made with Clyde Cowan, using super-sensitive detectors that evolved into the whole body counters pioneered by H division. Reines and Cowan announced their detection of the neutrino, a tiny bit of matter possessing neither charge nor mass but a detectable amount of energy, after setting up their detector deep underground near the big production reactor at the AEC's Savannah River plant in South Carolina. Reines has conducted further neutrino experiments in a diamond mine some 10,000 feet underground in Africa. Underground detection chambers are used because of the shielding from other radiation. In announcing the appointment, UC officials said Reines will continue with his neutrino research while assuming administration of the Departments of Physics, Chemistry and Mathematics and serving as a Professor of Physics at the new campus, which is about 40 miles from Los Angeles, in Orange County.

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shorts . . .

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Horace E. Noyes, traffic manager in the Supply and Property Department, has been named to an Atomic Energy Commission task force that is drafting proposed new regulations for the transportation of nuclear material. After review, the new rules will be submitted to the Interstate Commerce Commission for possible adoption.

Armand Provost, 61, a special messenger and driver for Group W-3 of the Weapons Division, died March 9 at the Los Alamos Medical Center after a long illness. A native of Southbridge, Mass., Provost was employed by LASL on October 21, 1957. Survivors included his wife, Ethel.

Two LASL employes are recent retirees. **Eva N. Canton**, an electronic assembler with P-1, joined the Laboratory staff on March 19, 1952, as an accounting technician. She came to Los Alamos from Sausalito, Calif. **Flavio S. Maestas**, a truck driver helper with SP-4, was hired April 4, 1949. Previously, he worked for The Zia Company and the U.S. Corps of Engineers.

Construction of the new **Los Alamos County Courthouse** begins this spring and is to be completed within a year. Franklin Construction Company of Albuquerque, with a bid of \$602,230, was awarded the general contract by the AEC. The building will contain 26,500 square feet and will be located west of Ashley Pond, north of the present county building. It will be a part of the Civic Center that has been projected for "downtown" Los Alamos. The bid opening February 23 was the second attempt to get the Courthouse project moving. All bids were rejected after the first opening last November, when the lowest was found to be \$158,000 over the \$605,000 estimate. Plans were then reworked, eliminating a portion of the basement, some air conditioning and some exterior decoration, and bids were called for again.

A public drawing will be held at 9 a.m. April 22 to establish priorities for the 41 vacant townsite lots that have been classified for residential use. The drawing will be held in the first-floor conference room of the Los Alamos Area Office of the AEC at 528 35th Street. Appraised values of the lots were announced in February. Maps in-

dicating the locations of the lots and an individual survey plat of each lot have been posted in the lobby of the Area Office building and in the offices of the Department of Housing and Urban Development, 1211 Eleventh Street. Eligibility to participate in the public drawing is limited to project-connected persons. Application forms are available in Rooms 124 and 127 of the Area Office building. They may be filed by eligible persons until 5 p.m. April 20.

Ellis L. Stout, 43, safety engineer with the administrative services section of LASL's CMB Division, was buried March 26 in Guaje Pines Cemetery in Los Alamos.



STOUT

He was found dead of a gunshot wound three days earlier in a weekend cabin he owned near Pagosa Springs, Colorado. Stout, an employe of the Laboratory since 1946, was extremely active in community affairs. He was twice chairman of the County Commission, chairman of the County Charter Commission and recently elected a trustee for the Los Alamos United Fund. He was also active in Boy Scout work, was a former justice of the peace and had served a term as president of the New Mexico Society of County Officials. In professional life, he was a past-president of the New Mexico Society of Safety Engineers and a member of the American Chemical Society. Ben K. Lynch, Pagosa Springs coroner, said the head wound that caused Stout's death appeared to have been self-inflicted.

William J. Masilun, 55, an electronics technician in P-4 and prominent civic worker in Los Alamos for many years, died March 22 in an Albuquerque hospital after a brief illness. A LASL employe since 1948, Masilun was a native of Pittsburgh, Pa. He was a charter member when the Elks Lodge was established in Los Alamos in 1958 and held officer posts in the organization each year. He was exalted ruler in 1963-64. Masilun was a coin collector and had been active in many groups devoted to that hobby. With his wife, Elizabeth, who works at GMX-4, he lived in Pajarito Village in the Valley.

Loan
Of Rare
Gem
Enables LASL
Group To
Collect

DIAMOND DATA

By DUDLEY LYNCH



Contents: One \$100,000 diamond.

OVER THE YEARS, Los Alamos has required the use of strange and, at times, exotic items in its research, but rare gems have not been prominent among them.

No more!

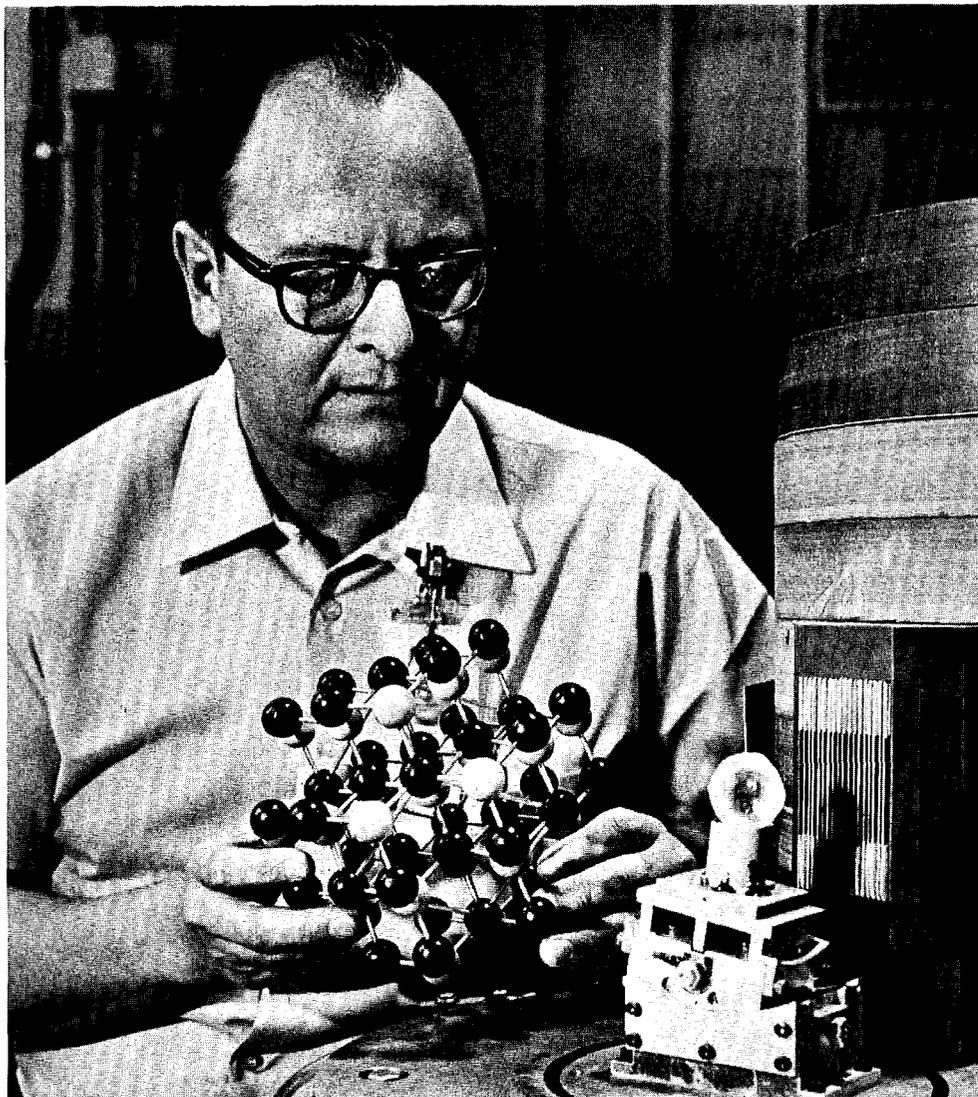
During the last three months, the Laboratory has been the temporary home of the Oppenheimer Diamond, a 253.70-carat gem found in South Africa in 1964 and normally on display in the Gem and Mineral Hall of the Smithsonian Institution. It was loaned to LASL for study of diamond's abstruse crystalline innards.

The diamond, due back in Washington, D.C., by April 1, was used by the Laboratory's P-2 Group. Involved in the project, which began in early 1964 with another large but less spectacular stone, have been John Yarnell, P-2 Group Leader, and John Warren, Robert Wenzel and Darryl Smith. Technically, the group is studying lattice vibrations in the diamond crystal. So far, they report, the experiment has created as many questions as answers.

The gem arrived on January 4 by registered mail in a small cardboard container. From the liberal assortment of postal stampings applied, the package obviously was of value to someone, but there was no inkling that a \$100,000 (its insured value) diamond was inside.

Security was a problem. An around-the-clock guard was the initial thought, but the three-month vigil would have cost about \$7,000. The solution was to lock the reactor room where the diamond was set up, place the gem under the unblinking eye of a closed-circuit tele-

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John Yarnell, P-2 Group Leader, places model of diamond's atomic structure beside Oppenheimer gem. Neutron counting device sits behind 253.70-carat stone.

DIAMOND . . .

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vision camera monitored at the reactor control console, and schedule security checks four times during daylight and hourly at night.

The insurance coverage of \$100,000 was requested by Smithsonian. Says Dr. George Switzer, chairman of the Department of Mineral Sciences: "The stone is transparent and could be broken into several nice stones of jewel quality. And even though it is insured for \$100,000, I don't quite know how you would go about replacing it. This

is something we had been looking for for a number of years. You don't find them this large or this perfect very often."

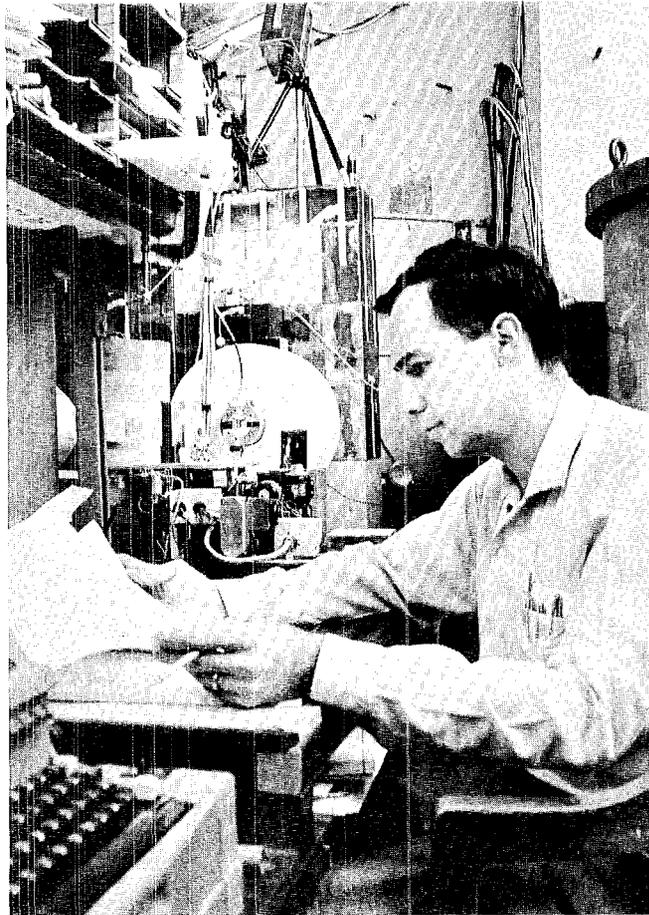
Switzer says the stone is "the largest diamond crystal on display anywhere in the world." The stone's eight-sided, "octahedron" design occurred naturally, a quality that adds to its rarity. It has a yellowish tinge and thus somewhat the appearance of a lump of frozen lemonade. The stone was found in the Dutoitspan Mine, one of the better known South African properties of Du Beers Consolidated Mines, Limited, and only once before has

Smithsonian allowed it out of its case for an extended time. In making arrangements for the most recent trip, negotiations were handled for LASL by Pete Petersen of Supply and Property.

The LASL experiment, a study in solid state physics, is an attempt to better understand how atoms vibrate within, seemingly, the most solid of solid objects (atoms in all materials are constantly moving, at varying speeds, depending on the temperature).

Diamond is a crystalline form of carbon, which appears in the same column of the periodic table as the

'... the upshot of the Los Alamos studies is the finding that diamond does NOT react like (silicon and germanium).'



Experimental apparatus surrounds John Warren in reactor room at Omega Site. Diamond appears in left center, in front of neutron beam opening from Omega Reactor. Television camera, one of several security measures, maintains necessary around-the-clock vigil.

elements germanium and silicon. The last two form the same crystal-line structure as diamond, leading to the conjecture that the atoms in diamond vibrate in the same way as their periodic neighbors.

The Los Alamos experimenters conceived the study after reading a Russian scientific paper which sets forth how a diamond should react if it behaves similarly to germanium and silicon.

But the upshot of the Los Alamos studies is the finding that diamond does NOT react like the other two elements. "We can't explain what's happening on a fundamental level,"

says Warren. "But we are still trying."

The complex crystal structure of diamond has a three-dimensional-lattice pattern. Visualize an atom at each corner of a child's "jungle gym" and you have an idea of the lattice arrangement of the diamond atoms. Each atom is connected to its neighbors by strong electrical forces which hold the crystal together in much the same way that the bars hold the gym together. By shaking the gym, you can get an idea of how strong the bars are. Similarly, by shaking the atoms in a crystal, you can learn something

about the forces that hold it together.

A good way to "shake" the atoms in a crystal is to shoot neutrons at them. These atomic particles, which have mass but no electrical charge, are readily obtainable from the Omega West Reactor at LASL's Omega Site. A beam of neutrons with fixed energy and momentum is directed into the diamond. As the particles emerge, a neutron spectrometer, set up to record neutrons being scattered at a given angle, notes changes in energy and momentum incurred during passage

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Closed circuit TV hook-up (above) was used for surveillance during working hours. Security guards checked hourly at night. Monitoring screen from Omega Reactor control console are Charles Warner, left, and Al Lyle. Close-up view at left reveals diamond's huge dimensions.

'The results also further antiquate theories on lattice vibration, some of which were first proposed in the early 1900s ...'

DIAMOND...

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through the diamond. These quantities, in turn, tell much about the motion, caused by the neutrons, of the atoms in the crystal.

In a measurement that lasts from eight to 48 hours, a single one of the many ways that the atoms can vibrate is revealed. The data collected during weeks of constant experimentation with the neutron spectrometer at different angles to the incident beam are used to form

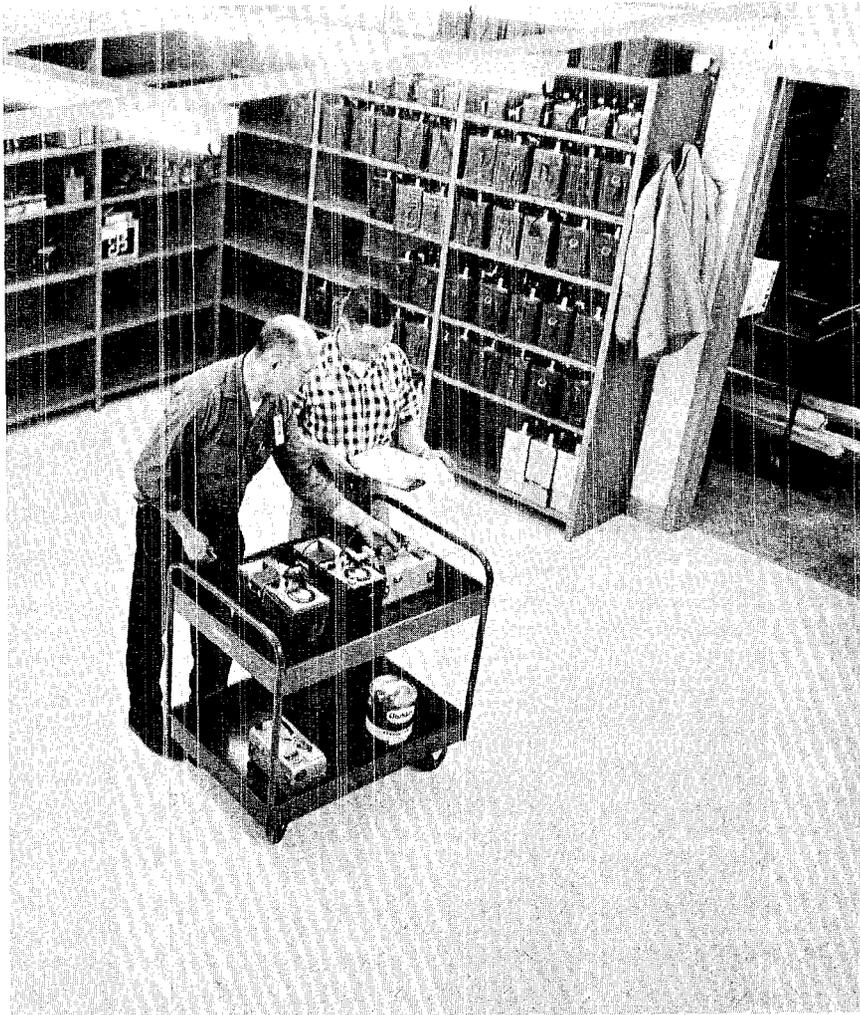
a set of "dispersion curves" that serve as identifying patterns or fingerprints of the forces inside the crystal.

It was when the fingerprints of diamond were compared with the fingerprints of silicon and germanium that brows became furrowed. In defiance of theory, the fingerprints didn't match.

The knowledge has no earth-shaking consequences, explains Warren, but it does point up a "lack of knowledge" of the forces operating within crystals. The re-

sults also further antiquate theories on lattice vibration, some of which were first proposed in the early 1900s and went unchallenged until neutron studies opened up new exploratory paths in recent years. Much work remains in this area of scientific study.

"There is no theory to explain the forces at work in silicon and germanium, yet" muses researcher Wenzel. "Even if someone is successful in explaining those two, now they will still be out of luck with diamond."



Instruments used for radiation monitoring in new Occupational Health Laboratory are distributed from this area by Leo Riedel (left) and Francis Randolph.

THE NEW Occupational Health Laboratory building was put in use last month, providing for the first time ample facilities for two major Health Division service/research groups—H-5 and H-8.

H-5, the Industrial Hygiene group, is concerned primarily with air contamination and pollution as it affects workers. H-8 is the Field Test Studies group and is devoted to broad problems of health and safety arising from radioactivity associated with reactor tests and operations at the Nuclear Reactor Development Station in Nevada.

The pumice block and pre-stressed concrete OHL building, which has been painted beige and white, is on Pajarito Road, just east of the Diamond Drive intersection. Shaped like an off-size letter "T," the building contains 26,000 square feet of floor space. It cost \$1,405,000.

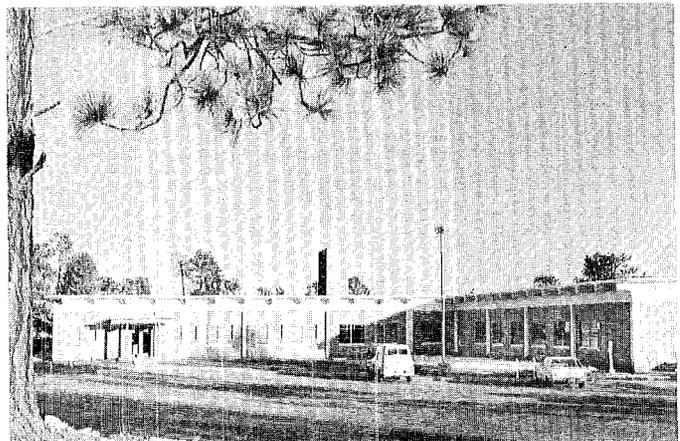
In addition to specialized laboratory facilities, the building includes a branch library (actually a branch of the Medical Library in the HRI building), a machine shop, drafting rooms, instrument storage and repair rooms, a specimen receiving and storage room, a concrete "source vault" for storing low-level

continued on page 9

New OHL building on Pajarito Road reflects "new look" in technical area construction. Although of pre-stressed concrete and concrete block construction, design and bright decorating minimize traditional austere appearance.

New Address For H-5 & H-8

*Health Groups Move
Into Expanded
Laboratory Facilities
On Pajarito Road*





Planning equipment location for this large counting room are H-8 Group Leader Harry Jordan and Jerry Dummer of H-1.



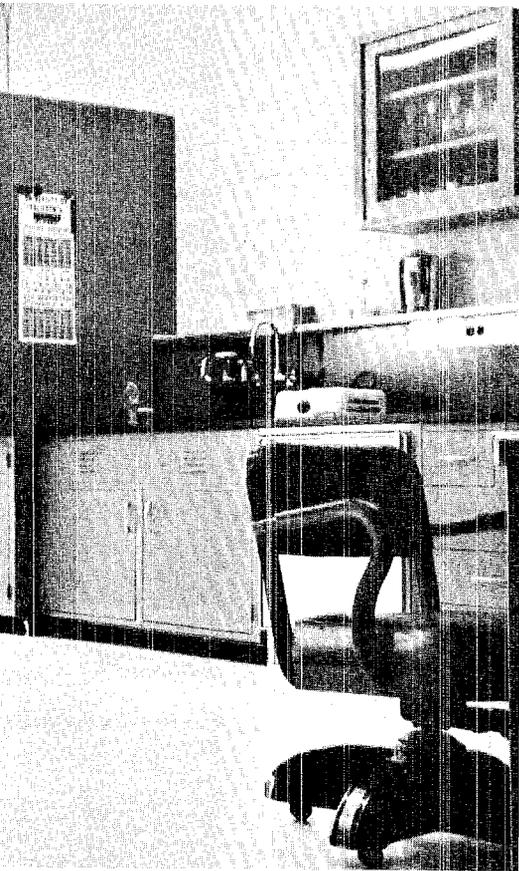
Top Right: Pollution-to-order is possible with this dust chamber used for testing masks. In photo are (from left) Darell Bevis, George Boyer and John Ortiz, all of H-5 Group.



Left: Fred Worman prepares to open heavy door of low-level source vault where radioactive samples are stored until counted. In corridor is Ruth Williams, H-8 secretary who is in charge of vault usage.



Bottom Right: Most laboratories are arranged in suites with separate office area. In this photograph are (from left) Helen Miller, Romualda Madrid and Olus Ramsey, all of H-5.



NEW ADDRESS ...

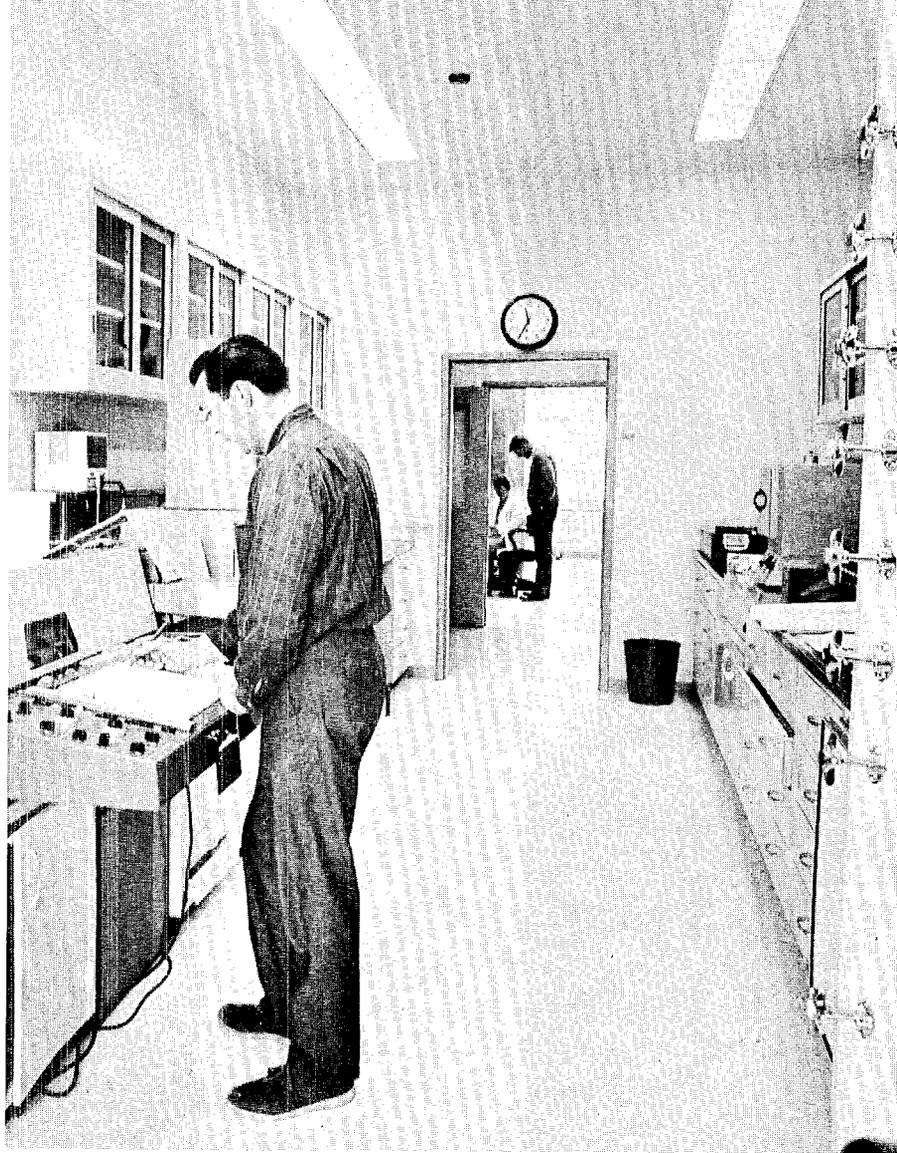
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radiation sources awaiting study, conference rooms and photographic darkrooms.

Gases are supplied to lab rooms from central tank manifolds. Purified water is piped through plastic tubing directly to rooms from a deionizing-distilling system in the building basement. Special power generating equipment assures constant voltage for instrument calibration.

Group Leaders Harry Schulte of H-5 and Harry Jordan of H-8 said the new building makes possible additional research efforts that were impossible for both groups in their crowded quarters in the HRI building.

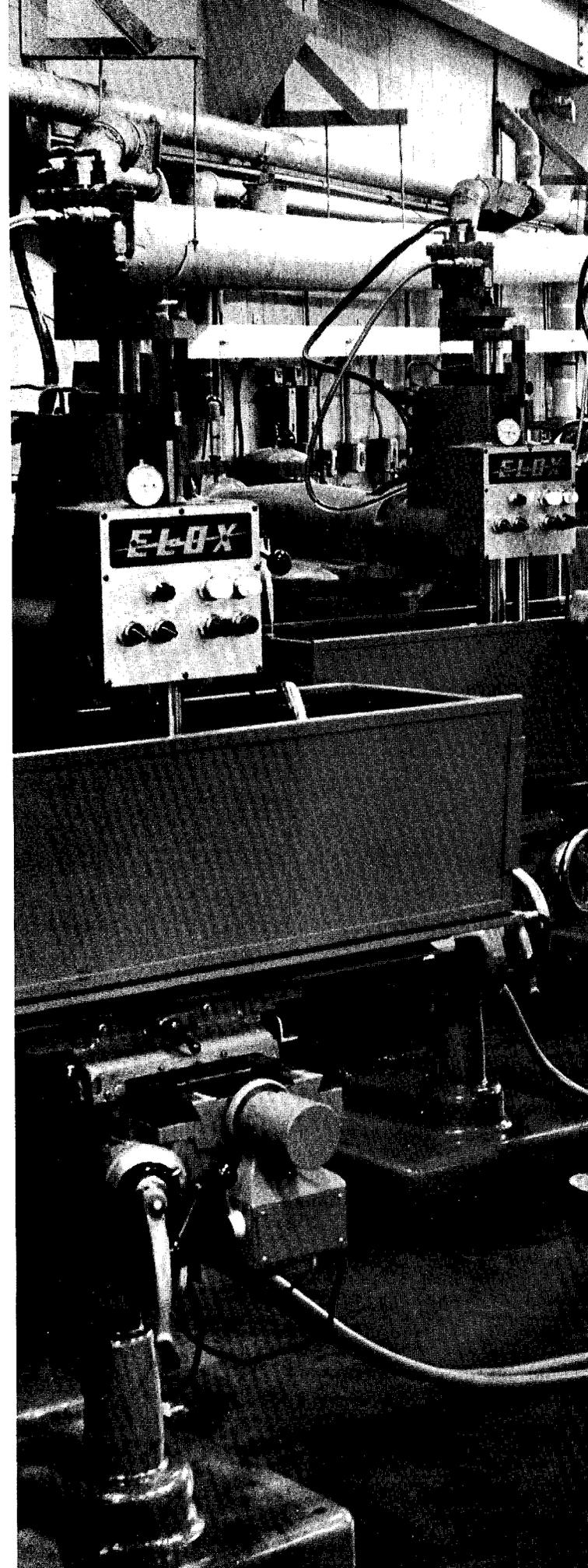
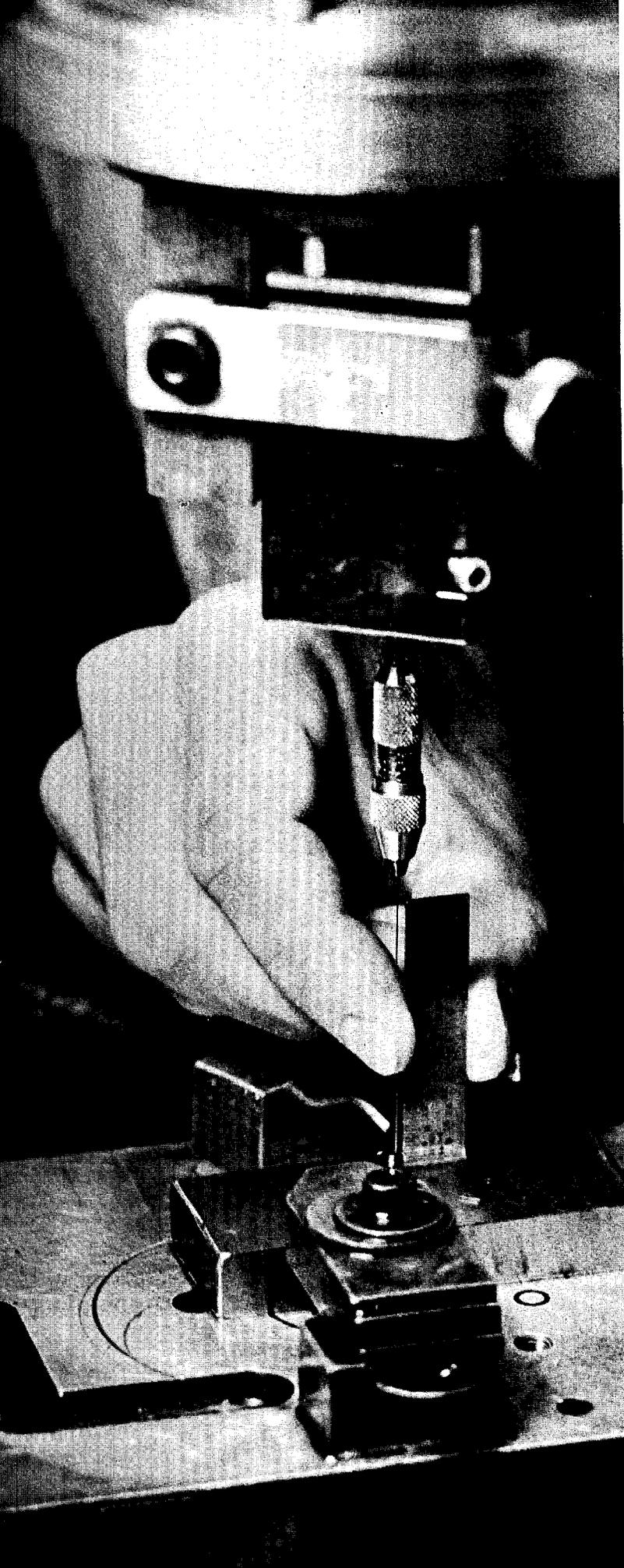
Space vacated in HRI will be used to accommodate the rapidly expanding activities of the biomedical research group, H-4, according to H Division Leader Dr. Thomas Shipman.



Infrared and gas chromatography instruments are checked out in new quarters by Evan Campbell. Seen across corridor in another H-5 laboratory room are personnel Olus Ramsey and Bill Mass.

Rita Bieri (below) of H-5 serves as librarian in OHL Branch Library.





A New Use For The SPARK

Al Zerwas pressed a finger into a small cardboard box—the type a druggist might use for packaging capsules—and gingerly removed a tiny object.

Poised on his fingertip was a miniscule length of a metal rod, .025 of an inch in diameter, through which had been bored a hole twice the thickness of a human hair. Consider that the substance was tungsten-rhenium, among the hardest alloys known, and that the machining involved no contact of tool and workpiece. The significance of a relatively new process called electric discharge machining (EDM) then comes into focus.

“We can get a lot smaller than that,” said Zerwas, head of research and development in LASL’s Shop Department, as he flicked the tiny nub of metal back into the container on a workbench.

How small? The answer comes from Bob Howes, assistant Shop Department head.

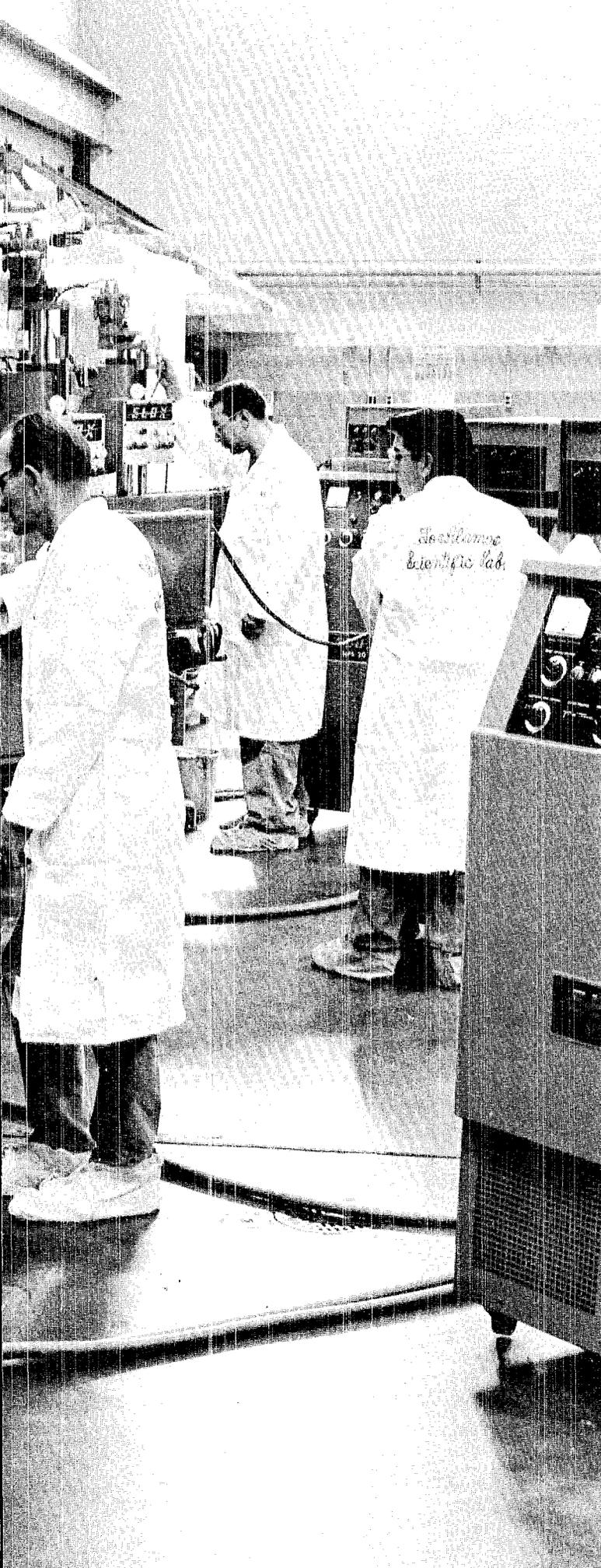
“We’ve experimented with electrodes (tools that direct the “drilling”) down to three-tenths of one-thousandth of an inch in diameter. That’s about one-tenth of the diameter of a human hair.”

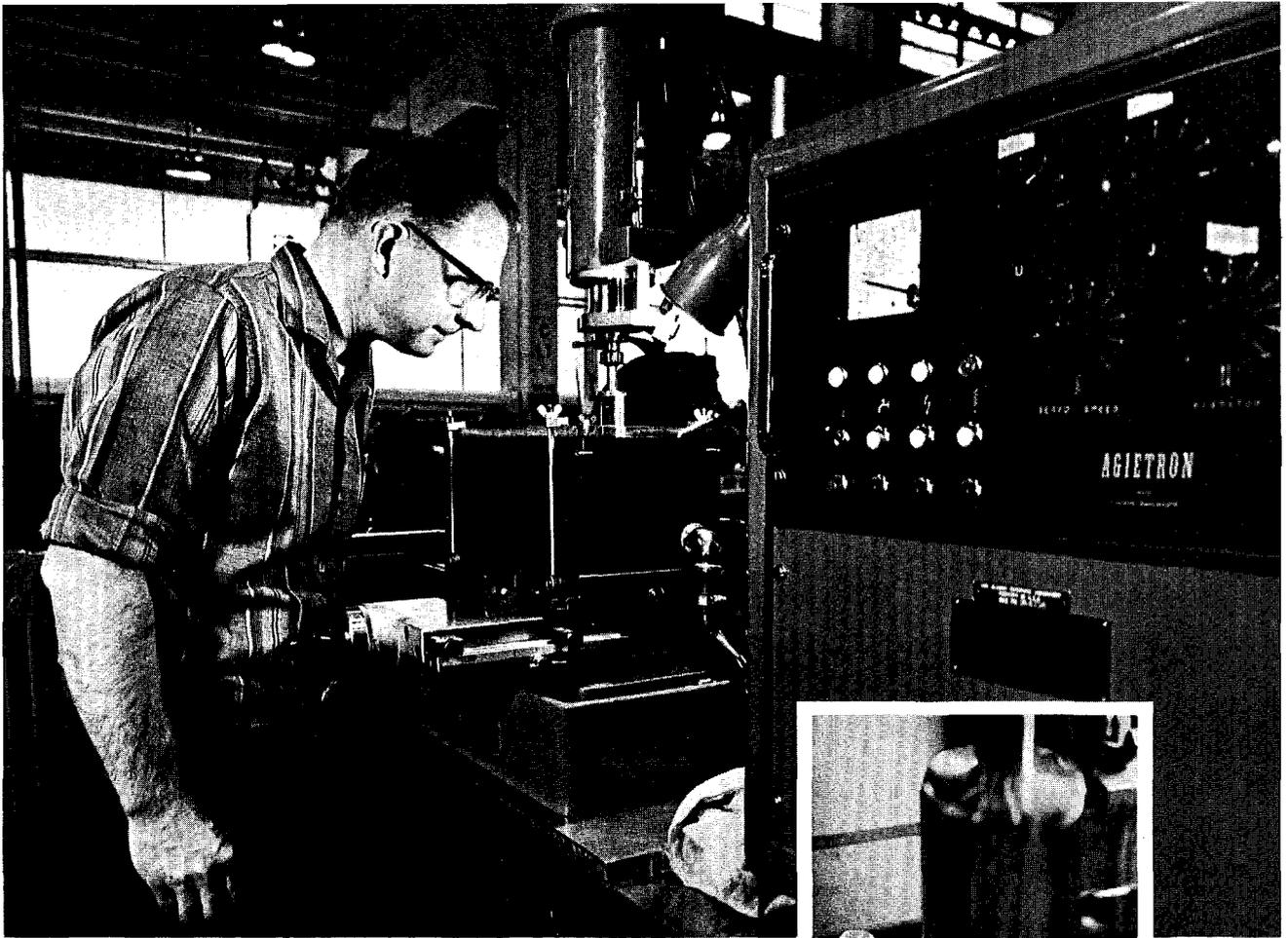
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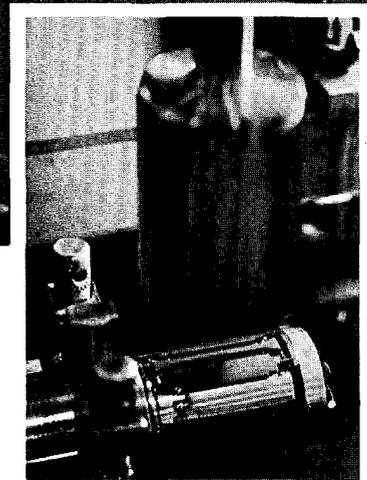
Far Left: Electric discharge machining sometimes involves tiny dimensions. This job calls for placement of a hole .010 inch in diameter through quarter-inch thickness of tungsten. Passage of miniscule drill (seen above index finger) through the ultra-hard material requires two hours.

Left: Among LASL Shop Department’s 10 electric discharge machines are four recently ordered to aid in fabrication of fuel elements for a reactor research program. The machines are now set up in Laboratory’s Shop 15, an area where radioactive materials are worked with.





Erosion process carefully watched by Edward Gritsko of SD-1 is occurring beneath surface of oil bath, called a dielectric in machining argot. Material is glassy carbon (inset), which poses problems for conventional machining methods because of its brittleness. Four hours of EDM sparking are required to produce small oblong piece from carbon sleeve.



SPARK . . .

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among the first users of EDM for producing precision and intricate designs in metals. The Laboratory has steadily strengthened its capability with EDM, which is the most effective process known for working extremely hard or exotic metals. These are the materials that, in most instances, defied complex machining until a minute but erosive spark was harnessed. That spark is proving to be the most exciting coruscation in shop environs since the acetylene torch. Ten years ago, placing a pinprick hole, so small it nearly eludes the naked eye, deep into a tungsten alloy was more a dream than a reality. But nowadays, to express

amazement at such a feat brings a quick rejoinder from Shop Department personnel that such jobs are not so extraordinary where EDM is concerned.

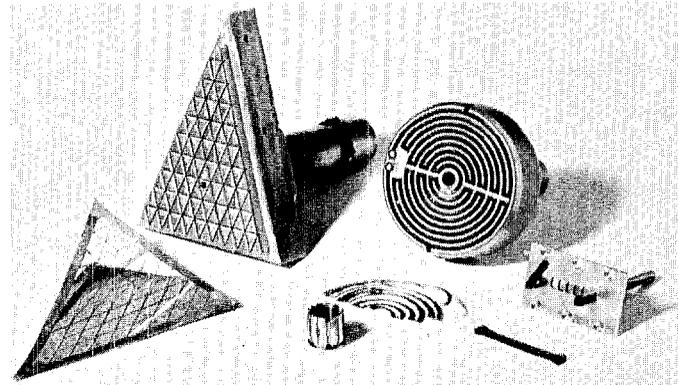
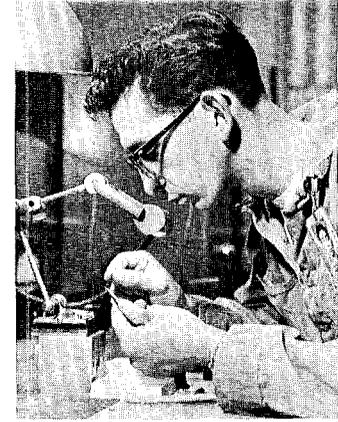
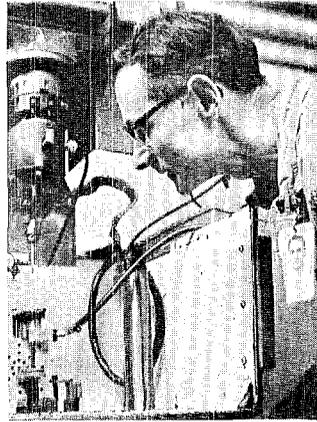
What is an EDM machine and how does it operate? What are its advantages over conventional metal-working machines? How is it being used in scientific and defense work and in industry?

The heart of an EDM machine operates on a principle similar to that of a spark plug in a gasoline engine. An electrode (in EDM's case, the tool that determines the cutting design) is host to a negative electrical buildup. When the designated potential is reached, a spark jumps a gap, normally about

.001 of an inch wide, to the positively charged electrode. In EDM, this electrode is the workpiece, the metal part to be machined.

Each spark that strikes the workpiece causes an area of erosion in a process that is not fully understood. "They don't know whether the particles are ripped off, melted off or exploded off," says Howes. "One source will tell you one thing and another something else." The melting theory holds that the erosion rate is determined by the melting point of the material and that a substance with a low melting point erodes faster. A spark striking bismuth, which melts at 520 degrees Fahrenheit, will produce a crater four times as deep as a spark of

Frank Osvath (top left) of SD-1 inspects electrode before starting EDM device in Shop 13. At top right, SD-5's Faustin Trujillo uses magnifying glass to make precision measurement of hole placed in workpiece. Samples of electrodes and products of intricate EDM jobs (bottom photo) indicate capability of machining process for producing involved configurations. Two large objects in top row are brass electrodes used to form ribbed triangle and concentric circle designs. The pierced plate at right has electrode protruding through hole it "drilled" earlier.



equal power impinging on tungsten, which melts at 6098° F. The erosion rate is also directly affected by the conductivity of both the workpiece (only good conductors of electricity can be machined by EDM) and the electrode—the higher the electrical conductivity, the higher the erosion rate.

The business end of the electrode-tool and the workpiece are submerged in a medium called the dielectric. Usually an oil bath, the dielectric serves these purposes: It helps control the spark direction, since the hydrocarbon substance is a poor conductor; it removes debris—the particles that are eroded from the metal surface; it cools the electrode; it prevents, to a large degree, the fusion of erosion particles with the electrode.

Because the spark takes the shortest path between the electrode and the workpiece, erosion of the metal follows perfectly the opposite configuration of the tool, with one exception: The design produced is slightly larger than the pattern.

The combination of the insensitivity of EDM to metal hardness and the "duplicating" factor makes such machining invaluable for producing intricate cavity configurations in high-strength steels, carbides and exotic materials. And the process occurs without the high cutting forces, machining strains and machine and tool wear associated with conventional machining.

The Laboratory has 10 EDM machines, four of which are new arrivals. The new ones will be used to mass produce components for a reactor research program. Several of the LASL devices form their own enclave in the Lab's main Shop Building. Others are used in Shops 13 and 15 where radioactive materials are machined. The largest EDM device can remove three cubic inches of hardened steel per hour at full power (60 amperes). The machine operates at a maximum of 250,000 cycles per second, a level approached only for very smooth surface finishes. (The high-

er the spark frequency, the lower the amperage and the more shallow the tiny erosion crater formed by each spark. The converse also is true.)

Some of the work done at LASL by electric discharge machining is almost as delicate as gold-leaf filigree. Grids, latticework, concentric circles, threads, gear designs, multi-diameter borings, grooves and simultaneous placement of hundreds of annular cavities are feats being routinely performed with materials that before were practically impervious to complex machining. The components are going into Laboratory instrumentation and equipment where their heat- and pressure-resistant qualities are giving longer and more dependable lives to crucial elements in reactors, radiation detectors and satellite assemblies, to name a few.

Los Alamos received one of the first electric discharge machines ever built. Delivered in 1951, the machine was slow and dangerous

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A bank of EDM machines forms semicircle in Shop 4. Largest device, in right foreground, can remove three cubic inches of hardened steel per hour. Operators here are Edward Gritsko and Manuel Herrera, seen examining drawing, and Jimmy W. Collier.

SPARK . . .

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when compared to new models. It was actually built, however, before the companies now in the business had given EDM a great deal of thought. Used then by the Laboratory's Weapons Division to machine tungsten carbide, the "Method X" device, as it was named, is now permanently retired. But it gave the Laboratory a crude capability in machining refractory metals when no other method was available.

Eight prime contractors under the Albuquerque Operations Office of the AEC have EDM machines in

their shops, with LASL leading the list in numbers. In industry, manufacturers of such diverse items as plastic clothes baskets and heavy-duty trucks are using EDM to "tool up." A watchmaker employs EDM for close-tolerance machining of delicate parts. Such a widespread use of EDM has led a Western Electric engineer, who is working on EDM techniques, to predict: "As EDM develops, and more and more design shapes become complex, a substantial portion—from 25% to 50%—of all machining by 1975 will be by EDM or one of its related electro-machining processes."

MRS. ENRICO Fermi first saw Lamy in the summer of 1944.

The episode began when an employe in the transportation office at Chicago's Metallurgical Laboratory—the lab with no metallurgists—called the wife of the pioneer nuclear physicist to report:

"I have got you a drawing-room on the 'Chief.' You know you are to get off at Lamy, don't you? Somebody will meet you there."

As she describes the incident in her book, *Atoms in the Family*, Mrs. Fermi viewed the impending journey with trepidation.

"My own excitement had vanished at the prospect of the vague connection with an unknown person at Lamy, N.M. Should we miss him, or her for all I knew, we would reach Santa Fe sorachow. But once there, could we go around asking people to help us

find the most secret place in the United States?"

At Lamy, without her husband who was to come later, Mrs. Fermi stepped off the train with her two children and was met on the platform by a soldier.

"Are you Mrs. Farmer?"

"Yes, I am Mrs. Fermi."

"I was told to call you Mrs. Farmer."

After that exchange, Mrs. Fermi and her brood climbed into a GI car and were driven to their destination on a mesa in the Jemez Mountains.

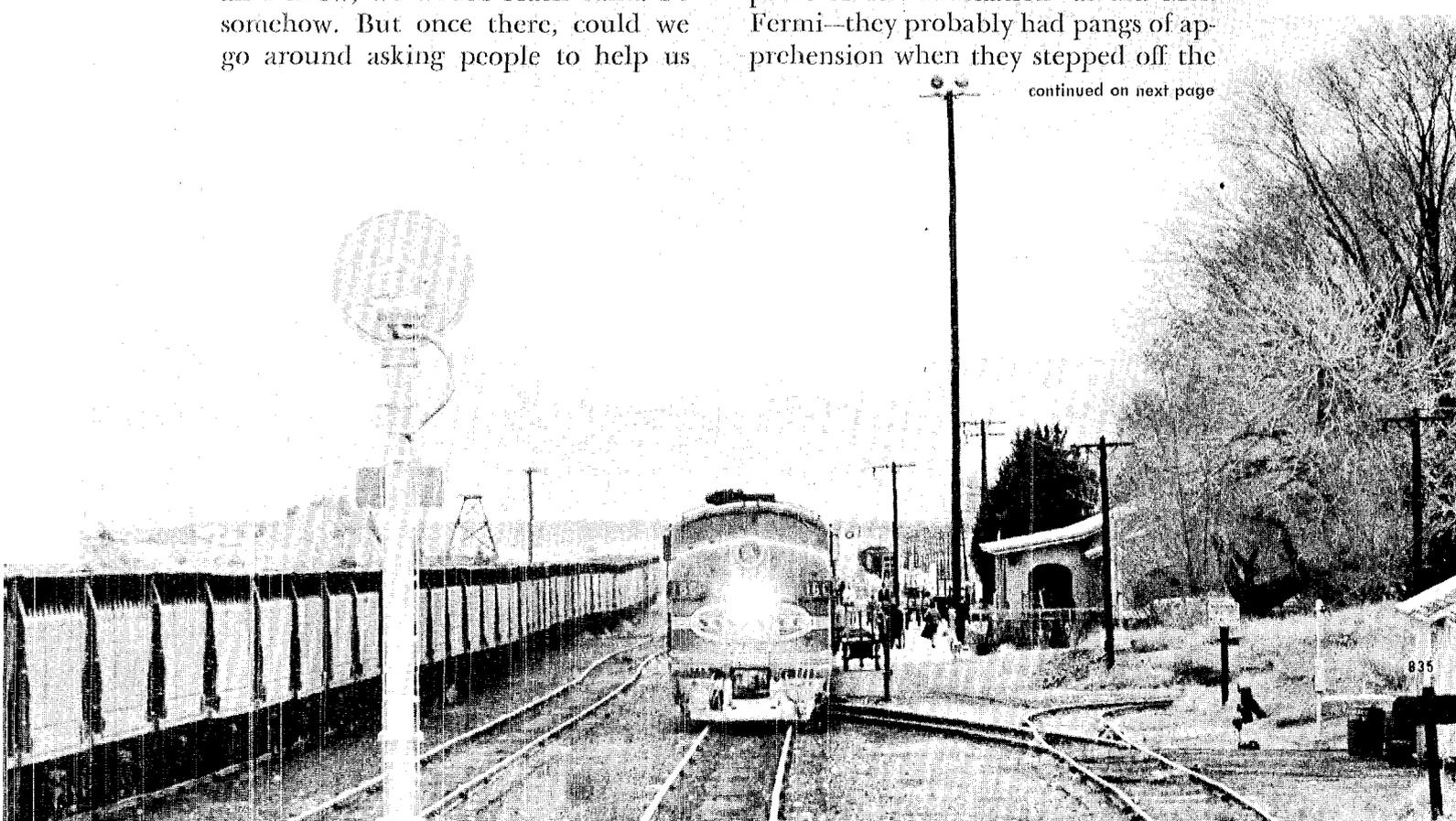
Literally hundreds of the personnel who lived and worked at Los Alamos during the wartime atomic bomb project first set foot on New Mexico soil at the small but vital railhead of Lamy. And if they had no trepidation at learning of their point of disembarkation—as did Mrs. Fermi—they probably had pangs of apprehension when they stepped off the

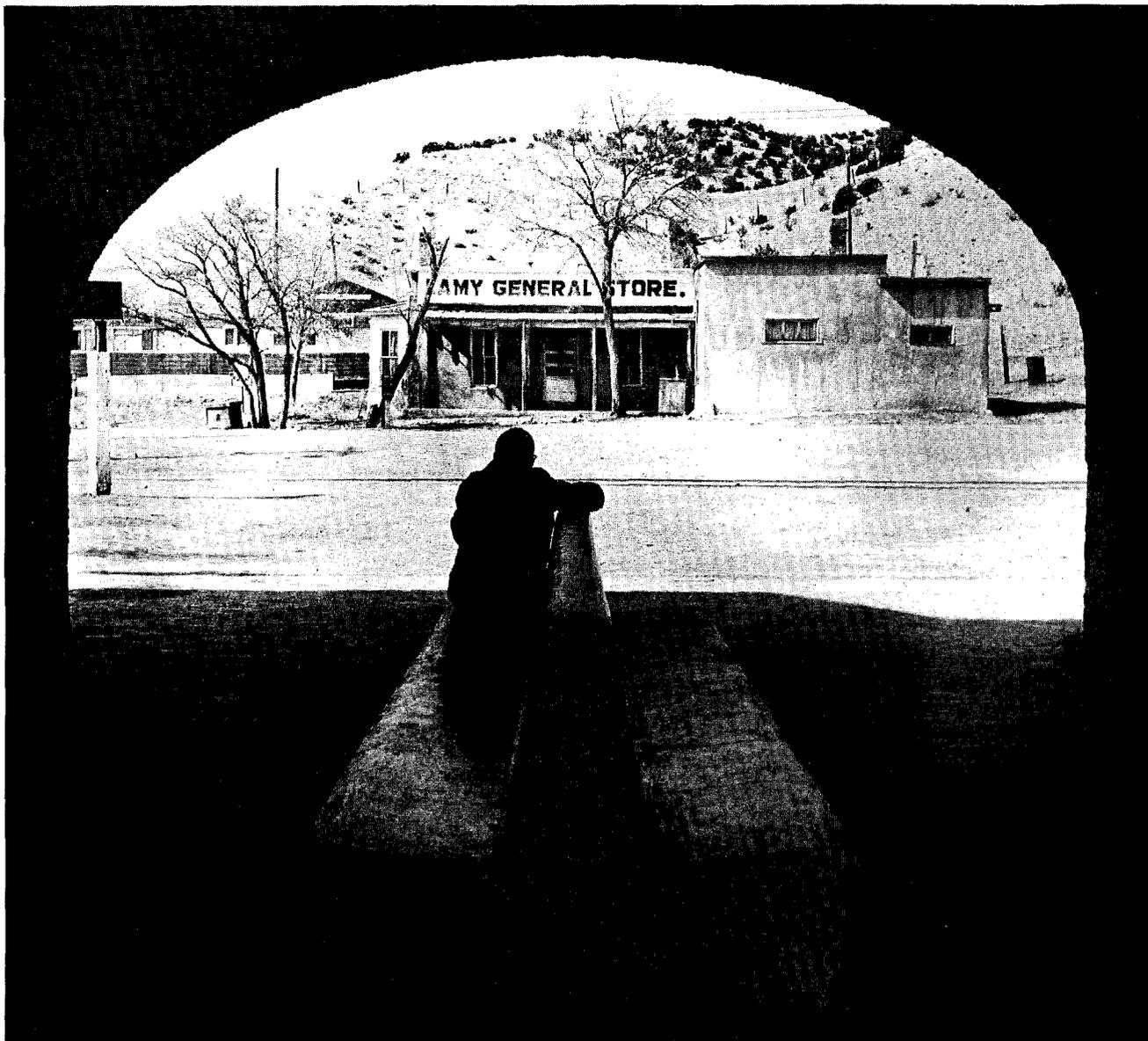
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Lamy

THE TOWN THE RAILROAD BUILT

Photographs by Bill Jack Rodgers





Beneath this arch, at side of Lamy Depot, walked hundreds of Los Alamos wartime personnel, including dozens of famed scientists using assumed names.

LAMY...

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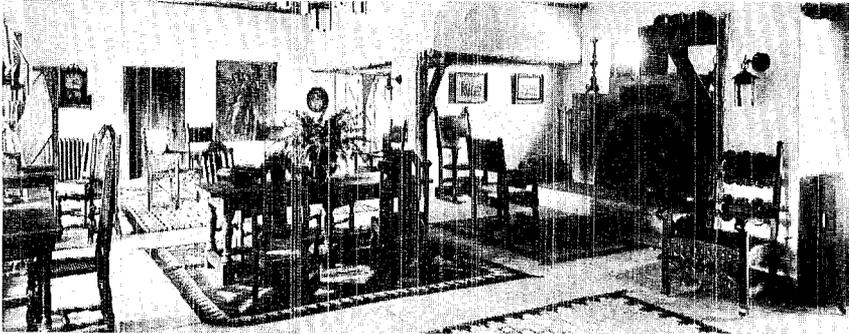
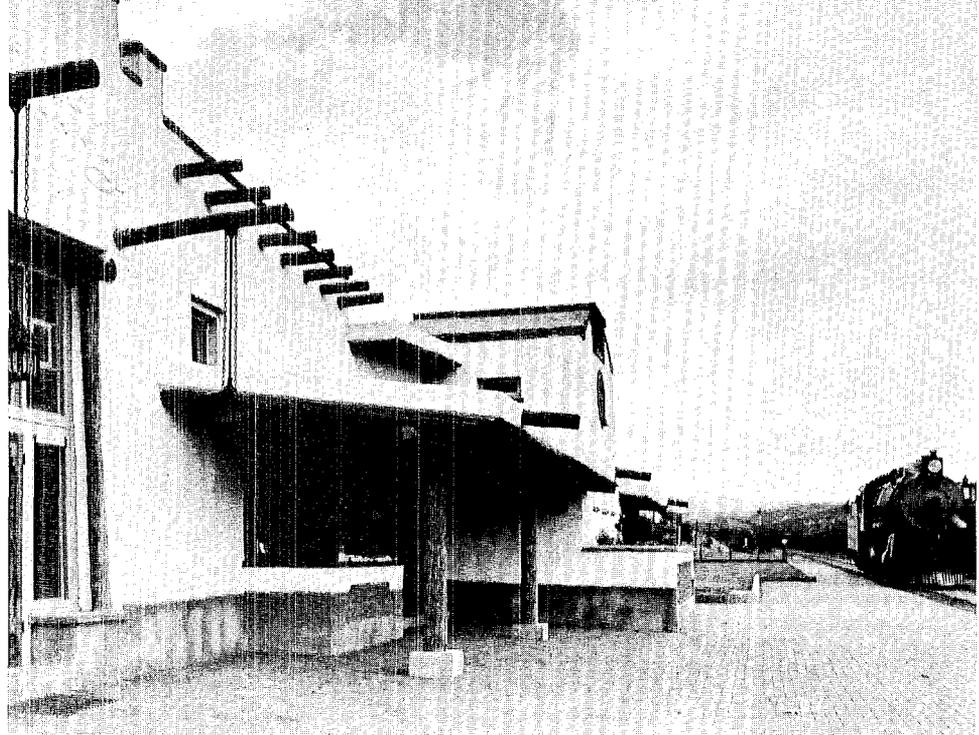
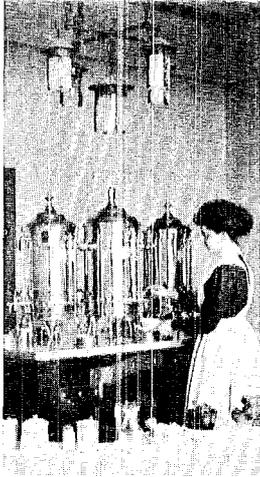
"Chief" in the sandy foothills of northcentral New Mexico.

Today, Lamy is a pressureless, placid, one-gas-station village—and that fill-up enterprise, like its companion general store, has been at least temporarily waylaid. The Santa Fe County community, which slumbers at the end of a dead-end spur off U.S. Highway 285, has never been home to many more than 300 persons at any one time. Today, the population might be 70 or 80, but then

again Lamy has stumbled on the economic path of hard times in the last 20 years. Like other communities based on a "one-horse" economy, Lamy is the victim of a technology that builds things bigger, makes them go farther, faster, cheaper.

The railroad to which current Lamy agent C. C. Robinson has given 43 years of his life brought Lamy Junction into being more than 80 years ago. For many years thereafter, the railroad nurtured well the hamlet which sprang up in the scrubbed hills 17 miles southeast of Santa Fe.

The rails gave Lamy form in the shape of maintenance barns and section crew quarters and the



The El Ortiz (above), a Fred Harvey restaurant and hotel, was once a renowned Lamy landmark. Known for efficient Harvey girl service (top left) and expansive, comfortable quarters (bottom left), the establishment closed in April of 1940 as diesel locomotives came into use. (Fred Harvey photographs)

depot. They provided substance in payrolls and in trade from the travelers who endlessly came and went. The rails prompted erection of a Harvey House, the El Ortiz, which ranked in popularity with the Alvarado at Albuquerque, the Cardenas at Trinidad, the Escalante at Ash Fork, the El Garces at Needles. But when the diesel replaced the steam locomotive, Lamy declined in status and stamina to an "exurb" passenger station for the state capital and a railroad communications point between Las Vegas and Albuquerque. The story of Lamy, then, is of an active past, not of a kinetic present or a highly promising future.

Station Agent Robinson first saw Lamy as a traveler in 1915, but the junction had outgrown its swaddling clothes by then. The village followed quickly on the heels of the Santa Fe Railroad, which pushed far into New Mexico in 1879. (The first postmaster was a Daniel A. Phillips, appointed March 1, 1881.) But other than the annotation that Lamy is a namesake of Archbishop John B. Lamy, who died in 1888, historians are

singularly vague about the community's fledgling steps. One author suggests that Lamy's original residents came from closeby Cañoncito. Otherwise, historical sources do little more than point out such incidents as Territorial Gov. Miguel A. Otero's 1904 excursion to Lamy Junction in the state's first official gasoline vehicle.

The governor's outing, however, illuminates one thing: The Littlest Town has always been a locale to go *to* or *through*—never one to hold many of its visitors.

Lamy would never have existed at all had citizens of Santa Fe, circa 1879, had their wishes. News accounts of that year describe a hubbub of frantic maneuvering by state capital nabobs to ensnare the railroad route. "A visit to Santa Fe," read one editorial, "combines for the traveler at once superb health, grand scenery, classic interest, and the capital centre of all material interests—civic, commercial, financial, military and ecclesias-

continued on next page



Pink Garter Saloon, with huge cherry wood bar, is known over Northern New Mexico for quaint western decor. Proprietor Billie Trinkle, one-time Clovis beauty shop operator, has owned business only a few months and hopes to restore some of its former prestige.

LAMY...

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tic. Surely these are worthy of the highest consideration of the railroad interests."

Consideration, yes. But a main-line railroad, no.

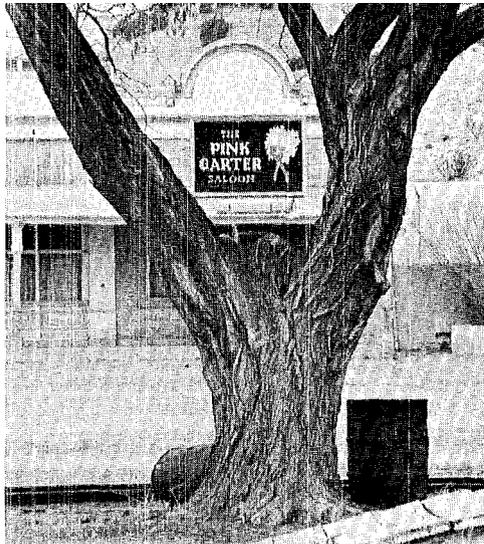
Santa Fe was many miles off the projected route of the Atchison, Topeka and Santa Fe because of mountains on the north and east. To insure fairness, the railroad financed an independent survey and report, but the answer was still no. Chagrined but not silenced, the local editor changed his tactics. The territorial capital, he now insisted, must have a spur to the main line, and he affirmed the "justice in Santa Fe (the community) considering the equity of bearing a portion of the extra costs." A bond election, split into two parts of \$79,000 and \$71,000, subsequently passed 191-72 and 192-67. "An election never took place in Santa Fe which was so one-sided," reported the happy scribe.

The first train pulled into Santa Fe on February 16, 1880. And at the point where it left the main tracks, a town was destined. There was another reason for a railroad town here, though. To the

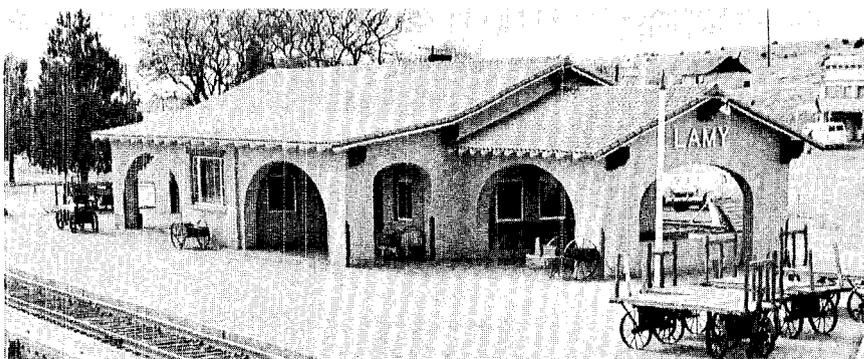
north, the granite ledges of Apache Canyon frowned down from heights of nearly 8,000 feet on the Lamy flatlands. To move trains through Glorieta Pass, additional locomotives were kept with their crews at Lamy. Low-wheeled for improved traction, these mountain engines were coupled on, usually one in front and two behind, for the hour-long, ten-mile upgrade trip. "This was quite a sight to see," recounts a former Lamy resident, who remembers it as a scene of "smoke, cinder, steam and gusto!"

With a large complement of railroad employees and their families living there, Lamy eventually gained the amenities of a town: a general store, pool hall, saloon and a school, all surrounded by the ubiquitous yellow buildings of the A.T. & S.F. And, of course, Lamy had the El Ortiz, the Harvey House, an "oasis in the desert" as one weary train-rider once described it.

The hacienda-styled El Ortiz was an imposing sight. Heavy beams of oak protruded from its coarse, gray-pebbled exterior. Santos, Spanish engravings, photographs and old paintings on cow hides decorated the walls of an expansive living room. Indian rugs covered the floors. The dark,



Saloon (left) and railroad depot are only businesses now active at Lamy Junction.



Longtime Railroader Robinson is station agent.

dignified, hand-carved furniture was formed of brass, leather and Flemish oak. At one end of the room, a wide arch opened the way to the lunchroom. Behind polished counters, the famed Harvey Girls, well-starched in their black-and-white uniforms and unfailingly polite, worked amid a battery of coffee urns and tea samovars. The El Ortiz's dozen or so hotel rooms—all without baths—opened onto a grassy patio, whose perimeter in the growing season was a verdant scene of hanging vines and split-log planter boxes.

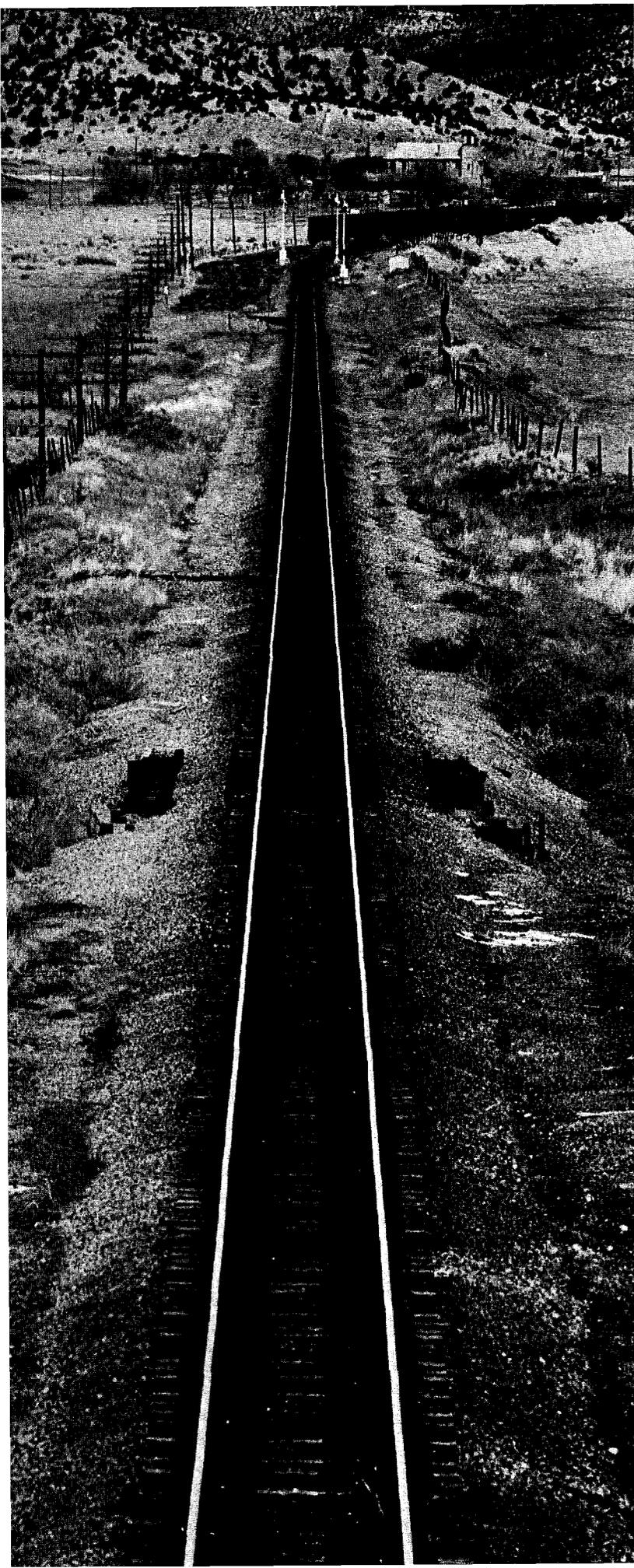
William Jennings Bryan, three-time Democratic candidate for the U.S. presidency, was an El Ortiz guest for one night in 1918 while on a Liberty

Bond sales drive. Another patron was William F. (Buffalo Bill) Cody. A lamenting writer, eulogizing the hotel at its closing in April of 1942, awarded it a clientele of "the great and the near-great; salesman and statesman; financiers and shoe clerks; artists, writers and musicians; (and) Santa Fe 'high society,' political and the 'Upper Palace Avenue' set." All, he said, would mourn the passing of "the littlest hotel in the littlest town."

One footnote nearly lost to history is supplied by George J. Roche, a Harvey vice president in Chicago. "The El Ortiz," says Roche, "was known as the 'Honeymoon House' as it was usually here a newly wedded manager was sent." That may help to explain why the El Ortiz had 62 managers between 1910 and 1938. One of them, stationed there for three months in 1930, was a "G. J. Roche."

The El Ortiz was closed by the time Project Y personnel, often bewildered and mutiny-minded, arrived in Lamy en route to supersecret Los Ala-

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Climbing toward their rendezvous with Glorieta Pass, several miles in the distance yet, the rails bend toward Lamy in this photograph, taken from the U.S. 285 overpass.

LAMY...

continued from preceding page

mos. That was unfortunate. The hotel's familiar comforts might have softened the introduction to Northern New Mexico. In that respect, Dorothy McKibbin, Box 1663's Gal Friday at Santa Fe, remembers a number of lachrymose WACs who, told earlier they were bound overseas, were struck with the truth when they saw Lamy's sandy hills instead of the ocean.

The site where the old El Ortiz stood is today a grassy plot with a single-file stand of big trees. Down the tracks, a few hundred yards to the west, the school sits boarded up. Nearby, an American flag flutters from a makeshift pole at the U.S. Post Office branch. The Catholic church—with its silver-painted bell sitting in a windswept loft 28 creaky steps above the landing—shares Main Street with the depot, the temporarily closed Lamy General Store and the Pink Garter Saloon.

The Pink Garter ranks second to the railroad station in Lamy attractions. The high-kicking establishment has faded some and lacks the pull of other years. But a new proprietor, a former Clovis beauty shop owner, has new plans and hopes for the Pink Garter's deep red dining room, German-made cherry wood bar and true-to-saloon-tradition cancan stage. She also owns the closed general store and its two silent gasoline pumps.

"I'm the biggest property owner in town," she shouted one recent day over the raucous "plink-plank-plunk" of the Piano-la, a jukebox version of a player piano.

Outside, meanwhile, the "Super Chief" pulled in for a brief disgorging of passengers who hurriedly piled on buses for Santa Fe. A glance down the tracks in either direction revealed the yellow buildings of the railroad and the red-and-green signal lights marking the tracks. The air, moreover, smelled strongly of creosote, an almost unmistakable odor of the rails. Lamy is still a railroad town.

Physics Addition Planned

About 100 employes from three Laboratory divisions will be housed in a two-story, \$681,560 Physics Building addition on which construction is expected to begin this month.

Bids on this project and a \$68,000 ultrasonic facility at Pajarito Site (TA-18) were opened recently by the AEC.

Construction on a 6,000-square-foot mock-up building to be used

in the developmental phases of the proposed meson physics facility accelerator, meanwhile, is nearing completion immediately east of the Physics Building.

The new Physics Analytical Center, similar in design to the Laboratory's recently occupied SM-200 building, will have a square, hollow shape with a wing extending from the main area. Contained in its 26,500 square feet will be an 182-

seat auditorium, a 40-seat classroom and space for extensive data processing equipment as well as office space.

Personnel occupying the Analytical Center will include members of Physics (P) and Meson Physics (MP) Divisions and all of the T-9 Group of the Theoretical Physics Division.

A Santa Fe firm, J. R. Brennand Construction Company, is the apparent low bidder on the project, according to Francis K. Tallmadge, P Division assistant for engineering. Once started, the contractor has 365 calendar days to complete the job. The architect-engineer is W. C. Kruger & Associates of Los Alamos.

The new structure will be south of the Physics Building and will be connected by an enclosed walkway.

Tallmadge said space also has been provided in the building for future computer controls and printers that could be tied in, by radio or cable, to the Laboratory's main computer systems. Personnel could then run computer problems by remote control.

An 80-car parking area also is planned.

The MP Division structure will permit research and development of accelerator components and radiofrequency apparatus for use in the proposed giant linear accelerator. Designed by the Zia Company and being erected by Zia's Los Alamos Constructors, Inc., the facility and its mechanical and electrical equipment have a price tag of about \$227,000.

Another Santa Fe contractor, Modern Construction Company, was the apparent low bidder on the Pajarito Site project. The structure will be a concrete and masonry block building containing 720 square feet. The contractor has 120 calendar days to complete it after being authorized to proceed.

new hires

Carl Edwin Keller, Middleton, Conn., J-15.

Jesse Cline Clark, Livermore, Calif., P-9.

Facundo Jose Benavidez, Truchas, N.M., H-4.

Sharon Lee Gibson, Los Alamos, N.M., W-1.

Julie Shannon Wilson, Los Alamos, N.M., H-4.

Wynoka Frances Miller, Los Alamos, N.M., P-4.

Ralph Albert Bassett, Santa Fe, N.M., SD-1.

Jack Ernest Mullen, Santa Fe, N.M., SD-1.

Geraldine Ellison Johnson, Los Alamos, N.M., J-10 (Casual Rehire).

Regina Alice De Field, Los Alamos, N.M., GMX-6 (Part time).

Jerome Jesse Rosenthal, St. Louis, Mo., CMB-6 (Rehire).

Charles Robert Tallman, Azusa, Calif., N-4.

Sally Deborah Ohlsen, Los Alamos, N.M., MP-1.

Jerry Melvin Potter, Peoria, Ill., MP-1.

Douglas White Long, Mercury, Nev., AO-4.

George Michael Trujillo, Santa Fe, N.M., M&R.

Manton David Trimmer, Santa Fe, N.M., SD-5.

Keith Carl Roush, Los Alamos, N.M., SD-5.

Patricia Diane Staake, Los Alamos, N.M., ENG-3 (Casual).

Charles Edward Meketa, Albuquerque, N.M., J-7.

Bobby Robert Vigil, Los Alamos, N.M., PER-4 (Part time).

Gordon Lyle Jacks, Douglas, Ariz., J-DO NTS.

Paul E. Fehlau, Columbus, Ohio, W-7 (Rehire).

Georgia Pearl Courtney, Los Alamos, N.M., W-7.

Jennie Gail Sadlier, Fairview, N.M., GMX-7.

John Thomas Gast, Amarillo, Texas, GMX-3.

Manfred Stammler, Sacramento, Calif., GMX-2.

Polly Margaret Lee, Los Alamos, N.M., J-10 (Part time-Rehire).

Robert John Candler, Brownwood, Texas, CMF-9.

Victor Lonard Hesch, Santa Fe, N.M., ENG-1.

Robert Shepherd Burdette, Los Alamos, N.M., MP-5.

Thomas Allen Lawrence, East Alton, Ill., SD-1.

George Edward Walker, Cleveland, Ohio, T-9.

Kenneth Morris Lyons, Columbus, Ohio, MP-2.

the technical side

IEEE Meeting, Albuquerque, N.M., February 18:

"The Vela Satellite Program for Detection of High Altitude Nuclear Detonations" by Sidney Singer, P-4.

Plutonium Information Meeting, ANS-AIF, Washington, D.C., March 1-2:

"Status of Fast Reactor Physics Design" by W. H. Hannum, K-1.

Presentation at Science Class, St. Vincent's Academy, Albuquerque, N.M., March 7:

"Mars Bound with Newton's Laws" by T. F. Stratton, N-5.

NBS-JT-13 Seminar on Microwave

Noise and Harmonic Power Meas- urements, Boulder, Colo., March 7-8:

"Methods Currently in Use or Envisioned to Evaluate Performance of Low Noise Sources in the 200-1600 MHz Region" by Joseph R. Parker, MP-1.

"Requirement for Low Noise Frequency Sources in the 200-1600 MHz Region in a Proton Linear Accelerator Application" by Robert A. Jameson, MP-2.

Western Metal Congress Technical Program, Los Angeles, Calif., March 7-11:

"Shock Wave Strengthening" by Eugene G. Zukas, CMF-13 (INVITED PAPER).

Presentation at FFTF Driver Fuels Meeting, Hanford, Wash., March 8-10:

"Liquid Plutonium Fuel Systems—Their Status and Capabilities" by William H. Hannum (K-1) and L. D. Kirkbride (K-2).

Eleventh Annual Gas Turbine Con- ference and Products Show, Zurich, Switzerland, March 13-17:

"The Prospects for Nuclear Reactor-MHD-Commercial Power Production" by L. A. Booth, K-4 (INVITED PAPER).

Optical Society of America Meet- ing, Washington, D.C., March 15- 18:

"Studies of Iron I and II Spectral Line Intensities at Various Currents and Neon Gas Pressures in a Hollow Cathode Discharge Tube" by David W. Steinhaus and Michael A. Zerwekh, both CMB-1.

Colloquium Talk, University of Cali- fornia, San Diego, Calif., March 16:

"Photographic Observations of the Motion of an Artificially Produced Plasma in the Earth's Magnetic Field" by Herman Hoerlin, J-10.

Presentation of First Governor's Conference on Environmental Health Planning, Albuquerque, N.M., March 16-18:

"Panel Discussion on Solid Wastes Disposal" by Dean D. Meyer, H-1.

Presentation at Colloquium, NASA Langley Research Center, Langley Station, Va., March 21:

"Numerical Solutions for Hydro-

dynamics Problems" by Richard A. Gentry, T-3.

National Meeting of the American Chemical Society, Pittsburgh, Pa., March 21-31:

"The Bonds Between Unlike Metals. I. Indications of Multiatom Interaction Units in Solutions of Nickel or Copper in Cadmium" by Donald R. Conant and Guy R. B. Elliott, both CMF-2.

"The Bonds Between Unlike Metals. II. Liquid Structure, Liquid Immiscibility, and a Change of Interaction Units at About 0.01 Mole Fraction Gold in Cadmium" by Harold S. Swofford, Jr. (Summer Staff) and Guy R. B. Elliott, both CMF-2.

"The Bonds Between Unlike Metals. III. The Effect of Reactions Between Solute and Solvent on Concentration Cell E.M.F. Values" by Guy R. B. Elliott, Joe F. Lemons, and Donald R. Conant, all CMF-2.

"Ternary Fission Search" by R. J. Prestwood and B. P. Bayhurst, both J-11.

"Mass Symmetry of Neutron Induced Fission at Resonances" by G. A. Cowan, B. P. Bayhurst, R. J. Prestwood, J. S. Gilmore, and G. W. Knobeloch, all J-11.

"Emission of Alpha Particles in the Fission of U^{238} by 11- to 21-MeV Protons" by T. D. Thomas (Princeton University) and S. L. Whetstone Jr., P-9.

Conference on Neutron Cross- Section Technology, Washington, D.C., March 22-24:

"Elastic and Inelastic Scattering of Fast Neutrons from Li^6 and Li^7 " by John C. Hopkins, P-DOR.

"Gamma-Ray Production Cross-Sections of Fast Neutron Induced Reactions in Al, Fe, Nb, W, U, and Pu" by Henri Conde, Darrell M. Drake, and John C. Hopkins, all P-DOR. (Not for presentation—to be published in Conf. Proceedings).

"Measurements on the Capture Cross-Section of U^{238} with Bomb Source Neutrons" by N. W. Glass, J. K. Theobald, A. D. Schelberg, J. H. Warren and L. D. Tatro, all J-17.

"Relative Fission Cross-Sections of

U^{238} , Np^{237} , and U^{235} by W. E. Stein, P-2, R. K. Smith, P-9, and J. A. Grundl, N-2.

"Fission Cross-Section of U^{235} , 20 eV-5 MeV" by Wilbur K. Brown, P-3, D. M. Bergen, W-8, and James D. Cramer, W-8. (Not for presentation—to be published in Proceedings)

"Fission Cross-Section of Pu^{239} , 20 eV-5 MeV" by Edward R. Shunk, W-8, W. K. Brown, P-3, and R. LaBauve, K-1. (Not for presentation—to be published in Proceedings.)

"Fission Cross-Section of U^{233} , 20 eV-5 MeV" by D. W. Bergen, W-8, B. G. Silbert, P-DOR, and R. C. Perisho (Summer).

"Fission Cross-Section of Pu^{240} , by D. H. Byers, W-8, B. C. Diven, P-3, and Myron G. Silbert, P-DOR.

"Use of Nuclear Explosions as Pulsed Neutron Sources," by B. C. Diven, P-3 (INVITED PAPER).

"A Method of Assay of U^{235} , U^{238} , and Np^{237} Fission Foils" by H. Louise Smith, J-11. (Not for presentation—to be published in Proceedings)

"Cross-Sections for Nucleosynthesis in Stars and Bombs" by George I. Bell, T-DOT (INVITED PAPER).

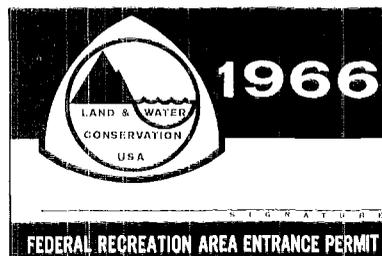
International Conference on Ultra-Violet and X-Ray Spectroscopy of Laboratory and Astrophysical Plasmas, Culham Laboratory, Abingdon, Berkshire, England, March 29-April 1:

"Comparison of Theoretical Spectra with Experiment for Highly-Ionized Atoms of Astrophysical Interest" by R. D. Cowan, T-DOT, and N. J. Peacock, Culham Laboratory.

"Solar X-Ray Emission Measurements in the 16-40 Å Region" by W. D. Evans, H. V. Argo, James A. Bergey, Burton L. Henke, and M. D. Montgomery, all P-4.

Seventh Symposium on Engineering Aspects of Magneto-Hydrodynamics, Princeton University, March 30-April 1:

"Fast Metallic Contact Solid Dielectric Switch" by John Marshall, Ivars Hecnins, both P-17, and Ralph W. Kewish, Jr., P-16.



Replaces 1965's Sticker

Federal Recreation Permit This Year Is 'Credit Card'

Gold-printed, wallet-sized cards, a sort of pre-paid credit card good for admission to more than 7,000 Federal recreation areas across the country, go on sale this month.

The cards are the 1966 successor to the Recreation/Conservation stickers that were introduced last year. Like last year, the cost of the "recreation area entry permit" is \$7.

Good until March 31, 1967, the cards will admit its purchaser and all who accompany him in a private automobile to recreation areas administered by the National Park Service, Bureau of Sport Fisheries and Wildlife, Bureau of Land Management, and Bureau of Reclamation in the Department of the Interior; the Forest Service in the Department of Agriculture; the Army Corps of Engineers in the Department of Defense, and the Tennessee Valley Authority.

An important change in this year's regulations is use of the permit when the purchaser is not in his own automobile. Under this change, the permit purchaser can use it in lieu of other admission charges to admit himself while on a commercial bus or other non-private vehicle traveling into Federal recreation areas. It will also be good for personal admission to Federal recreation areas not commonly entered by vehicle.

Areas where fees are charged must meet four conditions: They must 1) be administered by the participating agencies; 2) be adminis-

tered primarily for scenic, scientific, historical, cultural or recreation purposes; 3) have recreation facilities or services provided at Federal expense; 4) be of such nature that fee collection is practical.

As in 1965, regulations authorize collection of special use fees in addition to the entry permit use at many recreation areas. These may range, typically, from \$1 to \$3 for overnight use of camp and trailer sites and from 50 to 75 cents per site per day for picnic sites. There also may be special fees for boat launching sites, swimming facilities, cabins, firewood, and other special services.

At Bandelier National Monument and the Santa Fe National Forest, Los Alamos' next-door neighbors, there will be no fee beyond the entry permit this year; the entry permit will be good for picnic and camping facilities as well. Both Bandelier and the Forest Service will offer short-term permits, but the \$7 card will be by far the best buy.

Jim Godbolt is the new superintendent at Bandelier National Monument. He joined the Monument staff in February, replacing Tom Hyde, who has been transferred to Acadia National Park in Maine. Godbolt, a native of California, most recently was management assistant at Yellowstone National Park. He has been with the National Park Service since 1950.

20 years ago

IN LOS ALAMOS



Culled from April 1946 files of "LOS ALAMOS TIMES" by Robert Porton

Operations of Project in New Hands

Assumption of all post operations, including construction and maintenance, by the Zia Company, was announced this week by Lt. Col. W. A. Stevens, Post Commander. The new corporation, under its contract with the Government, took over operations effective April 1. By May 1, Colonel Stevens said, it is expected the firm will be handling all maintenance and operational activities heretofore under the direct supervision of the Army.

Lab to Build World's Highest Voltage Van de Graaff

Plans for construction of the world's largest practical operating voltage Van de Graaff Accelerator for use in nuclear research were announced this week at the Los Alamos Laboratory. The accelerator will be powered by an eight-million-volt generator, according to Dr. Joseph L. McKibben, nuclear physicist in charge of the projected construction of the Laboratory's new facility.

KRS Given Green Light by Washington

Authorization for expenditure of funds for operation and maintenance of the community radio station, KRS, has been granted by Washington, Col. Austin W. Betts, deputy to the commanding officer, announced yesterday. Under the terms of the authorization, Personnel Services of the Laboratory is permitted to hire civilians for operation and maintenance of the station and arrange for teletype services, transcriptions, and a library of classical and popular recordings. The station will be staffed by both civilian and military personnel.

Former SED's Hired on Hill

A large number of recently-discharged members of the Special Engineers Detachment were rehired as civilians this month, according to a compilation made by Armand Kelly, Assistant Director of Personnel, in charge of employment. The list includes: John Anderson, Lawrence Antos, Morris Battat, Clarence Berg, Melvin Bowman, Arthur Briesmeister, Loren Carlson, Michael Clancy, Harold Fishbine, James Gallagher, Frank Hauser, Gordon Knobeloch, John Lamb, Joseph Leary, Edward MacMann, Mitchell Melnick, John Mench, Clifford Nilsson, Clifford Nordeen, Edward O'Mara, James Osborn, George Ponton, Robert Potter, Charles A. Reynolds, Arno Roensch, John Russell, Edgar Rynd, Donald Schell, P. Harry Snowden, Francis Stack, Earl Swickard, Robert Van Lyssel and Alvin Van Vesseem.

what's doing

EXHIBITION: Lobby and corridors of Personnel Department, Building SM 123 (open area), 20 oils and watercolors from Stables Gallery in Taos. Mondays through Fridays, 8 a.m. to 5 p.m., until June.

MUSEUM OF NEW MEXICO: Buildings in Santa Fe open from 9 a.m. to 5 p.m. Tuesdays through Saturdays, 2 p.m. to 5 p.m. Sundays and holidays. Closed Mondays.

Museum of International Folk Art—"German Stoneware," opens April 17; "Salt Glaze Technique," closes April 10; "Afro-Arabic," continuing; "The Shape of Music," continuing.

Fine Arts Building—"Gulf Coast Artists," opens April 3; "The Artist's Record: Northern New Mexico," opens April 17; "The Artist's Record: The Western Scene," closes April 10; "New Mexico Watercolor Scenes," continuing.

Palace of the Governors—"Prehistoric Southwest Indian Civilizations from Ice Age to 1700," continuing; "Southwestern History: Spanish-Colonial Territorial Periods," continuing.

Hall of the Modern Indian—"Contemporary Indian Civilizations of the Southwest," continuing.

Folk Art Auditorium—"Music of the Kurds of Northern Iran," slide lecture and tape recordings by Dr. Dieter Christensen of the Department of Ethno musicology, Völkerkunde Museum, Berlin, Germany, April 12, 8 p.m., admission free; "Atumpan" (Talking Drums of Ghana), film, April 17, 7, 8 and 9 p.m., admission free; Floral arrangement demonstration by Mrs. Tadako Tamura of Tokyo, Japan, April 20, 19 a.m., admission free.

St. Francis Auditorium—"Prehistoric Greece," lecture by Professor Saul Weinberg of the University of Missouri, April 22, 8 p.m., admission free.

OUTDOOR ASSOCIATION: No charge, open to the public. Contact leader for information regarding specific hikes.

Sunday, April 17, Rio Grande—hike down trail at Red River junction and return on Little Arsenic Spring trail; 1,000 feet elevation loss, then gain. Terry Gibbs, leader.

Sunday, April 24, Cerro Pedernal—moderate hike up New Mexico's familiar flat-top mountain. Dibbon Hagar, leader.

Sunday, May 1, Bear Head—15-mile round trip to a mesa top in the Jemez. Terry Gibbs, leader.

Tuesday, May 3, night hike. Dibbon Hagar, leader.

Thursday, May 5, meeting at the home of Mrs. Pauline Ungnade, 1489 42nd Street.

FILM SOCIETY: Civic Auditorium. Admission by single ticket, 90 cents. Tickets available at the door.

Wednesday, April 20, 7 and 9 p.m.—"The Umbrellas of Cherbourg," French novelty musical (1964), directed by Jacques Demy; a love story told entirely in song and musical color.

Right: The irony of the carton inscription in the foreground makes itself known as the litter alongside a Los Alamos County roadside is surveyed. Keeping America beautiful takes the cooperation of all, from the wife of the President of the United States to a carload of casual picnickers bound for a summer outing in the Jemez.

Back cover: Framed in an untrimmed doorway of its successor is The Lodge, the "Host on the Hill" for Los Alamos visitors since the 1920's. Bill Jack Rodgers used a long lens to foreshorten distances between The Lodge and the new Los Alamos Inn, 88-unit motel that is scheduled for completion in mid-June. Sandwiched out of sight by the telescopic lens is Ashley Pond.



Henry T. Motz
3187 Woodland
Los Alamos, New Mexico

87544

