MINUTES

SPECIAL COMMITTEE ON NATURAL RESOURCES

August 9-10, 1977

Members Present

Representative Anita G. Niles
Senator Richard G. Gannon
Senator Fred A. Kerr
Representative James Cubit
Representative Larry E. Erne
Representative Keith Farrar
Representative R. D. McCrum

Staff Present

Emalene Correll, Kansas Legislative Research Department
John Rowe, Kansas Legislative Research Department
Don Hayward, Revisor of Statutes Office

Others Present

Harris, L. Mackey, Division of Water Resources, State Board of Agriculture
Dave Williams, Lt. Governor's Office
D. Wayne Zimmerman, The Electric Companies Association of Kansas, Topeka
Guy E. Gibson, Division of Water Resources, State Board of Agriculture
Joan Callan-Waywod, State Planning and Research
Marian Reynolds, Dodge City
Harold Shoaf, KEC, Topeka
Grace L. Wilson, League of Women Voters of Kansas
Amos Kramer, Kansas Petroleum Council, Topeka
Donald P. Schnacke, KIOGA, Topeka
Robert Anderson, Mid Continent, Ottawa
Walter Dunn, EKOGA, Topeka
Frank Broadfoot, KCC, Wichita
J. Lewis Brock, KCC, Wichita
Bruce F. Latta, Division of Environment, Department of Health and Environment
Mel Gray, Division of Environment, Department of Health and Environment
Gilbert D. Schoennogge, Kansas Water Well Association, St. Francis
James H. Strader, Kansas Water Well Association, Holton
Stewart Boone, Kansas Water Well Association, Garden City
Steve Carter, Kansas Corporation Commission
Jim Power, Kansas Water Resources Board
Dean Lebestky, Groundwater Section, Kansas Geological Survey
Manoutchehr Heidari, Groundwater Section, Kansas Geological Survey

The meeting was called to order at 10:00 a.m. by the Vice-Chairperson, Representative Anita Niles.

Minutes. A motion was made and seconded to approve the minutes of the July meeting as distributed. Motion carried.

Proposal No. 58 - Well Inspection Personnel. Staff reviewed the statutes relative to the investigation and plugging of abandoned wells, K.S.A. 55-139 through 55-142. In answer to questions, staff stated the Commission can also initiate an action. The Department of Health and Environment was included in the statute because people notify them of water pollution and the source of pollution may be an abandoned gas or oil well. There is a procedure for applying to the Commission to cap or temporarily abandon a well for no more than six months. Since the increased price of oil is making it economically feasible to again work some of these wells, the six month maximum may not be sufficient.

There are problems which sometime necessitate replugging a well, i.e., the casing was not cemented in; the casing deteriorated. Problems also arise because wells were abandoned prior to the well plugging act.

Staff reviewed the Groundwater Exploration and Protection Act, K.S.A. 82a-1201 through 82a-1215, noting this is primarily a licensing act.

After noting it was important to know where water is and where it is not, questions were raised relative to whether well logs are required for all wells and test holes. Staff stated they were not sure that rules and regulations require an individual drilling his own well to maintain and submit logs or require well logs for test holes.

In answer to questions, staff stated the water well contractor is licensed since he is the person held responsible. Employees are considered agents of the licensed contractor.

Concern was expressed that wells may be drilled without a permit since no one seems to be designated as responsible for turning in a violator. Requiring a contractor to be sure there is a permit before drilling a well with loss of license or forfeiture of bond as a penalty for noncompliance was suggested.

The meeting was recessed for lunch at 12:00 noon and was reconvened at 1:30 p.m.

Mel Gray, Department of Health and Environment, stated there are approximately 200 water well contractors and 300 drill rigs licensed in Kansas. Approximately 6,000 water wells, including irrigation wells, municipal water supply wells, individual domestic wells and garden wells, are drilled each year. Contractors must submit drilling logs to the Division of Environment which processes them and then forwards a copy to Kansas Geological Survey. There is presently a nine month backlog on the processing of logs.

In answer to questions, Mr. Gray stated most contractors are very good and require little checking. Others are checked more frequently. Two licenses have been revoked (one for failure to submit logs and one for construction practices) and a few contractors have failed to reapply. All complaints are investigated. Presently 100 to 150 inspections are made annually but the Division should be making 600. Also, more education in the field is needed. Adding a technician to assist with the paperwork would make this possible. Qualifications for the engineering technician IV position which has been requested in the past are high school graduation and eight years experience. College education may be substituted for experience on a year for year basis.

The cost of the water well licensing program is 50 percent to 75 percent above the fees collected. However, the intent of the law was not that it be totally self-supporting since it is of benefit to the state as a whole. An additional $15,000 to $20,000 would be needed if an additional person were hired. If the licensing fees are to be increased, they should not go above $50.00 per contractor.

Logs are required but water samples are sent in by the contractor as requested. These samples are analyzed by the Division's laboratory at an average cost of $40.00 to $50.00 per sample. This cost is absorbed by the Division under the water quality program which is in part federally funded. In testing samples, the Division is looking primarily at the chemistry of the water as opposed to the biology of the water. Test results provide additional information for the records and help locate problem areas such as brine intrusion or high nitrate. Lab work has been limited so far but with the new drinking water law it will increase significantly.

Approximately 75 percent of the wells drilled for domestic use are not in a groundwater management district. The percentage is higher for irrigation wells.

All test holes are to be plugged. If the material is unconsolidated, the hole is filled with dirt or gravel. Impermeable areas are filled with concrete. Although the Division tries to check for compliance with this regulation, some test holes are probably not filled.

Cities are required to submit plans for all construction relating to their water supply. After construction, the Division does an inspection and if in compliance, a certificate is issued.

Answering a question, Mr. Gray stated that laws pertaining specifically to artesian wells could be repealed since all artesian wells would be covered by other water laws.

Speaking specifically to Proposal No. 58, Mr. Gray stated he does not think a person can work for two bosses at the same time. Also methods are constantly changing making it difficult for one persons to keep up with both fields. The two types of inspectors see things from a different point of view. However, staff of the two agencies do notify each other of problems seen in the area of the other agency's responsibility. Responsibilities of the two agencies are fairly well defined with the Division responsible for the control and protection of water and the Commission responsible for the control and production of gas and oil.

Answering further questions, Mr. Gray stated drillers can inform the person hiring them that a permit is needed under S.B. 4. However, making drillers responsible for seeing the person does in fact have a permit would put them in the difficult position of attempting to enforce state law. A person can drill his own well without a license but he must do it by established standards and must submit a log.

Responding to a suggestion, Mr. Gray stated it would be more technically correct if 82a-1207(a) were changed from "Kansas groundwater laws" to "Kansas water laws" since there are no laws titled by the former phrase.

Mr. Gray distributed the following to the Committee: rules and regulations relative to the water well contractor's license and water well construction and abandonment (Attachment A); Water Well Record (Attachment B); Well Plugging Record Card (Attachment C).

Steve Carter, Kansas Corporation Commission, stated it would be difficult to share technicians in the KCC well plugging section with the Division of Environment because fees the KCC collects from the industry can be used only to carry out the intent of the statute under which they are collected. Sharing technicians would necessitate developing a system for determining a cost figure to be charged to the Division for the time the KCC technician was working for the Division. The nature of the work the KCC technicians do is very different in nature. The KCC technicians are hired on a geographic basis. Cooperative efforts between the two programs are developing and are working well.

In answer to a question, Mr. Carter stated they have 14 positions in the plugging section. The number of positions filled fluctuates depending on workload and ability to find qualified people. These technicians have a high degree of specialization based on years of experience, usually as roustabouts or riggers. Most of them are retired or semi-retired.

Mr. Carter, responding to questions, stated work for pluggers will be steady for at least the next two years. In some areas petroleum technicians may work in all three sections of the Conservation Division -- gas, oil and plugging. However, each time a person is shifted from one section to another, the administrative paperwork must show they were fired in one section and hired in the other section. A bill which would have eliminated the necessity for doing this was introduced during the last session but did not pass.

In answer to questions, Mr. Carter stated that if a plugged well is to be opened, an intent to redrill must be submitted to the Commission for approval. If the casing was left in, the driller may go back through the plug; if the casing was removed, they redrill and put in new casing. The Commission does not require drillers to furnish information on the condition of the plug when a hole is redrilled.

Since starting the program to plug old wells of unknown ownership five years ago, 101 wells have been plugged at a cost of approximately $113,000. The fund balance is $20,000 and about $3,000 per month is currently collected from assessments for this purpose.

The Commission inspects capped and temporarily abandoned wells to see if they are causing pollution. A well may be temporarily abandoned for a maximum of two years. The original request is approved for six months, and a request for an extension must be filed every six months. If there is any question that the well may be polluting, action is taken. Mr. Gray stated that under the new underground injection program, required by federal law, the Division will be checking all injection wells every five years.

Answering questions, Mr. Carter stated that the intent to drill includes how surface casing is to be set and the surface casing affadavit shows how many feet were actually set. This affadavit shows the bottom level of fresh water but it does not show the level or levels at which fresh water was encountered. The only way to furnish additional information would be to take out the drilling tools, clean the hole and then take a sample and this would be a costly operation.

In summation, Mr. Carter stated that sharing of information with the Division of Environment is an administrative procedure and is no problem if it is possible or feasible to get the information. Personnel of the two agencies do talk together and are contacting each other as needed. However, there would be problems in sharing personnel.

Don Schnacke, Executive Vice President, KIOGA, stated they are opposed to the sharing of personnel for the reasons given by Mr. Carter. The industry is assessed for the purpose of being regulated and they do monitor the use of the funds collected from these assessments. The industry does not see any problem with plugger demand since there is an increase in drilling activity and eight out of nine wildcat wells are dry. Also, when a driller needs a plugger, he does not want to have to wait because of the expense of having his rig and crew held up. Mr. Schnacke stated the record should show that he was also speaking for EKOGA at their request.

Responding to a reference to questions raised by Senator Janssen in Committee hearings during the last session, Mr. Schnacke stated the industry is paying for the plugging technician and if there was a problem of inspectors being idle, the industry would be complaining about the assessment being charged. He agreed the cost per hour for the rig and crew while waiting for an inspector would soon pay an inspector's monthly salary.

Robert Anderson, Mid Continent, stated the people he represents are satisfied with the present situation. Because of costs involved, it is important for plugging inspectors to be available when they are needed. Also, working for two masters does not work.

Gilbert Schoenrogge, President, Kansas Water Well Association, introduced their Executive Secretary, Stewart Boone, who stated that if the Division of Environment feels there is a need for more inspections, funds and personnel should be authorized.

In answer to questions, Mr. Boone stated they had lobbied for the licensing law and are not objecting to the requirements or any additional workload which has resulted from the act. Increasing a contractor's license fee to $50.00 and leaving the fee per rig at $25.00 would not be a burden.

Mr. Boone stated present information about the location of water meets their needs. However, drillers do not usually rely on previous logs. They drill their own test hole and draw their own conclusions. Two to five percent of the wells drilled are wildcat wells. These are usually found at greater depths or in areas not yet developed.

Mr. Boone, in answer to questions, stated they feel the law helps guarantee a safe drinking water supply, provides a closer surveyance of the water supply, and a more orderly irrigation operation. Also when people are licensed they look for a trade organization which is then in a position to offer education programs to its members.

Answering questions about the implementation of S.B. 4, Mr. Boone stated that seeing a person has a permit is not their responsibility but they will cooperate in educating the public about the requirements and in seeing that the requirements are met.

The meeting was adjourned at 4:30 p.m.

August 10, 1977

The meeting was called to order by the Vice-Chairman Representative Anita Niles at 9:10 a.m.

Proposal No. 57 - Water Related Issues. John Rowe of the Legislative Research Fiscal Staff explained how budgets for the agencies relating to water are reviewed for similar activities or projects and duplication of duties. He explained steps taken to resolve these problems when they occur through the budgetary process. Funding of projects are also watched for duplication.

In answer to questions, Mr. Rowe stated it is not as easy to check overlapping in the area of administrative and policy decisions. However, the staff and Ways and Means Committees do try to stay abreast of these decisions and their funding ramifications.

Questions were raised about how the measurement of depletions is budgeted. Guy Gubson, Division of Water Resources, State Board of Agriculture, stated his Division has signed a memorandum of agreement with the Kansas Geological Survey to provide in-kind services which includes staff time. The information collected goes to the Geological Survey and comes back to the other water agencies in published form. Mr. Rowe stated that to find out what a project such as this costs would require going to each agency's budget to determine its financial input and then total it up.

In answer to a question, Mr. Rowe stated that coordination between agencies on a formal basis has not been established. Heads of agencies have met on an informal basis as they felt necessary. As heads of agencies have changed the quality of coordination has changed. In the last few months, these meetings have become more formalized. He stated his personal observation is that there is less overlapping than is generally supposed. There is coordination although it is not always visible.

Staff summarized the provisions of the 1963 statutes (K.S.A. 82-901 through 82-926) mandating the development of the State Water Plan Act and the 1965 State Water Plan to which they led. Staff noted the Committee may want to consider updating the goals included as part of the act and suggested questions the Committee might want to ask representatives of the agencies.

Staff summarized the responsibilities of the four major water agencies referring to material sent to Committee members earlier. Staff pointed out that the Division of Environment administers both federal and state laws and carries out both federal and state mandates. The Water Resources Board is responsible for some research, for planning and for the storage and sale of water. The Geological Survey is primarily responsible for research and data base development.

In answer to questions, staff stated that both state and local decisions are to be taken into account in planning. It was clarified that the State Water Plan presently includes federal reservoirs only. These are included to indicate to the federal government what projects the state feels should be a part of the state's water development.

Jim Power, Water Resources Board, summarized the activities of the Board which include planning and coordination. In the past there were annual meetings of the state agencies having primary water responsibility to brief them on planning activities. A few years ago meetings involving state and federal agencies dealing with reservoir activities were also initiated. There is a coordinating committee on data meeting now. Joint meetings have been held relative to permit problems. Administrators of the various state water agencies have now agreed to meet on a quarterly basis to open lines of communication and to provide better coordination. The Water Resources Board is also involved in the development of federal projects in the state; in coordination with other states on multi-state activities and on matters pertaining to interstate rivers which pass through Kansas.

The Board also recommends legislation, administers the Water Storage Act, collects data and does some limited research. Mr. Power stated the Board feels that certain areas of research and data collection should remain with each agency because that is where the expertise is. However, this data needs to be accessible to the Board.

The Board is composed of seven appointed members and employs a staff of 26, one-half of which are professionals.

In answer to questions, Mr. Power stated the buck stops with the Board in the areas of planning and coordination. In other areas it stops with other agencies.

Mr. Power, in answer to a question, stated discussions are being held with other agencies to determine whether there should be a separate environmental plan or if a part of any such plan should be made a part of the Water Plan. The Board's preference is to consolidate the two as much as possible. Whether this is done and how it is done rests with the Legislature.

Responding to questions about local input, Mr. Power explained how they work with local communities to determine their needs, to determine how to meet these needs and to assist them in developing plans and getting projects through the Congress. He used the Hillsdale project as an example.

In answer to a question, Mr. Power stated that right now the agency administrators are cooperative because they have mutual problems. Whether or not coordination is mandated or left on a voluntary basis is a decision for the Legislature to make.

Mr. Power listed the members of the Board at the request of the Committee: Wallace Robinson, Scott County, irrigator; Dale Williams, Garden City, irrigator; Justice Fugate, Wichita, was Mayor of Wichita and is active in reservoir programs; Carolyn Sifold, Wichita, attorney who has acquainted herself with Kansas laws and laws of other states; Russ Crites, Ottawa, active in water advocacy groups; James Wilson, Iola, Superintendent of Public Works for Iola and active in water associations; Father Angelus, Atchison, management background in water related areas.

Reference was made to federal criticism of the states' water laws. Mr. Power stated the Board's position is that water rights are a right that belongs to the state. They are taking a lead role in the Interstate Conference on Water Problems to develop a joint statement opposing federal intervention.

Dean Lebestky, Associate Director, Kansas Geological Survey, stated the survey's primary function is research — to acquire, analyze and present data so that it can be used by other agencies. By law they have no regulatory or policy making responsibilities. Their primary responsibility in the water area is in groundwater. They do quantity and quality water research but they do not overlap with other agencies. In the area of quantity, they are concerned with the development of models. In the area of quality their primary research is in an intensive study of chemical problems of western Kansas. They locate and isolate problems and then present alternatives to other agencies who make the policy decisions.

In answer to questions, Mr. Lebestky stated they want input from other state agencies about what research they should do. They use the state agency liaison council for this purpose.

Responding to questions about overlapping, Mr. Lebestky stated their staff go out in the field to collect some data. Some data is collected by other agencies and some data is collected jointly. All three approaches are needed. The Survey works closely with the Department of Health and Environment to avoid duplication of sampling and is working for better cooperation in this area. Their lab equipment is basically complementary to that of Mr. Gray's laboratory. They work closely with Mr. Gray's staff to avoid duplication of lab equipment.

In answer to a question, Mr. Lebestky stated the survey does not have the capability of doing all the sampling for the Division of Environment. Mr. Gray stated they do hundreds of thousands of sample analyses annually. The Division of Environment's lab has the capability of doing analyses on a quantity basis which no other state agency has.

Mr. Lebestky noted that it is important that data be collected and be readily accessible to persons or agencies needing it. Computer mode is the only way this can be done. Presently the survey is studying the best way to do this to meet the needs of each agency. He pointed out that with computers it is not necessary for one agency to have all the data. What is important is that each agency can access the data it needs no matter in which agency it is stored.

In answer to questions, Mr. Lebestky state the survey is trying to anticipate future needs for disposing of toxic industrial wastes and to provide for better planning to meet these needs by studying where such wastes might be stored and what precaution and controls would have to be taken. They are also studying the possibility of artificial recharge through ponds to meet future water needs. Limited studies of some ponds in western Kansas is encouraging.

Mr. Lebestky, in answer to a question, stated the Survey provides information to persons, agencies and consulting hydrologists for private firms. They handled about 1,500 requests last year. They are usually the first agency contacted.

Mel Gray, Division of Environment, Department of Health and Environment, presented a statement.

In answer to questions, Mr. Gray stated laboratory fees do not meet costs now and there are some new requirements which will be expensive. An updating of fee schedules is ready for public hearing and will be coming to the Legislature next session. There will be objections, especially from municipalities. He noted that about one-half of the lab function is not self supporting because it is done to meet the state's needs and interests.

In answer to questions, Mr. Gray noted that Kansas is ahead of the federal government in some areas of water resources planning. Logical plans to meet the needs of Kansas are being developed through Section 208 planning. The first phase of policy decisions and plan implementation should be ready for consideration by the Legislature next session. The federal government is usurping the rights of states in developing natural resources because some states, unlike Kansas, have done little or nothing in this area.

Mr. Gray also noted the federal government has asked states to implement certain programs whether or not they have been demonstrated as needed. The Division of Environment has elected to question cost effectiveness of the requirements before implementing them.

In answer to a question, Mr. Gray stated he feels coordination is going along fairly well. The intent of the present Kansas law seems to be that coordination be a function of the Water Resources Board. However, the Legislature needs to realize coordination is expensive, especially in terms of personnel time. The majority of agencies are reluctant to give up personnel time for coordination because of what they must do to meet their own responsibilities. The Legislature should be the final overriding authority giving quality and quantity factors parallel consideration when making decisions.

Mr. Power stated that although the law is ambiguous, he feels the authority for the Board to serve a coordinating function is there.

Mr. Gray used the Wolf Creek power project as an example pointing out the need for the Legislature to make some overriding policy decisions. He also noted they support the Survey's study of areas that have a potential for hazardous waste storage. Industry has asked to store waste material in Kansas but the current policy of the Division is not to allow injection of toxic material in the ground. Waste materials kept in Kansas are detoxified, refined or stored in a way they do not come into contact with ground or surface water.

The meeting recessed at 12:00 noon for lunch and reconvened at 1:35 p.m.

Guy Gibson, Division of Water Resources, Board of Agriculture, stated that his is an administrative agency. The Division makes day-to-day decisions and sometimes wishes more information were available. They rely extensively on other agencies that have the expertise they do not have. The Survey and Division of Environment provide information and help to the best of their ability. They use the State Water Plan as a check for their activities and decisions. There are differences of opinion among the agencies but the decisions arrived at are in the best interest of Kansas.

In answer to a question, Mr. Gibson stated that in the upcoming budget they have requested one position for administration of the state grant funds for rural water districts.

Mr. Gibson, in answer to questions, stated he felt it was appropriate for them to do a study of computer use for the Division of Water Resources. He noted who the members of the study committee are and the activities of the committee to date. He stated he visualizes presenting a proposal to the Legislature indicating what is necessary to have, what would be desirable and what would be icing on the cake.

Mr. Gibson, in answer to a question, stated he feels coordination between agencies is fairly good at the present time but it could be improved with additional meetings. Meetings take time but from an administrative point of view it is time well spent. Coordination with groundwater management districts through the committee that has been formed with a representative from each district is functioning.

Speaking to the issue of rules and regulations, Mr. Gibson stated the groundwater management districts are developing their rules and regulations. There has been some conflict over the defining of words. Mr. Gibson stated that he feels very strongly that some definitions should be common to all districts. Districts have wanted to expand on the definition of words defined by the Legislature. He explained that the Board's attorney had informed him that his only statutory authority is to review these rules and regulations to determine if they are in conflict with state law or state rules and regulations and to make suggestions.

Rules and regulations for the Division are developed and are ready for final approval by the Department of Administration and then will come to the Legislature. Rules and regulations are being developed for the implementation of S.B. 4.

In answer to a question, Mr. Gibson stated the Division's staff has increased by nine positions but they are not all filled. There are some problems finding qualified people through civil service at the present time.

Mr. Gibson, in answer to questions, stated he acts last on permits for big projects. There may be a need for him to be more explicit with other agencies about comments and input on proposed projects. The meetings initiated by Mr. Power will help. He noted examples of cooperation with other agencies and with groundwater management districts. Some problems he noted were: the possible need for additional authority in handling situations involving other states, i.e., water rights to water flowing across state lines; requirements for the type of water used by oil companies; whether certain laws are to be enforced by his office or by local entities?

Following Mr. Gibson's statement, the Committee considered action on Proposal No. 58. It was decided that no action would be taken until the September meeting.

Staff was directed to invite an operator and an oil or gas driller to the next meeting to discuss the possibility of collecting more information about water in conjunction with oil and gas exploration.

Staff was also instructed to invite the manager and president of each groundwater management district to discuss the rules and regulations which they have proposed to the Chief Engineer. The Chief Engineer is also to be asked to go over proposed rules and regulations relating to the water appropriation statutes. Mr. Gibson is also to be asked to give his thoughts as to rules and regulations which may be necessary to implement 1977 S.B. 4.

The meeting was adjourned at 4:20 p.m.

Prepared by Emalene Correll

Approved by Committee on:

Sept. 6, 1977
(Date)

Attachment A

April 22, 1975

ARTICLE 30. WATER WELL CONTRACTORS LICENSE, WATER WELL CONSTRUCTION AND ABANDONMENT

28-30-1. PURPOSE. These rules and regulations are for the purpose of carrying out the objectives of the Kansas Ground Water Exploration and Protection Act as defined in K.S.A. 82a-1201 to 82a-1215, including the licensing and regulation of water well contractors, establishment of minimum standards for the construction, reconstruction, and treatment of water wells and the requirements for the plugging of abandoned holes. After the effective date of the adoption of these rules and regulations, no water well shall be constructed, reconstructed, treated, or abandoned contrary to the provisions of these rules and regulations. (Authorized by K.S.A. 1973 Supp. 82a-1202 and 82a-1205).

28-30-2. DEFINITIONS.

(1) "License" means a document issued by the Kansas State Department of Health and Environment to qualified persons making application therefore, authorizing such persons to engage in the business of water well contracting.

(2) "Construction of water wells" means all acts necessary to obtaining ground water by any method, for any use including, without limitation, the location of and excavation for the well; but not including prospecting, surveying, or other acts preparatory thereto.

(3) "Secretary" means the Secretary of the Kansas Department of Health and Environment.

(4) "Department" means the Kansas Department of Health and Environment.

(5) "Water Well" means any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed when the intended use of such excavation is for the location, diversion, artificial recharge, or acquisition of ground water.

(6) "Abandoned water well" means a well whose use has been permanently discontinued. Any well shall be deemed abandoned that is in such a state of disrepair that using it for the purpose of obtaining ground water is impracticable.

(7) "Water well contractor" or "contractor" means any individual, firm, partnership, association, or corporation who shall construct, reconstruct, or treat a water well. The term shall not include: (a) An individual while in the act of constructing a water well on land which is owned by him and is used by him for farming, ranching, or agricultural purposes or at his place of abode, but the well shall be constructed in compliance with prescribed minimum well standards as provided in these rules and regulations; (b) An individual who preforms labor or services for a licensed water well contractor at his direction and under his supervision.

(8) "Aquifer" means an underground formation that contains and is capable of transmitting ground water.

(9) "Confined Aquifer" is an aquifer overlain and underlain by impermeable layers. Ground water in a confined aquifer is under pressure greater than atmospheric pressure and will rise in a well above the point at which it is first encountered.

(10) "Unconfined Aquifer" is an aquifer containing free ground water; that is, the ground water is at atmospheric pressure. The upper surface of an unconfined aquifer is the water table.

(11) "Domestic uses" means the use of water by any person or by a family unit or household for household purposes, or for the watering of livestock, poultry, farm and domestic animals used in operating a farm, and for the irrigation of lands not exceeding a total of one acre in area for the growing of gardens, orchards and lawns.

(12) "Public water-supply well" means a well that is used to provide water for cities, rural water districts, water districts, and trailer courts.

(13) "Ground water" means that part of the subsurface water which is in the zone of saturation.

(14) "Grout" means concrete, neat cement, or other material approved by the Department used to create a permanent water tight joint between the casing and the undisturbed formation surrounding the casing or between two strings of casing.

(15) "Pitless well adapter or unit" means an assembly of parts which will permit water to pass through the wall of the casing or extension thereof and prevent entrance of contaminants.

(16) "Test hole" means any excavation that is constructed for the purpose of determining the geologic and hydrologic characteristics of underground formations.

Atch. A

(17) All other words used herein shall be given their usual customary and accepted meaning and all words of a technical nature or peculiar to the water well industry shall be given that meaning which is generally accepted in said industry. (Authorized by K.S.A. 1973 Supp. 82a-1203 and 82a-1205).

28-30-3. LICENSING.

(1) License Requirements. It shall be unlawful for any water well contractor to construct, reconstruct, or treat a water well after January 1, 1975, unless such water well contractor has a valid and current license issued by the Kansas Department of Health and Environment.

(2) Eligibility. To be eligible for a water well contractor's license an applicant must (a) have been engaged in the occupation of water well contracting in Kansas on July 1, 1973 or (b) the applicant must have passed an examination conducted by the Department or (c) if a non-resident, he must meet the conditions contained in the subsection pertaining to reciprocity.

(3) Application and Fees. (a) Applications for a water well contractor's license must be filed with the Department on forms furnished by the Department. Each application must be accompanied by an application fee of ten dollars ($10.00). (b) Those contractors eligible under 2 (a) above must file application by July 1, 1974. (c) Before issuance of a water well contractor's license, each contractor must pay a fee of twenty-five dollars ($25.00) plus a fee of twenty-five dollars ($25.00) for each drill rig operated by or for him. These fees shall accompany the application and shall be by bank draft, check or money order payable to the Kansas Department of Health and Environment - Water Well Licensure. (d) Application fees will be retained by the Department whether a license is issued or denied. If denied, the license fee or fees will be refunded.

(4) Bonding Requirements. Each licensed resident or non-resident water well contractor shall file with the Department a surety bond in the amount of $5,000 furnished by a corporate surety company authorized to do business in the State of Kansas conditioned upon the accuracy of representations made by the water well contractor in his application for license, and compliance with all standards, rules and regulations of the board, and the provisions of the Kansas Ground Water Exploration and Protection Act.

(5) Reciprocity. The Department, upon receiving an application and the payment of the required fees and the furnishing of a bond as required in this section, may issue a license to any non-resident who holds a valid license from another state provided that the applicant's qualifications meet the minimum requirements of K.S.A. 82a-1201 to 82a-1215. Non-resident fees for the contractors license shall be equal to the fee charged for a similar non-resident license by the state in which the applicant is a resident, but it shall not be less than twenty-five ($25.00). The application fee and drill rig license fee will be the same as the Kansas resident fees.

(6) Failure to Pass Examination. Failure of an applicant to pass the examination for water well contractor's license as required under 2 (b) of this section, shall disqualify him from making further application for a period of six (6) months.

(7) Renewal of License. Water well contractors' and drill rig licenses shall expire on June 30 of each year. They may be renewed for the following year by (a) submitting an application for renewal to the Department at least thirty (30) days in advance; (b) payment of the annual license fee of twenty-five dollars ($25.00) plus the annual fee of twenty-five dollars ($25.00) for each drill rig operated by or for him and (c) by furnishing the necessary bond as required under subsection four (4) of this section.

(8) License Number. Each drill rig operated by or for a licensed water well contractor shall have prominently displayed thereon the drill rig license number as assigned by the Department in letters at least two inches in height. Decals, paint, or other permanent marking materials may be used. (Authorized by K.S.A. 1973 Supp. 82a-1205, 82a-1206, 82a-1207, 82a-1208 and 82a-1209).

28-30-4. GENERAL OPERATING REQUIREMENTS.

(1) Work Reports. Within thirty (30) days after construction or reconstruction of a water well, the contractor shall submit a report of such work to the Kansas Department of Health and Environment and to the landowner on the well record form (WWC-5) provided by the Department. He shall report to the Department and to the landowner any polluted or other non-compliant conditions which he was able to correct and/or the conditions which he was unable to correct. He shall also report to the Department the plugging of any abandoned well giving the location, landowner and method of plugging.

(2) Artificial Recharge and Disposal. The construction of artificial recharge wells and fresh-water disposal wells must comply with K.S.A. Chapter 82a, Articles 1201 to 1215 and with all other applicable rules and regulations of the Department.

(3) Well Tests. If a pumping test is run on a well, results of the test shall be reported on the well record form (WWC-5) or a copy of the contractor's record of pumping test shall be attached to the well record form.

(4) Water Samples. Within thirty (30) days after receipt of the work report on a well, the Department may request the contractor to submit a sample of water from the well for chemical analysis. Insofar as is possible, the Department will define in advance areas from which well water samples will be required. (Authorized by K.S.A. 1973 Supp. 82-a-1205 and 82a-1212).

28-30-5. CONSTRUCTION REGULATIONS FOR PUBLIC WATER-SUPPLY AND RESERVOIR SANITATION ZONE WELLS.

All activities involving public water-supply wells and wells located in reservoir sanitation zones shall conform to existing Policies, Rules and Regulations of the Kansas Department of Health and Environment (28-10-100, 28-10-101, and 28-15-1 to 28-15-10) with respect to permits, location, construction, and disinfection (Authorized by K.S.A. 1973 Supp. 82a-1205).

28-30-6. CONSTRUCTION REGULATIONS FOR ALL WELLS NOT INCLUDED UNDER SECTION 28-30-5.

(1) The location of wells shall include utilization of every reasonable protection available to promote sanitary conditions; i.e. topography, drainage, and sewage disposal.

(2) Grouting. (a) The top ten (10) feet of the well shall be sealed by grouting the annular space between the casing or pipe in a driven well and the well bore before the well is put into use. Where a pitless well adapter or unit is being installed, the grouting shall start below the junction of the pitless well adapter or unit where it attaches to the well casing and shall countinue to at least ten (10) feet below this junction. (b) To facilitate grouting, the upper ten (10) feet of the well shall be drilled to a minimum diameter at least three (3) inches greater than the outside diameter of the well casing. (c) A neat cement grout mixture shall consist of one 94-pound bag of Portland cement to five to six gallons of clean water.

(3) Where ground water is encountered at a depth less than the minimum grouting requirement, the grouting requirement may be modified to meet local conditions as approved by the Department.

(4) Confined waters shall be separated from each other and from unconfined waters encountered in the same hole by grouting with cement, concrete, or other approved materials in areas designated by the Department.

(5) The well casing shall terminate not less than one (1) foot above ground surface and shall be sealed so as to prevent the entrance of polluting material. In the construction of a well to be used solely for the irrigation of land in the growing of crops, the well casing may terminate below ground surface in a well pit to facilitate the installation of a centrifugal or similar type pump.

(6) Well vents shall be used and terminate not less than one (1) foot above ground surface and shall be screened with not less than 16-mesh brass, bronze, copper screen or other screen materials approved by the Department and turned down in a full 180° return bend so as to prevent the entrance of contaminating materials.

(7) Prior to termination of a well construction job, the well must be cleaned of mud, drill cuttings and other foreign matter so as to make it suitable for pump installations.

(8) All domestic, industrial and other wells producing water for human consumption or food processing shall have durable water-tight casing from the surface of the ground to the top of the producing zone of the aquifer. In no event shall said water-tight casing extend less than 10 feet below the ground level. Exceptions to either of the above may be granted by the Department if warranted by local conditions. The casing shall be clean and serviceable and of a type to guarantee reasonable life so as to insure adequate protection against failure. The well casing shall be fabricated of wrought iron, steel, NSF approved polyvinyl chloride potable water plastic well casing or other NSF approved potable water plastic pipe or casing and shall comply with the minimum wall thickness given in Table 1, or other materials approved by the Department. A concrete slab or pump house floor shall be constructed of reinforced concrete around the top of the casing at least four (4) feet square, four (4) inches thick and sloped away from the casing. Where a pitless well adapter or unit has been used in the construction of a well the concrete slab may be placed below the pitless well adapter or unit and casing junction and back filled with natural earth materials and sloped away from the casing at ground surface or the concrete slab may be placed at the ground surface with natural earth materials placed between the concrete slab and the pitless well adapter or unit. A positive seal shall be made between the casing and the concrete slab.

(9) All wells when unattended during construction or repair, or used as observation wells, shall be securely covered.

(10) Prior to initiation of use all wells producing water for human consumption or food processing, must be disinfected according to Section 28-30-10.

(11) The top of the casing shall be sealed to prevent the entrance of contaminating material.

(12) All water bearing zones that are known or suspected to contain polluted water shall be adequately cased or sealed off to prevent pollution of either overlying or underlying fresh-water zones.

(13) No toxic materials shall be used in the construction, repair, or treatment of a well unless such materials are thoroughly flushed from the well prior to use. (Authorized by K.S.A. 1973 Supp. 82a-1205).

28-30-7. ABANDONMENT REGULATIONS.

(1) Wells Penetrating Unconfined Aquifers. A well that formerly produced from an unconfined aquifer shall be abandoned by the following procedure. The casing shall be cut off three (3) feet below ground surface, the hole filled with natural earth materials to the top of the water level, and from there with inert materials to within three (3) feet of the surface. The top of the casing shall be sealed with concrete or a steel plate.

(2) Wells Penetrating Confined Aquifers. Wells completed in confined and unconfined aquifers or in confined aquifers only shall be abandoned by cutting off the casing three (3) feet below land surface; plugging with concrete, neat cement or other material approved by the Department at the first impervious strata above each aquifer and cement grouted from a point three (3) feet below the surface for a distance of at least ten (10) feet. Natural earth materials may be used between plugs.

(3) Any abandoned well must be plugged according to subsection (1) and (2) of this section.

(4) Cased test holes shall be plugged by the water well contractor within three (3) days after the completion of and testing thereof with natural earth materials, neat cement, or concrete from bottom to top; provided, however, that test holes penetrating two or more aquifers shall be cement grouted from bottom to top or plugged in accordance with subsection (2) of this section. Uncased test holes shall be plugged in the same manner but must be plugged before the job is terminated. (Authorized by K.S.A. 1973 Supp. 82a-1205 and 82a-1213).

28-30-8. POLLUTION SOURCES.

It is recognized that permeability, horizontal and vertical distances from contaminants, drawdown characteristics, and other conditions of the aquifer are all factors to be considered in locating a well. Municipal governments or county governments shall be consulted when locating a well and shall be in compliance with their regulations; provided however, in no event shall the location of a well, with respect to contamination, be less than the following minimum standards:

The horizontal distance between the well and the potential source of contamination such as sewer lines, pressure sewer lines, septic tanks, lateral fields, pit privy, seepage pits, fuel or fertilizer storage, feed lots or barn yards shall be fifty (50)' feet or more. When sewer lines are constructed of cast iron or other equally tight materials, the separation distance shall be (10) feet or more. All wells shall be twenty-five (25) feet or more from the nearest property line, allowing public right-of-ways to be counted; provided, that a well used only for irrigation or cooling purposes may be located closer than twenty-five (25) feet to an adjoining property where such adjoining property is served by a sanitary sewer and does not contain a septic tank system, disposal well or other known source of pollution and where the property to be provided with the proposed well is served by both a sanitary sewer and a public water-supply. (Authorized by K.S.A. 82a-1201 and 82a-1205).

28-30-9. APPEALS.

Requests for exception to any of the foregoing rules may be submitted to the Department in writing and shall contain all information relevant to the request. Such requests must specifically set forth why such exception should be considered. The Department may grant exceptions when geologic or hydrologic conditions warrant an exception and when such an exception is in keeping with the purposes of the Kansas Ground Water Exploration and Protection Act. Appeals from the Department's decision may be made to the Secretary, who after due consideration of such appeals may hold with or reverse the Department's decision. (Authorized by K.S.A. 1973 Supp. 82a-1205).

28-30-10. WATER WELL DISINFECTION.

The disinfection of a water well system must be carefully and thoroughly done. Contamination can exist in the well water, on the casing, on the piping, the pumping equipment, on the screen, and in the gravel pack. All of these need to be touched by a water solution containing the disinfectant if contamination is to be eliminated.

(1) Gravel for gravel-packed wells shall be disinfected by immersing the gravel in a chlorine solution containing not less than 200 mg/l (milligrams per liter) of available chlorine before it is placed in the well. (A satisfactory solution may be made by mixing 1/4 pound of high test calcium hypochlorite (70% available chlorine) with 100 gallons of water.) Another acceptable method of disinfecting the gravel is to treat the gravel with a strong chlorine solution (200 mg/l) as it is placed in the well.

(2) Completed wells shall be disinfected by adding sufficient hypochlorite solution to them to produce a concentration of not less than 100 milligrams per liter of available chlorine when mixed with the water in the well. (Corresponds to about 1.5 lbs. of high test calcium hypochlorite per 1,000 gallons of water in the well.) Just prior to setting the pump, the casing and pump column shall be washed down with a 200 mg/l available chlorine solution. (Authorized by K.S.A. 1973 Supp. 82a-1205).

(3) All persons constructing, reconstructing, treating, removing the pump or pump column, replacing a pump, or otherwise performing an activity which has potential for contaminating the water supply shall be responsible for adequate disinfection of the well system and appurtenances thereto. In the case of a household water supply well, the following procedure should be followed in addition to the preceding requirements of 28-30-10.

A hypochlorite solution is recommended for disinfection and can be purchased in 5 1/4% solutions at most local grocery stores. The recommended dosage is one gallon of hypochlorite for each 500 gallons of water in the well. In order to determine how much hypochlorite will be needed for disinfecting a well, it is necessary that the quantity of water in the well be estimated as accurately as is practicable.

When the quantity of hypochlorite required to disinfect the well is less than five gallons, the hypochlorite should be mixed with five gallons of water and the diluted solution poured into the well. When disinfecting a well it is desirable to have the hypochlorite solution throughly mixed with the water in the well. This mixing can be accomplished by use of a rubber or plastic hose. The hose is raised and lowered so that the chlorine solution enters the water at all levels from the top of the water to the bottom. Immediately following the placing of the chlorine solution in the well, the pump should be operated until the water discharging from the pump has a distinct chlorine odor; or if the well is equipped with a pressure pump and connected to a plumbing system, the pump should be operated until a distinct chlorine odor is present in the water coming from all faucets of the plumbing system beginning with faucets nearest the pump. The pump should then be shut off and no water withdrawn from the system for 12 hours, after which time the faucets should be opened and water run to waste until the chlorine odor disappears.

Table I.

MINIMUM WALL THICKNESS FOR WATER WELLS OTHER THAN PUBLIC WATER-SUPPLY AND RESERVOIR SANITATION ZONE WATER WELLS.

A. Steel and Wrought Iron Casing

Depth of Casing in Feet	Nominal Diameter, in Inches									
	4	6	8	10	12	14	16	18	24	30
	Wall Thickness *									
0-100	10	10	10	10	10	10	10	10	7	.219
100-200	10	10	10	10	10	7	7	7	.219	.219
200-400	10	10	10	10	7	7	7	.219	.250	.250
400-600	7	7	7	7	7	7	.219	.250	.312	.312
over 600	7	.219	.219	.219	.219	.219	.250	.375	.375	.375

* Decimal numbers indicate thickness in inches. Whole numbers indicate the United States standard gage (10 gage=.141 inches and 7 gage=.179 inches).

B. NSF Approved Polyvinyl Chloride (PVC) Potable Water Plastic Well Casing or Other NSF Approved Potable Water Plastic Pipe or Casing.

Nominal Diameter, in Inches	Minimum Wall Thickness in Inches
1.5	0.145
2	0.154
2.5	0.203
3	0.216
3.5	0.226
4	0.237
5	0.258
6	0.280
8	0.322

Attachment B

USE TYPEWRITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

1. Location of well:	County	Fraction	Section number	Township number	Range number
		1/4 1/4 1/4		T S	R E/W

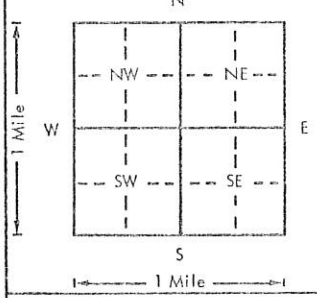
2. Distance and direction from nearest town or city:

Street address of well location if in city:

3. Owner of well:
R.R. or street:
City, state, zip code:

4. Locate with "X" in section below:

Sketch map:



6. Bore hole dia. ____ in. Completion date ____
Well depth ____ ft. ____

7. ___ Cable tool ___ Rotary ___ Driven ___ Dug
___ Hollow rod ___ Jetted ___ Bored ___ Reverse rotary

8. Use: ___ Domestic ___ Public supply ___ Industry
___ Irrigation ___ Air conditioning ___ Stock
___ Lawn ___ Oil field water ___ Other

9. Casing: Material ____ Height: Above or below
Threaded ____ Welded ____ Surface ____ in.
RMP ____ PVC ____ Weight ____ lbs./ft.
Dia. ____ in. to ____ ft. depth Wall Thickness: inches or
Dia. ____ in. to ____ ft. depth gage No. ____

5. Type and color of material	From	To
(Use a second sheet if needed)		

10. Screen: Manufacturer's name ____
Type ____ Dia. ____
Slot/gauze ____ Length ____
Set between ____ ft. and ____ ft.
____ ft. and ____ ft.
Gravel pack? ____ Size range of material ____

11. Static water level: mo./day/yr.
____ ft. below land surface Date ____

12. Pumping level below land surfaces:
____ ft. after ____ hrs. pumping ____ g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.
Estimated maximum yield ____ g.p.m.

13. Water sample submitted: mo./day/yr.
___ Yes ___ No Date ____

14. Well head completion:
___ Pitless adapter ____ Inches above grade

15. Well grouted? ____
With: ___ Neat cement ___ Bentonite ___ Concrete
Depth: From ____ ft. to ____ ft.

16. Nearest source of possible contamination:
ft. ____ Direction ____ Type ____
Well disinfected upon completion? ___ Yes ___ No

17. Pump: ___ Not installed
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of drop pipe ____ ft. capacity ____ g.p.m.
Type:
___ Submersible ___ Turbine
___ Jet ___ Reciprocating
___ Centrifugal ___ Other

18. Elevation:

Topography:
___ Hill
___ Slope
___ Upland
___ Valley

19. Remarks:

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Business name License No.
Address ____
Signed ____ Date ____
Authorized representative

T R E/W Sec 1/4 1/4 1/4

Forward the white, blue and pink copies to the Department of Health and Environment

Form WWC-5

Atch. B

MI-1023

Attachment C

USE TYPEWRITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

1. Location of well:	County	Fraction	Section number	Township number	Range number
		1/4 1/4 1/4		T S	R E/W

2. Distance and direction from nearest town or city:

Street address of well location if in city:

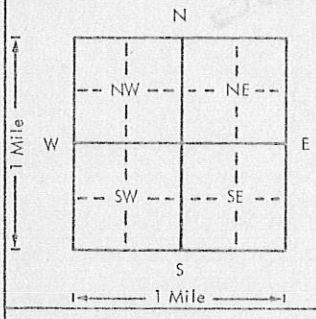
3. Owner of well:

R.R. or street:

City, state, zip code:

4. Locate with "X" in section below:

Sketch map:



6. Bore hole dia. _____ in. Completion date _____
Well depth _____ ft. _____

7. ___ Cable tool ___ Rotary ___ Driven ___ Dug
___ Hollow rod ___ Jetted ___ Bored ___ Reverse rotary

8. Use: ___ Domestic ___ Public supply ___ Industry
___ Irrigation ___ Air conditioning ___ Stock
___ Lawn ___ Oil field water ___ Other

9. Casing: Material _____ Height: Above or below
Threaded _____ Welded _____ Surface _____ in.
RMP _____ PVC _____ Weight _____ lbs./ft.
Dia. ____ in. to ____ ft. depth Wall Thickness: inches or
Dia. ____ in. to ____ ft. depth gage No. _____

5. Type and color of material	From	To
(Use a second sheet if needed)		

10. Screen: Manufacturer's name _____
Type _____ Dia. _____
Slot/gauze _____ Length _____
Set between _____ ft. and _____ ft.
_____ ft. and _____ ft.
Gravel pack? _____ Size range of material _____

11. Static water level: mo./day/yr.
_____ ft. below land surface Date _____

12. Pumping level below land surfaces:
_____ ft. after _____ hrs. pumping _____ g.p.m.
_____ ft. after _____ hrs. pumping _____ g.p.m.
Estimated maximum yield _____ g.p.m.

13. Water sample submitted: mo./day/yr.
___ Yes ___ No Date _____

14. Well head completion:
___ Pitless adapter _____ Inches above grade

15. Well grouted? _____
With: ____ Neat cement ____ Bentonite ____ Concrete
Depth: From _____ ft. to _____ ft.

16. Nearest source of possible contamination:
ft. _____ Direction _____ Type _____
Well disinfected upon completion? _____ Yes _____ No

17. Pump: ___ Not installed
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of drop pipe _____ ft. capacity _____ g.p.m.
Type:
___ Submersible ___ Turbine
___ Jet ___ Reciprocating
___ Centrifugal ___ Other

T ___ R ___ E/W ___ Sec ___ 1/4 1/4 1/4 ___

18. Elevation:

Topography:
___ Hill
___ Slope
___ Upland
___ Valley

19. Remarks:

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Business name License No.
Address _____
Signed _____ Date _____
Authorized representative

Forward the white, blue and pink copies to the Department of Health and Environment

Form WWC-5

Atch. C

MI-1023

USE WRITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

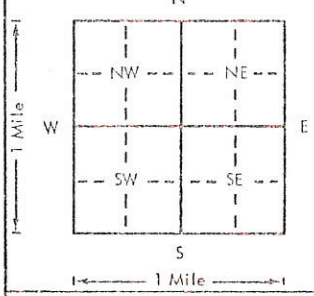
1. Location of well:	County	Fraction	Section number	Township number	Range number
		1/4 1/4 1/4		T S	R E/W

2. Distance and direction from nearest town or city:

Street address of well location if in city:

3. Owner of well:
R.R. or street:
City, state, zip code:

4. Locate with "X" in section below: Sketch map:



5. Type and color of material	From	To
(Use a second sheet if needed)		

6. Bore hole dia. ____ in. Completion date ____
Well depth ____ ft.

7. ___ Cable tool ___ Rotary ___ Driven ___ Dug
___ Hollow rod ___ Jetted ___ Bored ___ Reverse rotary

8. Use: ___ Domestic ___ Public supply ___ Industry
___ Irrigation ___ Air conditioning ___ Stock
___ Lawn ___ Oil field water ___ Other

9. Casing: Material ____ Height: Above or below
Threaded ____ Welded ____ Surface ____ in.
RMP ____ PVC ____ Weight ____ lbs./ft.
Dia. ____ in. to ____ ft. depth Wall Thickness: inches or
Dia. ____ in. to ____ ft. depth gage No. ____

10. Screen: Manufacturer's name ____
Type ____ Dia. ____
Slot/gauze ____ Length ____
Set between ____ ft. and ____ ft.
____ ft. and ____ ft.
Gravel pack? ____ Size range of material ____

11. Static water level: mo./day/yr.
____ ft. below land surface Date ____

12. Pumping level below land surfaces:
____ ft. after ____ hrs. pumping ____ g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.
Estimated maximum yield ____ g.p.m.

13. Water sample submitted: mo./day/yr.
___ Yes ___ No Date ____

14. Well head completion:
___ Pitless adapter ____ Inches above grade

15. Well grouted? ____
With: ____ Neat cement ____ Bentonite ____ Concrete
Depth: From ____ ft. to ____ ft.

16. Nearest source of possible contamination:
ft. ____ Direction ____ Type ____
Well disinfected upon completion? ____ Yes ____ No

17. Pump: ___ Not installed
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of drop pipe ____ ft. capacity ____ g.p.m.
Type:
___ Submersible ___ Turbine
___ Jet ___ Reciprocating
___ Centrifugal ___ Other

T ___ R ___ E/W ___ Sec ___ 1/4 ___ 1/4 ___ 1/4 ___

18. Elevation:

Topography:
___ Hill
___ Slope
___ Upland
___ Valley

19. Remarks:

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Business name License No.
Address ____
Signed ____ Date ____
Authorized representative

Forward the white, blue and pink copies to the Department of Health and Environment

Form WWC-5

MI-1023

USE ITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

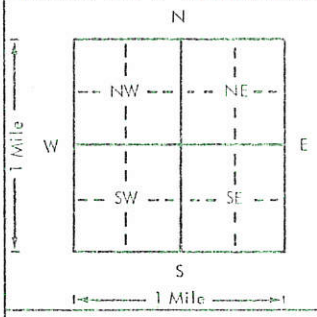
1. Location of well:	County	Fraction 1/4 1/4 1/4	Section number	Township number T S	Range number R E/W

2. Distance and direction from nearest town or city:

Street address of well location if in city:

3. Owner of well:
R.R. or street:
City, state, zip code:

4. Locate with "X" in section below: Sketch map:



5. Type and color of material	From	To
(Use a second sheet if needed)		

6. Bore hole dia. ____ in. Completion date ____
Well depth ____ ft. ____

7. ___ Cable tool ___ Rotary ___ Driven ___ Dug
___ Hollow rod ___ Jetted ___ Bored ___ Reverse rotary

8. Use: ___ Domestic ___ Public supply ___ Industry
___ Irrigation ___ Air conditioning ___ Stock
___ Lawn ___ Oil field water ___ Other

9. Casing: Material ____ Height: Above or below
Threaded ____ Welded ____ Surface ____ in.
RMP ____ PVC ____ Weight ____ lbs./ft.
Dia. ____ in. to ____ ft. depth Wall Thickness: inches or
Dia. ____ in. to ____ ft. depth gage No. ____

10. Screen: Manufacturer's name ____
Type ____ Dia. ____
Slot/gauze ____ Length ____
Set between ____ ft. and ____ ft.
____ ft. and ____ ft.
Gravel pack? ____ Size range of material ____

11. Static water level: mo./day/yr.
____ ft. below land surface Date ____

12. Pumping level below land surfaces:
____ ft. after ____ hrs. pumping ____ g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.
Estimated maximum yield ____ g.p.m.

13. Water sample submitted: mo./day/yr.
___ Yes ___ No Date ____

14. Well head completion:
___ Pitless adapter ____ Inches above grade

15. Well grouted? ____
With: ___ Neat cement ___ Bentonite ___ Concrete
Depth: From ____ ft. to ____ ft.

16. Nearest source of possible contamination:
ft. ____ Direction ____ Type ____
Well disinfected upon completion? ___ Yes ___ No

17. Pump: ___ Not installed
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of drop pipe ____ ft. capacity ____ g.p.m.
Type:
___ Submersible ___ Turbine
___ Jet ___ Reciprocating
___ Centrifugal ___ Other

T ___ R ___ E/W ___ Sec ___ 1/4 ___ 1/4 ___ 1/4

18. Elevation:

Topography:
___ Hill
___ Slope
___ Upland
___ Valley

19. Remarks:

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Business name License No.
Address ____
Signed ____ Date ____
Authorized representative

Forward the white, blue and pink copies to the Department of Health and Environment

Form WWC-5

MI-1023

USE TER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

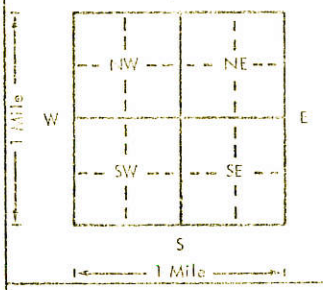
1. Location of well:	County	Fraction 1/4 1/4 1/4	Section number	Township number T S	Range number R E/W

2. Distance and direction from nearest town or city:

Street address of well location if in city:

3. Owner of well:
R.R. or street:
City, state, zip code:

4. Locate with "X" in section below: Sketch map:



6. Bore hole dia. ____ in. Completion date ____
Well depth ____ ft. ____

7. ___ Cable tool ___ Rotary ___ Driven ___ Dug
___ Hollow rod ___ Jetted ___ Bored ___ Reverse rotary

8. Use: ___ Domestic ___ Public supply ___ Industry
___ Irrigation ___ Air conditioning ___ Stock
___ Lawn ___ Oil field water ___ Other

9. Casing: Material ____ Height: Above or below
Threaded ____ Welded ____ Surface ____ in.
RMP ____ PVC ____ Weight ____ lbs./ft.
Dia. ____ in. to ____ ft. depth Wall Thickness: inches or
Dia. ____ in. to ____ ft. depth gage No. ____

5. Type and color of material	From	To
(Use a second sheet if needed)		

10. Screen: Manufacturer's name ____
____
Type ____ Dia. ____
Slot/gauze ____ Length ____
Set between ____ ft. and ____ ft.
____ ft. and ____ ft.
Gravel pack? ____ Size range of material ____

11. Static water level: mo./day/yr.
____ ft. below land surface Date ____

12. Pumping level below land surfaces:
____ ft. after ____ hrs. pumping ____ g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.
Estimated maximum yield ____ g.p.m.

13. Water sample submitted: mo./day/yr.
___ Yes ___ No Date ____

14. Well head completion:
___ Pitless adapter ____ Inches above grade

15. Well grouted? ____
With: ___ Neat cement ___ Bentonite ___ Concrete
Depth: From ____ ft. to ____ ft.

16. Nearest source of possible contamination:
ft. ____ Direction ____ Type ____
Well disinfected upon completion? ___ Yes ___ No

17. Pump: ___ Not installed
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of drop pipe ____ ft. capacity ____ g.p.m.
Type:
___ Submersible ___ Turbine
___ Jet ___ Reciprocating
___ Centrifugal ___ Other

T ___ R ___ E/W
Sec ___
1/4 1/4 1/4

18. Elevation:

Topography:
___ Hill
___ Slope
___ Upland
___ Valley

19. Remarks:

20. Water well contractor's certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Business name License No.
Address ____
Signed ____ Date ____
Authorized representative

Forward the white, blue and pink copies to the Department of Health and Environment

Form WWC-5

MI-1023