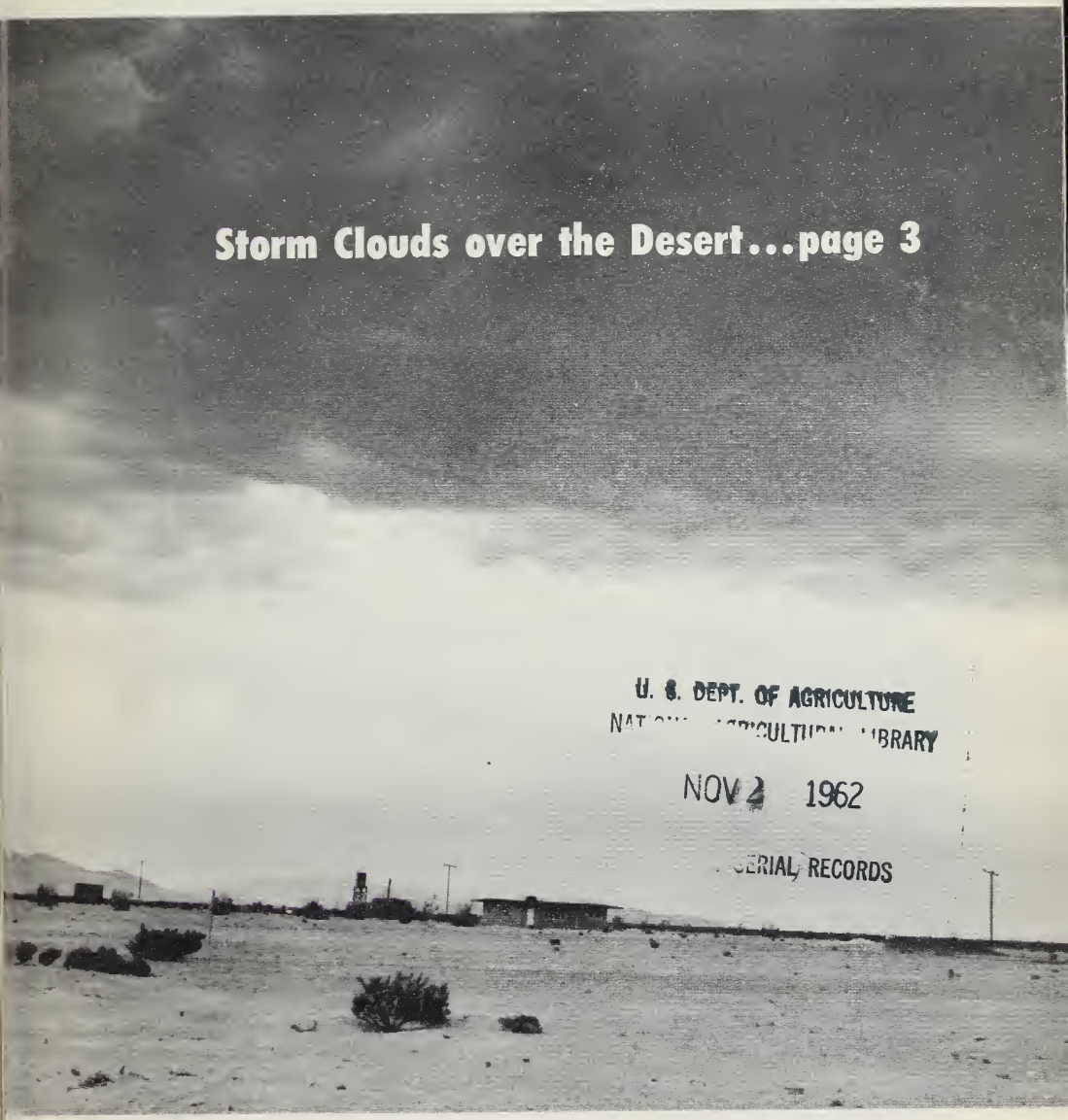
OCTOBER
1962

Rural Lines

RURAL ELECTRIFICATION ADMINISTRATION • U. S. DEPARTMENT OF AGRICULTURE



Storm Clouds over the Desert...page 3

Growth Through Agricultural Progress

A Message from the ADMINISTRATOR

In his speech at Oahe Dam, South Dakota, President Kennedy again gave evidence of his solid support for REA programs and principles, and of the broad perspective with which he views the future of electric power in this Nation. We are making a wide distribution of his full text, but we should also like to quote here this section:

"The REA cooperatives and power districts . . . have proved to be a successful middle ground between private corporations and public ownership, serving as a constant bulwark against political and economic extremes, and making the most of Theodore Roosevelt's principle that marketing agencies which represent all of the people should be given a preference in the development of waters which belong to all the people.

"The role of the REA is not finished, as some would believe. To be sure, most farms now have electric lights. Most REA cooperatives and power districts are well established. But we are rapidly approaching the time when this nation will boast a 300 million population, a $2 trillion national income, and a grave responsibility as the breadbasket and food market for a world whose population will have doubled.

"That is the prospect for the end of this century — and the key to this century is power — power on the farm as well as the factory — power in the country as well as the city.

"As the need for power on the farm and in the countryside continues to increase, electricity rates must remain low — more generating capacity must develop — and soon the vast resources of nuclear energy must be tapped. This is not a choice between spending and saving — for REA is a form of saving: saving hours and lives on the farm — saving farms for our nation's needs — and saving and returning to our nation's government every dollar loaned, with interest.

"In taxes on new appliances, new equipment and new farm income, the miracle of REA has returned to the public treasury many times the entire cost of the program . . .

(Continued on inside back cover)

Rural Lines

Administrator

Samuel Levenson, Editor

Contributor to this issue: Virgil Hassler, Hubert Kelley, Bernard Krug.

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STORM CLOUDS OVER THE DESERT

For years, efforts by residents of Amargosa Valley in Nevada to obtain electrical service from commercial power companies met with no success. They wrote letters, they pleaded, they cajoled, they met in interminable conferences with power company officials —all to no avail.

Now that they have organized a cooperative and have been successful in obtaining an REA loan, they are receiving plenty of attention — all of it endangering their infant Amargosa Valley Electric Cooperative.

It isn't easy to repel such unwelcome attentions when your cooperative is just getting organized, when you have practically no staff or funds, when communications with your members are hampered by difficult desert conditions.

Here are some of the thunderbolts thrown at the Amargosa directors and their one-man staff in recent weeks:

—opposition from a battery of attorneys for three giant power companies at hearings before the California Public Utilities Commission.

—a restraining order against construction of distribution lines in the Amargosa and Pahrump valleys.

—a court proceeding to obtain an injunction against this same construction.

—charges by a Nevada utility, via newspaper releases, display ads, radio and TV commercials, that the cooperative is duplicating its facilities in an area already receiving central station service.

Defense against these would be tough for a going organization, but Amargosa is barely months old. Four of the five directors are active farmers. A board meeting means 200 miles of travel for a majority. There are no farm telephones, no RFD. Word-of-mouth communication is all but impossible. Manager-engineer Phil Parker has difficulty finding time to read his mail, let alone answer it.

The storm broke soon after REA approved a $3,940,000 loan on March 2, 1962 to the Amargosa Valley Cooperative, Inc. The loan provided for 319 miles of distribution line to serve 513 consumers, including 151 irrigation pumps, and 110 miles of 138 kv transmission line. Power for the system will be obtained from the Bureau of Reclamation at Henderson, Nevada.

The transmission line is also important to the Nation's nuclear defense and space programs. Amargosa has leased capacity in the transmission line to the Atomic Energy Commission and will sell additional power for the expanding facilities on Atomic Energy Commission's Nevada Test Site. The new transmission line will end AEC's risky dependence on an older single circuit single pole type 138 kv line built by the commercial Nevada company . The AEC and Air Force put up most of the funds for this line.

Elmer S. Bowman, president of the Amargosa cooperative, has been involved in several attempts to bring in power. Before settling at Manse in the Pahrump, President Bowman farmed at Overton where another REA borrower, the Overton Power District No. 5, has functioned very successfully since 1937. This experience convinced him that the Pahrump should look to the REA for assistance in getting electricity.

Most of these early efforts stumbled over power arrangements, particularly the cost of wholesale power. REA actually made a loan in 1953 for service in the Baker and Death Valley areas of California and the Pahrump, but the loan was rescinded after 14

Manager-engineer Philip Parker (left) and co-op president Elmer Bowman meet with Death Valley citizens in Shoshone (California) high school building to discuss power problems.

months because large power and irrigation users would not commit themselves to take the high cost power.

The Pahrump folks never gave up trying, but it was hard to establish feasibility with wholesale power costing 12 mills and power fed over long expensive transmission lines. Meanwhile, new life was stirring in the Amargosa, next valley to the north. In 1956 the first settlers came, under newly granted desert entry permits, to master the hostile environment. Down went the irrigation wells and up came water and with it the first domestic vegetation. Experiments of the first settlers showed that the volcanic soil could be amended for high production of alfalfa, wheat, grapes and other crops. Trouble was, everything had to be hauled in and out great distances, so that costs ran high. Low-cost electricity would be one solution.

Ed Mankinen, first Amargosa settler and the cooperative's secretary-treasurer, recalls that he went to the Nevada power company in 1957 to inquire about service. The company had lines within 15 miles, but Mankinen was told to come back in twenty years.

The Amargosans decided to try the REA route to lower cost power for irrigation and better living. The first steps were fairly easy, but then they ran into the same power snarl, with a different twist, that blocked Pahrump. The Nevada company refused to wholesale power, on the ground that the capacity of its transmission line had been committed.

The Pahrump and Amargosa groups joined forces to search for an escape from the old dilemma. It was apparent they would not succeed going their separate ways, and union would have many advantages. Discussions were held with representatives from Death Valley, and forces were joined in the Amargosa Valley Cooperative. Two Amargosa directors resigned to permit Bowman and Walter Williams to join the board as Pahrump representatives.

The power problem was solved through arrangements to get a block of hydro from Parker-Davis dams and back-up power from Arizona. After REA approved a loan for $3,940,000 on March 5, the Bureau of Reclamation agreed to furnish step-down facilities at Henderson. The directors decided to apply loan funds earmarked for this substation to building lines into the long-neglected Death Valley area.

The power companies reacted fast. The Nevada utility called a meeting of Amargosa residents, and rushed in crews to set a few poles in advance of the meeting. A company in California, possessing both the required certificate and the closest power source, made motions to come into Death Valley, but did not follow through.

Then late in May another giant utility (1,768,000 consumers) in California proclaimed its intentions to serve the Death Valley area, tapping the Nevada company's line at the

state border near Death Valley Junction. Company representatives began to call on co-op supporters, promising professional service and bargain-basement rates. Applications for a franchise and certificate were filed with Inyo County supervisors and California PUC.

The PUC application revealed fatal shortcomings in the Death Valley proposals. Spokesmen told a public meeting at Shoshone there would be plenty of power for Death Valley from the 15,000 kw Nevada Power would have left over after fulfilling AEC-Air Force commitments. The application, however, revealed that the Nevada utility promised only 800kw, hardly enough to serve the three largest of the 100 California users. Company agents shrugged and said, "We're in business to make a profit," and the PUC application forecast losses in Death Valley.

But this was only the beginning of the power company drive. The Nevada utility leased the tiny private diesel plant at Lathrop Wells, ran it until the equipment failed and then moved in a larger unit. This is the basis for its claim that it is providing "cental station service" and that the cooperative is duplicating its facilities. Still to come were the litigation and propaganda campaigns.

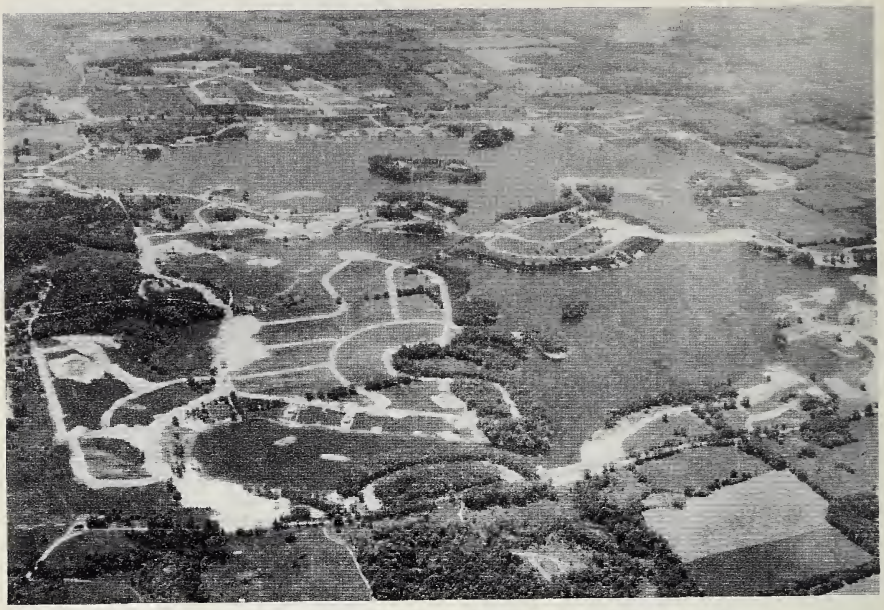
The folks at Pahrump, Stovepipe Wells and the south end of Inyo County wonder if success for the power companies will leave them without hope for central station power. They may have reason to wonder, considering the record on several similar occasions.

Elmer Bowman told a meeting at Tecopa in June, "If Amargosa fails I don't expect to see power in the Pahrump within ten years."

It's a long time to wait.

Co-op supporters, holding fast, refused to allow power company contractor to set these poles in Amargosa Valley. Sprinkler rig appears in background.

RISING LAKE RAISES HOPES



Lake LeAnn in Southeastern Michigan—after remodeling.

A 1,850 acre man-made lake development is raising hopes of Somerset Township, Michigan, for an economic boom despite little agricultural or industrial production.

A major housing development around Lake LeAnn is expected to boost the township's total property valuation by $700,000 by 1965. In 1960 the assessment was $27,000, and in 1962, it is $250,000 (estimated).

It should also help Southern Telephone Company, which serves the lake from its nearby Bundy Hill exchange, to reach its goal of 4,000 subscribers in another two years. Southern Telephone Company now serves 2,900 subscribers in parts of Jackson, Lenawee, Washtenaw and Hillsdale counties in Southeastern Michigan—not bad considering that in 1956, when it first received an REA loan, it had only one-third that number. Not only have many new subscribers been added, but hundreds of persons formerly served by inadequate telephone systems have been provided with dependable, modern dial telephone service, engineered and built to meet their communication needs.

Acquisition of the 1,850 acres which composes the Lake LeAnn development involved 16 farm properties and was begun in March 1960. Brush and timber clearing, excavation, construction of roads and dams were started four months later. The project has just been completed.

Until Lake LeAnn became a reality, prospects of economic growth for Somerset Township and its 1,504 residents were dim. The rich Scipio oil fields lie enticingly close, but are actually too far away to present much promise. The nearest producing well on the east rim of the oil field is 10 miles away

from the township. Somerset has never been a major agricultural area because of the generally poor condition of its soil. Nor has its economy been helped by decreased traffic volume on U.S. 12 owing to the opening of Interstate 94 ten miles to the north.

The economic stimulation generated from this project should be a lasting one for this area. Thousands of dollars have been put into circulation through the purchase of land, wages and salaries paid for engineering and construction necessary to develop the 485-acre lake with nine miles of shoreline, 20 miles of road construction to service the 2,000 lots, a golf course, parks and eventually a shopping center that will be included in the project. Money that is being and will continue to be spent for housing and recreation facilities is not a small item either. To date, approximately 875 lots have been sold and 60 new homes have been started.

However, building an artificial lake is not a swift and simple cure-all for the ailments of lagging rural areas. It takes know-how, a favorable location, a good source of water and many other factors to complete a project like this successfully. The present builder who specializes in lake-making, says that, "even with the experience we now have, we figure only a 10 percent success ratio of lake sites surveyed by our study team." Ideally, he wants marginal, low land surrounded by high hills, with a buying market available. In Lake LeAnn's case, all of these factors are present. It is within easy commuting distance of more than 6,000,000 people, being 75 miles from Detroit, 52 miles from Lansing, 54 miles from Toledo, and 15 miles from Jackson. It is served by U. S. Highways 12, 94, 127 and 223. The natural springs will soon fill the lake to its required boundaries.

One of the many new lakefront homes that promises to bring prosperity to Somerset Township and new subscribes to Southern Telephone Company.

Charcoal Improves Picture at Isanti County, Minnesota

Stockpile of hardwood logs shown here represents part of $40,000 that have been paid to area farmers to supplement their income. In background are two new kilns which will help Rum River Charcoal meet demand for its briquets.

Long before "rural areas development" became a common expression, the thing it stands for was taking place in the small community of Isanti (population 1,693), near Cambridge (population 4,895). Both towns are located in Isanti County, Minnesota.

Back in 1955, H. H. Lemke, area forester at Cambridge, and Elgin Gunderson, executive vice president of Peoples State Bank of Cambridge, decided there might be a possibility of using waste hardwoods found in the area in some manner that would provide jobs and revenue for local residents. They formed the Rum River Charcoal Company at Isanti to produce charcoal that would be sold to a briquet-making plant at Savage, Minnesota.

Since it was a fairly new idea, local residents viewed it at first as some kind of joke. Their views seemed justified when the initial kiln burned down the first time it was fired up. Undaunted, Lemke and Gunderson built two more kilns which proved operational, and Rum River Charcoal was in business. The plant was soon using 2,500 kwh per month, a matter of some satisfaction to its supplier, the Anoka Electric Cooperative, Anoka, Minnesota.

In 1958 the briquet-making plant at Savage was moved to Isanti, and the following year it was bought by Rum River Charcoal. Thus the company was able to make charcoal briquets at Isanti from the raw charcoal produced in its own kilns.

One result was that the plant's monthly consumption jumped to 8,500 kwh. The increase posed no special problems for Anoka Electric, which had learned long ago that, in order to remain competitive in its service area, it had to be ready to meet demands for large loads as well as small. Its policy

has been to gear itself to providing service to this type of member *before* it is actually needed, rather than after. For instance, it serves Rum River Charcoal with a bank of 87.5 KVA, although the actual monthly demand runs between 44 and 48 kw.

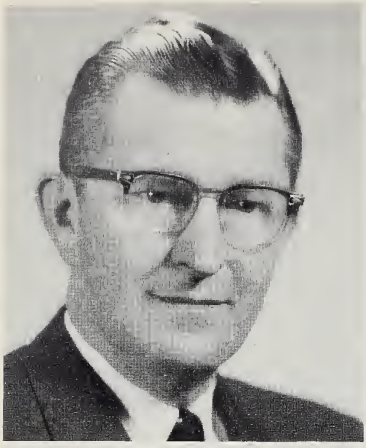
The Rum River Charcoal Company has grown steadily since it expanded into briquet-making. It expects to produce two to three thousand tons of its hardwood briquets in 1962. This will represent a volume of $250,000, a sizable amount for a company which employs only 20 persons on a full-time basis.

The company distributes to about 500 farmers in the area a total of $40,000 a year for their local hardwood, such as oak, hickory, and birch. It is a small bonanza but a genuine one, since the wood used is not suitable for lumber.

In addition, several small charcoal plants located elsewhere have begun to sell their products to Rum River Charcoal. They receive approximately $50,000 a year. Several of these plants are in northern Minnesota, which has recently received much publicity during the past year because of its need for area development.

Robert Backlin, general manager and treasurer of the Rum River Charcoal Company since 1956, is justifiably proud of the contribution his company has made to the welfare of the local area, particularly because it was accomplished with local help, local financing, local resources, and local initiative. The people of Isanti, in turn, are proud of the company. Other communities in the State and Nation could do worse than attempt to emulate the Rum River Charcoal Company. They may have to go far, however, to find as appealing a name for their company as this one.

These kilns must be able to withstand a temperature of 900 degrees during the charcoal-making process. Workers remain on duty around the clock to control the partial combustion of the hardwood logs to produce top quality charcoal.



John A. Baker Leads USDA Rural Areas Development Drive

The Agriculture Department's emphasis on rural areas development is expected to increase markedly with the recent appointment of John A. Baker as Assistant Secretary of Agriculture for Rural Development and Conservation, a new position.

In his new assignment Mr. Baker will supervise and coordinate the activities of Rural Electrification Administration, Farmers Home Administration, Forest Service, Office of Rural Areas Development, Soil Conservation Service, and the Farmer Cooperative Service.

These agencies will get fresh ideas for "strengthening and revitalizing rural America" through a series of five regional "Land and People" conferences at which Mr. Baker will hear the reports of discussion groups.

The first meeting was held September 17-18 in St. Louis, Missouri, for the North Central States. Other conferences are listed as follows: October 1-2 in Portland, Oregon, for the Western States; October 8-9 in Denver, Colorado, for the Great Plains States; Octover 15-16 in New Orleans Louisiana, for the Southern States; and October 22-23 in Philadelphia, Pennsylvania, for the Northeast.

Secretary of Agriculture Freeman, keynote speaker at each meeting, said the conferences were called to enable farmers, businessmen, educators, civic and government leaders to put forward their own proposals for spurring economic renewal of their communities. "We look to local representatives as the real experts in determining how Federal programs can best help to revitalize rural areas," Mr. Freeman explained.

Assistant Secretary Baker, a native of Arkansas, served in the Department of Agriculture for almost 14 years prior to joining the staff of a national farm organization in 1951.

He attended the College of Agriculture at the University of Arkansas, where he was graduated with honors in rural economics. He has a master's degree in agricultural economics from the University of Wisconsin, and has taken additional postgraduate work at the Harvard School of Business, Princeton University, and elsewhere. During World War II he was a naval officer assigned to the military government section, and acted as agriculture and economics officer on Okinawa. □

Terry Moynihan, manager of Kit Carson Electric Cooperative, provides much of the drive behind business revitalization movement in Taos, New Mexico.

TAOS RAMROD

Ex-artilleryman Terry L. Moynihan, manager of Kit Carson Electric Cooperative, has a hand in so many projects around his headquarters town of Taos, New Mexico, that visitors sometimes get the idea that he isn't one man, but a whole committee. Jim Colegrove, publisher of The Taos News, calls him a "ramrod," and little wonder. Last summer, one edition of Colegrove's weekly contained not only a photograph of Moynihan on page one, but also his name in no fewer than three front page stories.

After Taos County was designated a redevelopment area last year by the Area Redevelopment Administration, co-op manager Moynihan, who also operates his own 20-unit motel, somehow found time to arouse his fellow citizens to action and got no fewer than 28 different rural areas development projects under way. Most are still in the works, but nobody who knows Terry Moynihan doubts that some of his proposals are going to make the grade — if only through the sheer force of Moynihan's indomitable will.

"It's just that I'm not afraid to ask for help," he explains. "When the school teachers around Taos complained that they needed better housing, I asked Drew Cloud, the Farmers Home Administration director for New Mexico, to come up to Taos and explain things to people. When I heard about rural areas development,

Co-op president Reuben A. Martinez, who owns a store opposite the mission at Ranchos de Taos shown here, considers it his "duty" to explore business opportunities with co-op members.

I wrote REA and got Jim Wood of REA's RAD staff to come out here and talk to businessmen for several days. When it looked as though SBA loans might be the answer for a number of people, I wrote Albuquerque and got Richard Valdez, head of the Small Business Administration office in the State, to come up and tell our people how to apply. I remember that owners of a sporting goods store, a real estate firm, a motel, a dry cleaning plant, and a service station came to hear Valdez tell them to get blueprints of their proposed expansion, 25 percent participation from their banker, and a clear title—and go ahead and apply."

With the help of an active board of trustees, Moynihan is promoting a statewide school for electric linemen, to be located at Taos, which would offer a 52-week course to train new linemen and train experienced men in hot line work and the use of new tools and equipment. State vocational training officials are interested and the Taos Municipal Board of Education has given its enthusiastic approval.

Moynihan also inaugurated a plan for a hospital for crippled children and local landowner Feliberto Martinez already has donated 100 acres, including a medicinal spring, as the site for a therapy center. Besides that, Moynihan has headed a committee backing a new interstate highway through Taos and spearheaded a drive for a new dam.

Taos, a 7,000-mile-high artists' colony and tourist attraction, boasts an invigorating climate, superlative hunting and fishing, nearby Indian pueblos, and a Spanish-American landscape filled with variety and beauty. It was the home of Kit Carson, but Kit Carson himself couldn't be any more of a local booster than Moynihan, whose love of "the kingdom of Northern New Mexico" extends to the fishing spots near Red River, Questa; the mountains near Hondo Canyon and Tres Ritos; the springs of Ojo Caliente; and lush, tranquil valley villages like Penasco.

"It's the greatest piece of country in the world," muses Moynihan, looking off from the top of US Hill. "Sometimes I wonder why everybody doesn't live here." And while not everyone is likely to move to Taos and environs, Moynihan is doing his best to attract at least a few more tourists and full-time residents. With the cooperation of Alfredo Real, governor of the ancient Picuris Indian Pueblo near Penasco, he is seeking aid in remodeling several old Indian school buildings into apartments for schoolteachers. Rental from these units would help increase badly depleted tribal income.

The Kit Carson manager also is participating in a drive to get a new roof for the famed Mission of St. Francis of Assisi at Ranchos de Taos, a national monument. He got Forest Service advice for co-op board trustee

Ancient church in Picuris Pueblo is one of the oldest in the Nation. Pueblo Governor Alfredo Real prepares to take visitors on a tour through edifice.

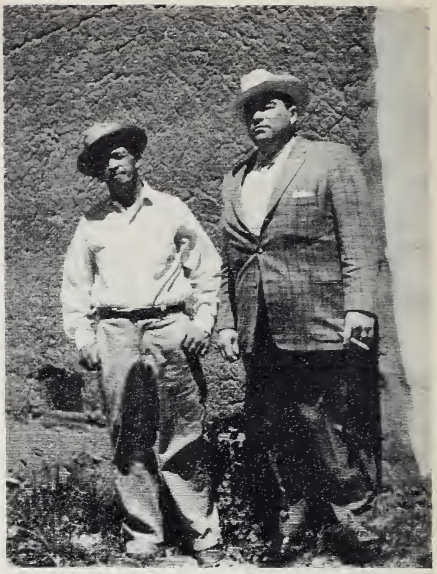
Making adobe brick, one of oldest New Mexico industries, is a waning occupation. However it is still being carried on by a few Indians, as shown here.

Frank Rodarte, local general store proprietor, who then planted 3,000 Christmas trees and will plant 10,000 more if the venture proves profitable. He aided Penasco school superintendent F. R. Rodriguez in planning a cabinet-making shop in an unused school warehouse, and he enlisted the help of Joe Otero, Taos superintendent of schools, in showing others how to fill out SBA loan applications.

He is working hard to interest a West Coast electronics firm in building a branch factory in Taos, and he is helping a couple of partners in planning a new ski run in a nearby canyon (other runs already are operating in the Taos area). He also is trying to help promote a window sash company for Questa and the expansion of a motel there.

The inexhaustible Mr. Moynihan came to Taos after World War II, bought a local motel, and remodeled it. For a time he served as a New Mexico Public Service Commissioner. When the Korean conflict began, he was called up as a First Lieutenant in the Field Artillery, and he flew 163 missions in Korea as an artillery observer.

"The more I saw over there, the more I appreciated what we have here in the United States," says Moynihan. "I think that it's important that we help each other in every way we can to make our communities more prosperous, more inviting places to live in. The whole world has its eyes on us." □



Flavio Leyba (left), trustee of Kit Carson Electric, set up the first RAD meetings at Picuris Pueblo. F. R. Rodriguez, Penasco school superintendent, plans to install a cabinet-making shop in an unused adobe building.

ANSWERS TO "SPOT THE HAZARDS" ON BACK COVER

1. The truck is parked with door open.
2. Man at left is not wearing hard hat.
3. He is not wearing gloves.
4. He is standing under a working boom.
5. The wire points near his head are hazardous to his eyes.
6. Tool bin at side of truck is open.
7. Signaller, at right, is in poor position to warn oncoming traffic.
8. Door to hot-stick compartment on truck is defective. □

Northern Electric BUILDS A HOUSE (EPILOGUE)

Roger F. Johnson, the new manager of the Northern Electric Cooperative Association at Virginia, Minnesota, is renting one of the most-visited houses in the country.

Built by Northern Electric to display the virtues of all-electric heating, it has been visited by approximately 12,000 persons since its completion in October 1960. Events leading up to the construction of the demonstration home were described in the June 1960 issue of this magazine. But now it is possible to summarize the results.

The major one is increased understanding among people in the area of the fact that a well-insulated, all-electric home is perfectly capable of handling Minnesota's coldest weather, at a reasonable cost. On the Mesabi Range, thirty-five below is not an unusual winter temperature, with a brisk wind whipping up dark red dust clouds from the open pit iron mines. The thousands of people who visited the demonstration home emerged satisfied that electricity can do the job—as witness the greater number of all-electric homes being built and sold, and the increase of all-electric homes on Northern Electric's own lines — from 68 two years ago to 90 now. This figure does not include a great many all-electric cabins which are used only in summer. Supplementary electric heating is also popular in the area.

The house now rented by manager Roger F. Johnson, his wife and two sons, is a three-bedroom, ranch style rambler, with attached garage and full basement. It has a 200 ampere service entrance.

The home was built to emphasize four points:

1. To establish a standard for contractors, builders and electricians to follow.

2. Inform the public of the necessity for good installation and to show methods of applying it.

3. Display and test heating equipment suitable for northern Minnesota homes.

4. Promote general interest in electric heating and appliances.

Northern Electric is satisfied that these aims have been achieved. The project cost the cooperative $27,789. Naturally, a home of this quality could be built at much less cost in a more southerly climate. Some of the more significant expenditures are shown below.

Construction costs (labor and material)	$16,421
Lot and well	1,500
Landscaping	864
Water and sewage disposal systems including plumbing fixtures and installation	2,299
Meter loop, underground service entrance and panel	457
Wiring and fixtures	1,047
Electrical appliances	750
Advertising	1,888
Coffee, baked goods, etc.	311

REPORT ON COLLECTIVE BARGAINING

by Walter J. Clayton

Labor Relations Advisor, REA

About one fourth of REA's 993 electric borrowers now have agreements with their employees.

The agreements cover such subjects as: (1) wages; (2) benefits supplemental to wages (holidays, vacations, pensions and health and welfare provisions); (3) working conditions, safety, and related subjects; (4) work schedules, hours, shifts, overtime arrangements; (5) layoff procedures, seniority, promotions, transfers, etc.; and (6) operative provisions, such as durations, method of renewal, prevention of strikes and lockouts, grievance procedures, and arbitration.

These agreements often cover not only the negotiating of terms but also the interpretation and administration of the contract's provisions. About 30 of them require that every employee after 30 days become a union member.

Contracts are generally with the International Brotherhood of Electrical Workers, but a few other unions are also represented.

Some agreements date from the late 1930's and early 1940's. They were negotiated by REA borrowers and their employees in Michigan, Wisconsin, Minnesota, Illinois, Washington, Oregon and in the general area of TVA.

At the time of World War II, approximately 75 labor agreements between the employees and the systems were in existence, and the number increased until 1954 when the National Labor Relations Board relinquished jurisdiction over electric distribution cooperatives. From 1954 to 1959 few or no agreements were entered into between the borrowers and their employees, although most existing labor agreements were carried on, renegotiated and signed by the parties. Since NLRB resumed jurisdiction in 1959, the number of labor agreements entered into between REA borrowers and their employees has increased significantly.

The number of items in them has also increased over the years with the inclusion of fringe benefits to supplement wage rates. Many of the agreements call for retirement pay to supplement Federal old-age and survivors' insurance, and for health and welfare benefits (life insurance, sickness, hospitalization, and a variety of less widely-adopted benefits) paid for in part or in whole by the employer. Paid vacations and holidays are almost universal. Various other benefits, such as pay time for wash-up, clean-up, and clothes change, recording, call-back pay, and paid funeral leave when there is a death in the family, have found their way into the agreements. Thus fringe benefits have become a significant part of the total labor income.

A few years ago three cooperatives in Southern Illinois entered into a master contract with the representatives of the employees, and it was renegotiated the following year. This was the first time that a group of cooperatives had joined together under a master contract. □

Retired REA Official Begins New Career

George E. Dillon, who has spent most of his life helping to raise living standards of American farmers, is now engaged in doing the same job for farmers from other countries.

For 46 years Mr. Dillon taught better farming methods to U. S. farmers and helped them organize and run rural electric cooperatives. Last summer, at the age of 72, he came out of retirement to teach American techniques of self-help to farm specialists who have come to the United States from all parts of the globe.

Bearing the title of "Technical Leader" given him by the training section of the Foreign Agricultural Service, he is in charge of various foreign delegations which come here for four-month periods in order to learn from Department of Agriculture agencies and agricultural colleges their techniques for making agriculture more profitable to the individual farmer and more socially useful to their respective nations. His first assignment was to conduct seven Congolese officials (who speak only their native tongues and French) to various schools and bureaus in Ohio, West Virginia and Minnesota in order to learn about the services provided by the schools, county extension agents, production credit and farm loan associations, and rural electrification cooperatives.

Mr. Dillon has become known to thousands of farmers and electric cooperative leaders since he began working with them immediately after he was graduated with a B.S. in agriculture from the University of Wisconsin in 1914. For 14 years he was a county extension agent in his native State of Iowa. He then spent three years as a farm management specialist with Iowa State College.

Mr. Dillon began his 22-year stint with the REA in 1938. After spending 2 years in the field organizing electric cooperatives, he came to Washington where he worked for 7 years as regional head of the section examining loan applications from Iowa, Illinois and Wisconsin, 6 years as head of the REA power use program, and 6 more years handling loan applications, passing on acquisitions and solving problems of power requirements. He retired in September 1960.

Mr. Dillon, an astonishingly vigorous 72 (on November 11, 1962), has two reasons for being happy with his new assignment. First, he believes that a prosperous and stable agriculture is necessary for any developing nation that wishes to build up its economy and attain the status of a self-sufficient democracy. Second, "it feels good to be getting back."

To those younger than he is (chronologically, if not in spirit) he offers one concrete piece of advice: learn one foreign language and learn it well! □

REA LOAN BRINGS HISTORIC TELEPHONE COMPANY UP TO DATE

An REA loan is helping a telephone company to complete a technological development that began over 50 years ago with a single wire than ran on trees between two tiny hamlets north of Fresno, California, and which is concluding — for the time being, at least — with dial and microwave.

Not incidentally, the $1,100.000 loan will also enable the Ponderosa Telephone Company at O'Neals to improve service for 570 existing subscribers and give initial service to another thousand.

President and manager of the company is Jess E. Bigelow, who remembers when his mother. a strong-willed woman named Leota, felt she "just had" to talk to her own mother, who lived a mile down the road. In 1908 she ordered two telephones by mail, at a cost of $11 each. and, with her son's help, strung a wire on fence posts and trees to her mother's place.

Her husband. Herman, was not slow in seeing that this device could be useful in his stage route business which ran between Madera and the fast-growing Bass Lake region. So in 1910 he and young Jess ran a grounded line from tree to tree between North Fork and his home at O'Neals.

The line worked so well that he extended it to Friant. People along the way also liked the idea; they bought telephones and hooked onto the line.

The system speeded up traffic on the Bigelow stage route — but difficulties showed up. One night Bigelow got as far as Friant on his way home and tried to reach his wife by telephone. Two women were talking and wouldn't give up the line. Bigelow then and there decided that it was necessary to extend his line to the outside world.

In 1911 he and Jess put in 16 miles of line to the nearest Bell connection at Clovis — the hard way. Jess well remembers the 750 posts that he, his father, and a hired man put in that summer while sleeping nights in the hay mows of barns.

He also remembers how hard it was to raise $16,000 from the funds of the stage route, and from the cattle business that his father also ran, in order to pay for the project.

But in 1912 the "Bigelow Telephone Company" was officially organized and on its way.

Two years later Herman Bigelow died and Jess took over the company's operations. Its facilities included three toll circuits to Fresno and a direct wire to the telegraph office in the same city.

By 1948 it had 450 miles of line and $100,000 worth of equipment. It employed eight people full time and furnished adequate service to 85 subscribers (nearly 600 people) living in the rugged range country of southern Madera and northern Fresno counties.

It was in that year — 1948 — that Jess turned his attention for the time being from the 6,000-acre cattle ranch he ran "on the side," and examined his situation. The problems were obvious. Rates were still $1.50 per month — the same as they had been in 1911. Toll calls were still 15 cents for the first minute and 5 cents for each additional minute for calls between Friant and Clovis, and 25 cents plus 10 cents from O'Neals to Clovis.

True. the number of toll lines to Clovis had increased from one in 1911

to eight in 1948; and the number of toll calls per day from 10 to a high of 200. But this was still hardly enough to pay for the rising costs. Telephones in 1948 cost $30, compared to $11 in 1911. Poles, once $4.50, were $16. Wire, formerly $4 a hundredweight, rose to $16. Labor, which cost $50 a month, went to well over $200 a month.

(It may be interesting to compare these 1948 prices with current ones. Telephones still average $30 each and poles have gone down from $16 to $6; but the kind of wire most commonly used has increased in cost from $16 a hundredweight to $30, and labor is about $500 a month instead of $200. The increased labor and other costs have been sternly fought by standardization, mass production, long span construction, and lighter poles. The result: while labor and raw material costs per mile of telephone line have risen some 25 percent between 1948 and 1962, improved engineering practices and research have kept the rise in the net cost of building outside plant to something between 5 and 10 percent.)

So in 1948 Jess Bigelow took some $15,000 from his ranch funds and put it into the telephone company. It helped for a while, but as time marched on it became obvious that the company did not have the funds to extend service to such places as Huntington Lake, to continue to patrol with snowshoes the lines to Shaver Lake over mountains that looked like a playground for goats (or, alternately, introduce radiotelephone communications), or to change over to city-style dial phones.

In 1957 Bigelow reorganized the firm into a closed family corporation, preparatory to borrowing money for an expansion program, and renamed it the Ponderosa Telephone Company. Jess became president; his wife, vice-president; his married daughter, secretary; and his son, treasurer. Corporation business could be, and was, carried on over the dinner table.

The company then borrowed $186,000 from a telephone equipment manufacturer. It managed thereby to cut over to dial its exchanges at Auberry, Friant and North Fork, and made plans to add an exchange in the Shaver Lake area. The magneto exchange at O'Neals was maintained.

Soon enough it was apparent that demand at the time of cutover exceeded plant capabilities; still more funds were required. Bigelow finally decided that only an REA loan would do the job. He submitted a design prepared by his company's consulting engineer for REA's consideration in February 1961. The loan was granted in July of that year in the amount of $1,100,000, of which part would refinance the $186,000 indebtedness.

This loan will provide added facilities in the existing exchanges of Auberry, Friant, and North Fork; replace the magneto exchange at O'Neals with a dial one; and provide new dial exchanges for the Big Creek and Shaver Lake communities now served on magneto toll station lines. There will be extended area service trunks between all exchanges.

The new system will employ microwave to provide toll trunking to Fresno. This is necessary because of the high cost of building and maintaining aerial line over mountainous terrain in the Big Creek and Shaver Lake exchanges. The microwave equipment will be installed in a new $33,000 building at O'Neals, which will also contain the commercial office and warehouse facilities.

Outside plant construction got underway last August. Cutover of the new and enlarged system with its added facilities and subscribers is planned for June 1963. The program

includes adding 177 miles of new line; of the existing 196 miles of line, 100 will be retained in place and 74 miles will be rebuilt.

Thirteen of the total 1,496 subscribers to be served by the Ponderosa Telephone Company will be toll stations. Five of them will service Forest Service stations, and the remaining eight will be located in very sparsely-populated areas.

The farmers and ranchers in the area (producers of grapes, barley, cotton, dairy products, cattle, poultry and vegetables) will probably accept with equanimity the fact that they have new or improved telephone service. It is no more than they expect from a telephone company which started because a woman wanted to talk with her mother. □

Visiting Engineer Compares U. S. and Australian Telephone Systems

The Australian Postmaster-General, who runs the telephone system in that country, believes that, as nations become more and more competitive industrially, it becomes increasingly important for utilities in any given county to keep up with technical developments in other countries.

This is the reason why a slim, smiling engineer named H. T. Davis is taking a 29,000 mile trip around the world. Before coming to REA headquarters in Washington for a two-day stay, he had already visited France, Switzerland, West Germany, Denmark, Sweden, and the British Isles.

In exchange for the intensive briefing he received from REA engineers on recent developments in rural electrification and telephony, Mr. Davis offered some interesting comparisons between his native country and the United States.

The United States is about 10 years ahead of Australia in the field of telephone communications.

Some areas of Australia are lucky when they have even one person per mile of electric or telephone wire.

Joint use of poles is extremely common in Australia — and is being greatly expanded. In cities, buried plant is used much more than in the United States.

Unlike the United States, all electric systems in Australia are run by the various state governments. Coal is the major fuel for generating electricity by hydrogeneration is rapidly expanding.

The American west coast, with its sparse population, is of particular interest to Australian engineers, since it bears many resemblances to Australia's east coast.

Between periods of technical discussions regarding the coordination of power and telephone lines, which is his main interest, Mr. Davis drew for his American counterparts a picture of a country where children often travel 50 miles a day to attend school; where telephones are more common in rural areas than central station electricity; and where people, by necessity looking outward, can identify prominent buildings and areas in foreign countries as readily as they recognize

H. T. Davis, Australian visitor.

outstanding buildings in their own country. For instance, Mr. Davis had no difficulty in recognizing the Capitol in Washington, Central Park in New York, and the Louvre in Paris.

Mr. Davis said that Australia, with a population of 10 million, has the food, minerals, and other resources to support a population of 100 million. The 2½ million persons it has added since 1946 represents a large percentage of increase than the United States has ever showed in a similar period.

A graduate of Melbourne University, Mr. Davis is responsible for the development of external plant maintenance practices throughout Australia. He lives in Melbourne with his wife and four children. His hobbies are motor boating, tennis and swimming.

Mr. Davis concluded his visit with a handsome tribute to REA's special knowledge of rural power and communciations, which, he said, is widely recognized abroad. The increasing number of foreign engineers who visit REA headquarters each year would seem to bear out his statement. □

Telephones in World Double in One Decade, Canadians Use Telephones More Than Others

According to a recent report, there are 141,700,000 telephones in the world. Slightly more than half of them (52 percent) are in the United States.

The number of telephones in the world doubled in the decade since 1951. (All figures are as of the end of 1960, since it takes a long time to collect and compile this data.)

The United States has 40 telephones per 100 persons. Russia has about 2 telephones for every 100 persons.

The United Kingdom is second in the number of telephones, with 16 per hundred persons. West Germany ranks third (11 per 100).

While Canadians rank fourth in the total number of telephones, the proportion of telephones per population is second only to that of the U. S. — 32 telephones per 100 persons. Furthermore, Canadians use their telephones more than any other group. They average more than 538 telephone conversations per person. In the United States the average is 520. Sweden ranks third with 349 conversations per person. □

NINE WHO NEVER RETURNED

First man — meter reader — Tennessee — transportation
Second man — foreman — Minnesota — electric shock
Third man — foreman — Alabama — transportation
Fourth man — superintendent — New Mexico — electric shock
Fifth man — lineman — Louisiana — electric shock
Sixth man — foreman — Oklahoma — transportation
Seventh man — foreman — Texas — pole fall
Eighth man — lineman — Missouri — electric shock
Ninth man — foreman — Kentucky — crushed by tree

This is the doleful list of nine persons who, during the first eight months of 1962, were killed in accidents on the lines of REA electric borrowers. Six of these victims were supervisors.

These nine men cannot be regarded as statistics — as mere numbers in a record book. They were human beings. They had families and friends. Their death marks with gruesome emphasis the need for ending this appalling loss of life. REA borrowers cannot shirk the responsibility of keeping their employees conscious of accident prevention 24 hours a day, every day of the year.

Eight months, nine deaths — a ratio that should lead management everywhere to ask itself this question:

"When we send a crew out to do a job, have we done everything possible to assure that the men will return safely?"

New and Revised REA Bulletins . . .

New Bulletins:

168-4 (8/7/62), "Aerial Lifts and Baskets." Provides recommendations for the safe use of insulated aerial lifts and baskets.

112-8 (8/10/62), "Rates for Three Phase Rural Service." Presents technical information on the design of suitable rates for three phase service, and compares the cost of furnishing such service with the cost of single phase service.

Revised Bulletins:

20-2 (7/18/62), "Electric Loan Policy for Section 4 Loans." States current REA policy concerning loans for electric distribution, transmission, and generation facilities.

405-1 (7/23/62), "Financial Planning by Telephone Borrowers." Incorporates information concerning the basis on which REA can make loans to telephone borrowers to reimburse general funds.

43-5 (July 1962), "List of Materials Acceptable for Use on Systems of REA Electrification Borrowers." Replaces July 1961 basic list of acceptable materials.

Supplements and Partial Revisions to REA Bulletins:

44-3; 345-4 (7/27/62), "Specification for Wood Crossarms, Construction Lumber, and Pole Keys, and for Preservative Treatment of These Materials to be Purchased by REA Borrowers, Electric and Telephone." Brings to the attention of crossarm suppliers the material and dimensional requirements of four new types of telephone crossarms.

381-2 (7/31/62), "Telephone System Construction Contract, Labor and Material, Form 511." Requires use of new design of one-pair terminal for Figure 8 one-pair distribution wire.

344-2 (August 1962), "List of Materials Acceptable for Use on Telephone Systems of REA Borrowers." Brings the 1962 basic list of materials up to date.

Administrator's Message

(Continued from inside front cover)

"Our electric power needs will double during this decade — our economic, military and international posture will require a continuing ability to find new sources of energy. Surely, a continent so rich in minerals, a nation so blessed with water power and a society so replete with scientists and technicians can meet this challenge by making the best possible use of all our energy resources and all who are engaged in transmitting it — public and private, federal and local, cooperative and corporate."

Norman M. Clapp
Administrator, REA

THIS MONTH

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(GPO)

SPOT THE HAZARDS

Several hazards and unsafe practices appear in this picture which was especially posed by members of the line crew of Dunn County Electric Cooperative, Menomonie, Wisconsin. Are your linemen and crew members sufficiently safety-wise to pick them out? Answers are on page 14.