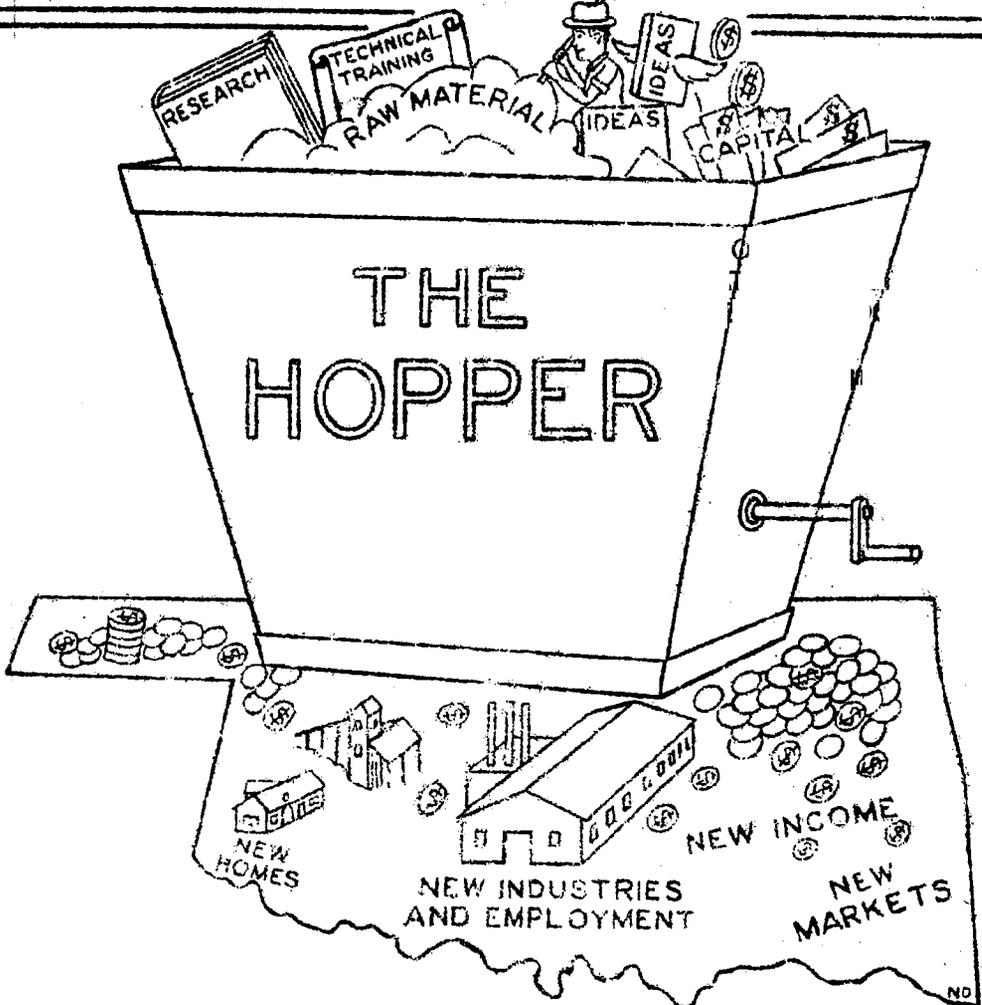


OKLAHOMA MINERAL INDUSTRIES CONFERENCE



PUBLISHED IN THE OFFICE OF THE
OKLAHOMA GEOLOGICAL SURVEY
NORMAN, OKLA.

OKLAHOMA INDUSTRIAL AND MINERAL INDUSTRIES CONFERENCE

Program for the Oklahoma Industrial and Mineral Industries Conference to be held in Tulsa, Monday and Tuesday, November 17 and 18, has been practically completed. The Conference is sponsored by the Industrial Department of the Tulsa Chamber of Commerce and the Oklahoma Geological Survey, with more than a dozen other state-wide organizations and institutions cooperating in promoting interest and attendance.

Luncheon speaker for the Monday program will be Governor Roy J. Turner of Oklahoma, who will discuss what the State Government is doing to help industrialize Oklahoma.

Speaker for the evening dinner will be Dr. Walter A. Bowers, President of Utopia College, Eureka, Kansas, founded by Roger Babson. His talk will deal with the industrial advantages to be found within the Babson Magic Circle. This is a circular area in the Middle West, designated by Roger Babson as the most desirable region for industrial expansion in the United States. Oklahoma is near the central part of the region thus designated by Babson as his Magic Circle.

The Oklahoma Industrial Tour last summer generated new interest and enthusiasm in the resources and possibilities for industrial expansion in Oklahoma. Those who made the Industrial Tour through the East are actively encouraging attendance at the Conference and have arranged for a reunion meeting following the Conference program. With the numerous organizations of the State that are cooperating to promote attendance present indications are that this will be the largest gathering of its kind in the history of Oklahoma.

Several thousand invitations have been mailed out, and everyone interested in attending is urged to make early reservations. Reservations for rooms should be made direct with the hotel. For places at the luncheon and dinner, November 17, and for the tour November 18, write to L. Harold Wright, Tulsa Chamber of Commerce, Tulsa 3, Oklahoma.

Program

- 9:00-10:00 Registration, Akdar Temple, Basement Auditorium, Fourth and Denver Streets. No registration fee.
- 10:00-12:00 Morning Session, Akdar Temple, Basement Auditorium. Erle P. Halliburton, President, Oklahoma Mineral Industries Conference, presiding.
- "Welcome", Victor F. Barnett, Associate Editor, The Tulsa Tribune.
- "Industrial Minerals and Fuels --Oklahoma's Basic Advantages", Mr. Halliburton.
- "New Developments and New Uses of Oklahoma Minerals", Robert H. Dott, Director, Oklahoma Geological Survey.
- "Another New Development in Oklahoma Minerals--Dolomite", Willard D. Ryder, Vice President, Rock Products Manufacturing Corporation, Ada.
- "Recent Discoveries in Mineral Survey of 47 Oklahoma Counties", William Mather, Inorganic Chemistry Division, Midwest Research Institute, Kansas City, Missouri.

Discussion.

12:00-12:15 Recess. Move to Crystal Ballroom, 16th Floor, Mayo Hotel, Fifth and Cheyenne Streets.

12:15- 1:30 Luncheon Session, Crystal Ballroom, John H. Dunkin, Vice President, Brown-Dunkin Company, presiding.

"How the State Government is Helping to Industrialize Oklahoma", Honorable Roy J. Turner, Governor of Oklahoma.

1:30- 1:45 Recess. Return to Akdar Temple.

1:45- 4:15 Afternoon Session. Milton Keating, Manager, Lawton Chamber of Commerce, presiding.

"What Prospective Industry Wants and Needs to Know About Your City", Oscar Monrad, Manager, Industrial Division, Oklahoma City Chamber of Commerce.

Panel Discussion: "How to get the Answers"

6:30- Dinner Session. Crystal Ballroom, Mayo Hotel, Erie P. Halliburton, President, Oklahoma Mineral Industries Conference, presiding.

"The 'Magic Circle', An Industrial Empire", Dr. Walter A. Bowers, President, Utopia College, Eureka, Kansas.

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"The Kaiser-Fraiser Motor Co. is negotiating with the Lone Star Steel Co. for the pig iron output of the Daingerfield, Texas furnaces."

PENNSYLVANIA GLASS SAND
BUYS MILL CREEK PLANT

Pennsylvania Glass Sand Corporation has acquired the property of the Mill Creek Sand Company, near Mill Creek, and is engaged in enlarging the plant to help supply the rapidly increasing demand for glass sand in this region. General offices of the Pennsylvania Glass Sand Corporation are at Lewistown, Pennsylvania. Glass sand mining operations of the company are at Mapleton, Mill Creek, Vineyard, and Ryde, Pennsylvania; Berkeley Springs and Hancock, West Virginia; and the plant recently acquired at Mill Creek, Oklahoma.

Although entrance of the Pennsylvania Glass Sand Corporation into the Oklahoma glass sand field through acquisition of the Mill Creek Sand Company operation is not increasing the number of operators in the district, enlarging of the Mill Creek plant is designed to give enough added producing capacity in the district to more nearly supply the demand for glass sand.

Established production in the glass sand district of the Arbuckle Mountains had been unable to supply demands for glass sand, and with expansion of the glass industry in Oklahoma and north Texas requirements for sand have been increasing. The Muskogee plant of Corning Glass Works and the Okmulgee plant of American Window Glass Company are in process of building and are expected to be heavy users of sand when in full production.

Pennsylvania Glass Sand Corporation became interested in finding a location in Oklahoma when they learned that new glass plants were being built in this region and some of the older plants had been enlarged, and that increased sand producing capacity was needed. Mr. Wm. J. Woods, president, and other members of the company came to Oklahoma to investigate possibilities.

OKLAHOMA COAL MINERS PROFIT
FROM TEXAS BLAST FURNACE

Oklahoma coal and Texas iron ore are being combined at Daingerfield, Texas, to yield pig iron, and 300 Oklahoma miners have hope for steady employment at the mine, which is furnishing the high-volatile coal used in making the coke. According to news reports, first pig iron from the Daingerfield blast furnaces was turned out the last week in October. The coke ovens and furnaces, built during the war under government sponsorship, have been acquired by the Lone Star Steel Company, and the company expects to make 600 to 800 tons of pig iron daily.

Of direct interest to Oklahoma is the fact that practically all coal used is supplied from Oklahoma mines. The coke ovens at Daingerfield have been operating several months, and the coke not being used in the blast furnaces there will be sold to other users. According to Minerals Yearbook, published by the U. S. Bureau of Mines, 2635 pounds of coal are required for each ton of pig iron produced. Coal being used in the Daingerfield coke ovens is a blend of high-volatile coal from the McAlester district, Oklahoma, and low-volatile coal, most of which is coming from the eastern part of the Oklahoma coal fields, with a small amount from near the state line in Arkansas.

Starr Coals, Inc., with main offices at Henryetta, is supplying the high-volatile coal to the Daingerfield plant from old Carbon No. 5 mine at Carbon, in the McAlester area. The Carbon mine was opened during the war by the Defense Plant Corporation, and operated by the McAlester Fuel Company. This mine, now the Starr No. 5, was acquired recently by Starr Coals, Inc., of which Earl Wells is president and M. A. Berman is secretary-treasurer. Low-volatile coal for blending is being purchased from other mines.

Mr. Wells stated that the Carbon mine is giving employment to about 300 men. If the blast furnaces continue to operate, the employment at the mines supplying coal for the coke ovens will be year-round instead of seasonal. Information is not available on the employment involved in mining the low-volatile coal, but it should be at least a third or more of that required for mining the high-volatile coal required for making the coke at Daingerfield. Thus, it is safe to assume that the direct employment value of this one industrial activity in the coal mines of Oklahoma alone is at least 400 workers.

Oklahoma is the only state outside the established areas producing metallurgical cokes in which a combination of coals suitable for blending to make this type of coke has been found. Several years ago the U. S. Bureau of Mines made tests on coals from different areas, but none of the coals so far tested proved suitable for metallurgical purposes except the blends from Oklahoma. However, it has been found that Oklahoma and Arkansas low-volatile coals can be blended with some of the western high-volatile coals to make a usable metallurgical coke.

The activity at Daingerfield, and the increased employment in Oklahoma coal mines should be credited, in part at least, to research projects on Oklahoma coals started before the outbreak of the war. It also is an indication of the time that may be required from the inception of a research program on mineral raw materials, and the "pay-off" in the form of industrial activity and increased employment in that region. The research consisting of coking tests on blends of Oklahoma coals was a cooperative project between the Oklahoma Geological Survey and the U. S. Bureau of Mines. The tests were instigated by the Oklahoma Geological Survey, and were conducted at the Pittsburgh laboratories of the Bureau of Mines.

MAKING HAY WHILE THE SUN SHINES

By

A. L. Burwell, Industrial Chemist
Oklahoma Geological Survey

Probably the greatest inducement Oklahoma can offer to prospective industry at the present time is its ample supply of low-cost natural gas for use as fuel and as raw material for the chemical industry. The ceramic industries in particular are large users of natural gas for fuel. The cost of fuel in the making of glass, pottery, refractories, brick, tile, etc., is probably, next to labor, the largest single item of expense. Naturally the price of natural gas and the dependability of the source of supply receives major consideration from management in these industries. It has been stated that low-cost natural gas was the determining factor in the location of the ceramic industry in Ohio. But, now, Ohio Public Utility Commission even forbids new domestic connections because of the shortage.

Probably the greatest obstacle facing Oklahoma in her attempt to bring new industry within her borders is the preference for industry to migrate to or to remain in areas where their particular branch of industry is already well established. Wherever an industry is already established there will be found labor skilled in that industry and its operations, and there industry is prone to remain. We in Oklahoma are fully aware that Oklahoma labor quickly and easily acquires new skills in industry, but management of industry is skeptical. Only when a serious upset of economic conditions occurs in their industry does management think of moving to new areas, or to new locations.

Such an economic upset now confronts certain industries, especially those who hold a preference for natural gas as fuel. "Since the end of the

recent war, there is unmistakable evidence of an almost unlimited demand for cheap fuel gas." This comes from no less an authority than CHEMICAL ENGINEERING (August issue). Industries whose locations were made because of cheap low-cost natural gas now find that the reserves are inadequate,--that service companies must, of necessity, supply domestic users first and have notified the industrial users to be prepared to have their fuel shut off at any time that circumstances warrant. Industry has found that the natural gas abundance was temporary and the supply has diminished and the price advanced. As surely as night follows day, the fuel situation in industry using natural gas in the old industrial areas has brought on an economic pain-in-the-neck if not an actual crisis.

No natural gas supplies are inexhaustible, and probably the abundance of low-cost gas in Oklahoma is relatively temporary, but depletion in Oklahoma definitely will not be as rapid as in the older eastern states. Nevertheless, we should remember that natural mineral resources when consumed are not replaceable howbeit they may be replaced by substitutes. The natural gas situation in Oklahoma today is very favorable for industry. Industry should be made thoroughly aware of the fact. Using the present abundance and prices as a lure, Oklahoma should exert every possible effort to influence industry to move plants to Oklahoma now, making hay while the sun shines.

There are good reasons why now is the time. One reason is fully covered in the quotation following:

"There are good prospects for reducing the cost of manufacturing gas through technologic development of new processes. If supplies of natural gas should shrink and its price increase substantially, the availability of such replacement supply will facilitate a gradual shift in the

source of gas with a minimum of interference in service and rates or in pipeline networks and distributing systems developed to handle gas fuel."

New ways to manufacture high B.t.u. gas from coal are outlined in an article in the August issue of CHEMICAL ENGINEERING. One process utilizes coal, air and water to produce water gas, which is then converted by the Fischer-Tropsch method to synthetic hydrocarbons and chemicals. Another process is known as Lurgi pressure gasification to yield a gas with three times the B.t.u. value of water gas. Another process yielding ultra-high B.t.u. gas as a byproduct is coal hydrogenation by the Bergius method. The last process is the gasification of coal in place, using steam or air to produce partial combustion, and collection of the resulting gaseous products.

Certainly the logical and most practical raw material from which synthetic gas may be produced is coal. With this fact in mind we can safely say that an industry which will establish itself in Oklahoma now, using our present abundance of low-cost natural gas will never need fear the economic crisis that now faces the ceramic industries in the north and east today. They would be "sitting pretty" if and when in the far-off future the present abundant natural gas supply declines because Oklahoma has an abundance of coal, too.

One of the exhibits on last summer's industrial train to which the attention of all visiting executives was called, stated: "Oklahoma, where success comes sooner." This should be restated time and again, with special emphasis on fuels, and with the emendation: "...and will last longer." The great southwest contains the nation's largest reserves of natural gas. Because of the system of inter-connected pipe lines, natural gas will be available in Oklahoma as long as anywhere else; after that, coal.

SURVEY RESEARCH LABORATORY
MOVED INTO NEW QUARTERS

All equipment of the Oklahoma Geological Survey Industrial Research Laboratory have been moved into a cement block building 32x150 feet in dimensions, on the South Campus of the University. (The South Campus of the University was built by the Navy during the war for use as an aviation technical training center, and has been turned over to the University of Oklahoma). The building assigned to the Oklahoma Geological Survey has ample room for setting up all equipment now owned, with space for some additional equipment.

A contract was made with the Department of Physical Plant of the University to make all necessary changes and installation of water, light, power, and heating services, and move equipment from the small building on the Main Campus formerly used for this laboratory.

In addition to the large cement block structure, building 138, in which the main laboratory facilities are installed, three adjacent small frame structures were assigned to the Survey. One of these has been turned over to the groundwater division for storage of equipment. Another is being converted into a spectrographic laboratory, and the other is being used for storage.

Present equipment in the research laboratory includes crushing and grinding equipment, rock saws, and similar apparatus at the west end; beneficiation equipment in the center; and furnaces, both gas and electric, boilers, kilns, air compressor, etc., in the east part of the building. A small room in a wing of the building has been equipped for chemical analytical control work, as checks on research. However, the main analytical laboratory will remain in its old quarters in the basement of the Geology building.