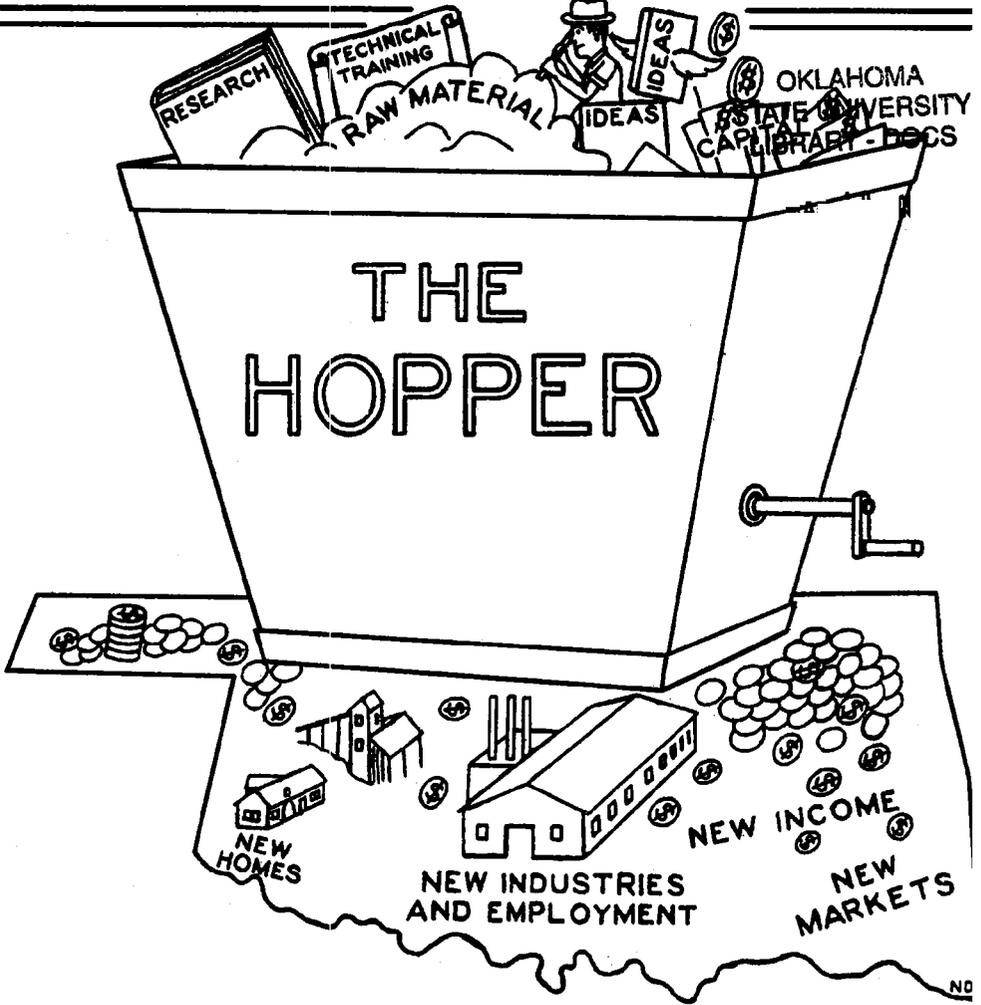

OKLAHOMA MINERAL INDUSTRIES CONFERENCE



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

RESEARCH FACILITIES WILL BE DISPLAYED TO INDUSTRIALISTS

The Tour of the University, scheduled on the Saturday morning program of the Industrial and Mineral Industries Conference, will include visits to some of the laboratories and other research facilities of the University of Oklahoma and of the Oklahoma Geological Survey. The program of the Conference, which begins Friday, September 30, and continues through Saturday noon, October 1, is designed to bring recognized speakers to discuss special phases of resources and industrial expansion, and to show to conference visitors some of the facilities available at the University and the Survey for research.

The Survey's Industrial Research Laboratory, which occupies a building on the South Campus of the University, has been expanded with addition of new equipment during the last two years. Completion of a Research Institute building on the University Campus has provided the University with space and facilities for organizing and carrying out research projects in addition to the laboratories and personnel in the various departments of the University.

Although the opening session of the Conference will not begin until the noon luncheon at 12:15 Friday, registration is scheduled to begin at 9:00 a.m., at the Extension Study Center, located on the North Campus of the University. There will be no registration fee, but luncheon and dinner tickets as well as tickets to the Oklahoma vs. Texas A. and M. football game should be purchased at this time. A block of tickets is being reserved for members of the Conference who wish to attend the game. A series of industrial films will be shown continuously at the Study Center during the morning registration period.

The Friday luncheon and evening banquet will be at the North Campus. The barbecue Saturday noon will be served in the Oklahoma Geological Survey Industrial Research Laboratory, Building 138, South Campus. Gerald H. Chase of the Survey staff is in charge of housecleaning and table arranging operations before "company" arrives, to sample the offerings of Rock Products Manufacturing Corporation at the barbecue.

At the business meeting Saturday morning, a report is to be made by the committee on permanent organization and name, appointed at the conference held in Oklahoma City last year to make plans for a permanent organization.

The committee on permanent organization and name is composed of:

Robert H. Dott, Norman
 Sheldon L. Stirling, Oklahoma City
 L. Harold Wright, Tulsa
 Jerry Soukup, Mountain Park
 Keith Marshall, Ada
 Harold Godsehawk, Enid
 W. J. Martin, Miami

The committee on program and arrangements for the 1949 Conference meeting is as follows:

Chairman, Robert H. Dott, Director, Oklahoma Geological Survey
 Vice-Chairman, Clarence Burch, Chairman, Oklahoma Planning and Resources Board
 Secretary, Thurman White, Director, Extension Division, University of Oklahoma
 Member, William J. Michaels, First National Bank and Trust Company, Tulsa
 Member, Oscar Monrad, First National Bank and Trust Company, Oklahoma City
 Member, John B. Freeman, Director of Short Courses and Conferences, Univ. of Oklahoma
 Ex-officio, George L. Cross, President, University of Oklahoma.

OKLAHOMA GROUND WATER LAW

House Bill 487, an act known as the "Oklahoma Ground Water Law", was enacted by the 21st Oklahoma Legislature. The bill was passed by the Senate May 26, by the House May 27, and was approved by the Governor June 6, 1949.

Sections 2, 3, 4, and 5 of the act define terms, policy and purpose, exempts use of water for stock and domestic purposes from restrictions of the act, and provides for determining priority of claims. These are as follows:

Section 2. In this Act, unless the context clearly indicates otherwise, the term "ground water" shall mean water under the surface of the earth regardless of the geologic structure in which it is standing or moving; it does not include water flowing in underground streams with ascertainable beds and banks.

The term "ground water basin" shall mean land overlying, as nearly as may be determined by known facts, a distinct body of ground water, but the exterior limits of a ground water basin shall not be deemed to extend upstream or downstream beyond a defile, gorge or canyon of a surface stream or wash.

"Ground water subdivision" shall mean an area of land overlying, as nearly as may be determined by known facts, a distinct body of ground water; it may consist of any determinable part of a ground water basin.

"Critical ground water area" shall mean any ground water basin as herein defined, or any designated subdivision thereof, not having sufficient ground water to provide a reasonably safe supply for domestic, municipal, industrial, irrigation, recreational, and other beneficial uses in the basin at the then current rates of withdrawal.

The term "waste" shall mean: (a) Taking or using ground water in any manner so that the water is lost for beneficial use. (b) Transporting water from a well to the place of use in such a manner that there is an excessive loss in transit. (c) Permitting any ground water to reach a pervious stratum and be lost into cavernous or otherwise pervious materials encountered in a well. (d) Permitting or causing the pollution of a sweet water strata or basin through any act which will cause water polluted by minerals or other waste to filter or otherwise intrude into such a basin.

The term "Board" shall mean the Oklahoma Planning and Resources Board.

The term "person" shall mean individuals, municipalities, corporations, and copartnerships.

Section 3. It is hereby declared to be the public policy of this State, in the interest of the agricultural stability, domestic, municipal, industrial and other beneficial uses, general economy, health and welfare of the State and its citizens, to conserve and protect the ground water resources of the State and for that purpose to provide reasonable regulations for the taking and use of ground water.

Section 4. Nothing in this Act shall be deemed to apply to or prevent the taking and using of ground water for domestic purposes or for the purpose of watering of stock provided that ground water shall not be taken or used for such purposes in a manner which constitutes waste as defined in this Act.

Section 5. Priority of claims for the appropriation of ground water, except as hereinafter provided, shall be determined by priority in time. All claims based on actual taking of ground water for beneficial use prior to the effective date of

this Act shall relate back to the date of placing of ground water to beneficial use and all claims for the beneficial use of ground water initiated after the effective date of this Act shall relate back to the filing of an application with the Board.

The priority of claim to appropriate ground water based on the actual taking and placing of ground water to beneficial use, prior to the effective date of this Act, as provided in this Section, shall be lost unless ground water is actually taken and placed to beneficial use within two (2) years from the effective date of this Act, and where the amount of ground water actually taken and placed to beneficial use within two (2) years after the effective date of this Act is less than the amount of ground water claimed by virtue of such prior taking, then such claim shall be effective only for that amount of ground water actually taken and placed to beneficial use within such time, provided future beneficial uses and needs are considered in such cases.

Sections 6 through 12 set up procedure for obtaining permits for use of ground water, methods of establishing priority, provide for making of surveys through cooperation or use of information from other federal and state agencies engaged in making such surveys, and prescribe legal steps that should be taken where it is necessary to hold hearings in court.

Section 13 contains a number of provisions as follows:

Section 13. After a court adjudication of existing rights in a ground water basin, as provided in Sections 9 to 14, inclusive, of this Act, is completed, the remaining ground water subject to appropriation, if any, may be taken only after securing a license from the Board. Application for a license to appropriate water from such a basin

shall be made on forms prescribed by the Board setting forth the description of the basin, the amount of water to be taken, the purpose for which the water is to be used and such other information as the Board may prescribe.

If the Board finds that there is unappropriated ground water, that the applicant can place such unappropriated ground water, or part thereof, to beneficial use and that the applicant has a prior claim to appropriate such ground water, the Board shall issue the applicant a license to place such previously unappropriated water to beneficial use in accordance with the rules and regulations of the Board.

The priority of claim to appropriate ground water, based on a license from the Board, as provided in this Section, shall be lost unless ground water is actually taken and placed to beneficial use within two (2) years from the issuance of such license, and when the amount of water actually taken and placed to beneficial use within two (2) years from the issuance of such license is less than the amount of ground water permitted to be taken under such license, then the license shall be effective only for that amount of ground water actually taken and placed to beneficial use within such time.

In cases where a permit is sought to withdraw ground water from a basin for air conditioning or cooling purposes the Board may require that such applicant provide facilities to aerate and re-use such water to reduce waste. The Board is authorized to require of all applicants that they will not waste such water, as defined in this Act, through faulty transportation lines or otherwise and in cases where the use of such water permits, the Board may require that after use it be returned to the basin from which it is extracted.

No permit shall be issued by the Board for the extraction of water from a basin if the findings of the Board indicate that such use would result in depletion above the average annual ratio of recharge.

No permit shall be issued to an applicant who does not own the land above such basin or hold a valid lease from the owner of such land permitting withdrawal of water from such basin.

In cases where an applicant desires to extract large quantities of water from a basin and before issuing a permit, the Board is authorized to determine and order a proper spacing of wells which in its judgment is necessary to an orderly withdrawal of water in relation to the average annual recharge of the whole basin. The Board is also authorized to require that water extracted in large amounts be metered and that such meter be placed under the seal of the Board subject to reading by the agents of the Board at any time and to require that the applicant report the reading of such a meter at reasonable intervals.

In issuing a permit, where field examinations of a basin indicate that water impregnated with minerals is located above a sweet water basin, then the Board shall require the applicant to contract that he will properly case in such impregnated strata and take all other necessary precautions to protect the sweet water basin from intrusion of polluted water.

The Board is hereby authorized to enforce all necessary regulations to stop the waste of ground water, not only as regards new applicants but also as to existing persons whose rights have been confirmed and adjudicated.

Section 14 provides for appeals from decisions of the Board.

Section 15. In any ground water basin in which the withdrawal of ground water exceeds the annual yield as determined by the court under the provisions of this Act, the Board shall have the power to require persons to cease such excessive withdrawals in reverse order of their priority of rights.

If, after reasonable notice and an opportunity for hearing is given a person withdrawing water from such a ground water basin, the Board finds that the safe annual yield of such basin is being withdrawn by other persons having higher priorities, the Board shall issue an order requiring such person, or persons of lesser priority of right, to cease withdrawing ground water from such basin.

Any person who fails or refuses to obey such order shall be guilty of a misdemeanor and shall be punishable by a fine of not less than Twenty-five (\$25.00) and not more than Two Hundred Fifty Dollars (\$250.00) and each day shall constitute a separate offense.

Upon the failure or refusal of any person to obey such an order, the Board may obtain an order from the District Court of the county in which the water is withdrawn by such person requiring the Sheriff of such county to stop such withdrawal.

Section 16. The Board shall prescribe and enforce reasonable rules and regulations consistent with this Act governing the drilling, casing, repairing, plugging and abandonment of ground water wells.

The last three sections contain the constitutional provision, penalties, and a statement that nothing in the act shall be construed to limit, modify, or repeal the powers, duties or functions of the State Health Department, Board of Health or Corporation Commission.

OBSERVATION WELLS DRILLED IN CADDO COUNTY

Industry Helps Science

Many times science helps industry in one way or another. Many more times science could help but does not because it has not been advised of the problem, often because industry does not know where to turn.

Many times, also, industry could assist science with facts and know-how, without endangering trade secrets, but often it does not do so, either because of a fear of inadvertently disclosing something confidential, or through not realizing the value of its information to science, or not knowing a scientific agency able to use the information.

An example of close and harmonious cooperation between science and industry recently grew out of a conversation between L. V. Davis, of the Oklahoma Geological Survey, and George E. Failing, owner of the George E. Failing Supply Company, at the January meeting of the Oklahoma Water Well Drillers Association. Pursued to its logical end, this conversation disclosed the interest of the Geological Survey in having a few test holes drilled that could be used for observation of fluctuations of ground-water levels in an area where irrigation with well water is just getting under way. It also disclosed the interest of the company in drilling shallow holes as a test of drilling equipment.

Science wanted holes drilled, knew where, but did not have a big enough job to justify a contract. Industry wanted holes to drill--but didn't care too much where.

Collaboration was the logical answer. Mr. Failing is one of Oklahoma's foremost exponents of irrigation, and he agreed to help by furnishing a light-weight portable rotary drill. Along with it

he sent Joel E. Yarborough of the Failing Engineering Department to supervise the drilling operations.

The Geological Survey furnished trucks to haul water and gasoline, and a groundwater geologist, L. V. Davis, to pick the drillsites and help on the rig. Other "roughnecks" were J. H. Warren, of the Oklahoma Geological Survey, and E. W. Reed and H. S. Mayberry, of the U. S. Geological Survey.

In two days intensive drilling, during which the drill truck was stuck in sand for 3 hours, eight test holes ranging from 50 to 80 feet in depth were drilled in the Cobb (Pond) Creek basin of west-central Caddo County, revealing much about the character of the sand and the frequency of solution openings in the Rush Springs sandstone. Drilling was entirely in fine-grained red sandstone, and average drilling time was about 25 minutes per hole.

Robert H. Dott, Director of the Oklahoma Geological Survey, Penn P. Livingston, Engineer, Ground Water Branch, U. S. Geological Survey, Austin, Texas, and Stuart L. Schoff, District Geologist of the Ground Water Branch for Oklahoma, spent several hours observing the operations.

Later, the test holes were cased so that periodic water-level measurements can be made in them indefinitely, as part of studies now in progress. One of these is a study of the ground-water resources of Caddo County, under terms of the regular cooperative agreement between the Oklahoma Geological Survey and the U. S. Geological Survey for ground-water investigations in Oklahoma. Another is a study of the relation of the ground-water fluctuations in the Rush Springs sandstone to the low-flow stages of Cobb (Pond) Creek, in which the prediction of future stages of the creek from ground-water levels is an objective.