

The Data Resources Library at the Kansas Geological Survey

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Data Resources Library, Kansas Geological Survey

Introduction

Two of the most important industries in Kansas are agriculture and petroleum. Agriculture, of course, depends on adequate water supplies (both rainfall and groundwater) for livestock watering and crop irrigation. In addition, the human population of Kansas is increasing, and water needs for human use are increasing proportionately. Petroleum resources in Kansas have been exploited for many decades, and consequently they are becoming increasingly difficult to find. Because natural resources are not evenly distributed, both water-well drilling and petroleum exploration depend on information gleaned from previously drilled wells. Archival records of water-well and petroleum drilling activities in Kansas are stored in the Data Resources Library of the Kansas Geological Survey (KGS), as is other information related to water and petroleum, and they are available for public use. This circular describes the information resources available in the Data Resources Library and how they can be used.

Data Resources Library

In 1975, the Kansas Department of Health and Environment (KDHE) began requiring that records be submitted for every water well drilled in the state of Kansas. These

records are initially submitted to KDHE. KDHE keeps copies for their own use, but the original forms are forwarded to the KGS Data Resources Library, where they are stored and made available to the public. In a similar manner, completion forms and geophysical logs for oil and gas wells are initially submitted to the Kansas Corporation Commission, but subsequently they come to the KGS Data Resources Library, where they are stored permanently. All of these records and other information about Kansas geology and water and petroleum resources — such as drillers' logs, scout cards, strip logs,

and plugged well information — are available to the public at the KGS Data Resources Library (fig. 1).

Water

Water-Well Completion Forms (WWC5 forms) for water wells drilled in Kansas since 1975 are on file in the Data Resources Library (fig. 2). Some drillers' records of earlier wells are also on file. They can be viewed and photocopied in the library itself, or requests for photocopies can be submitted by phone or e-mail. These forms contain information about the well's location, ownership, depth, water levels, yield (in gallons



Figure 1. Data Resources Library at the Kansas Geological Survey.

ACME COMPENSATED DENSITY LOG	
COMPANY	Smith Drilling Company
WELL	1-11 Gould
FIELD	
COUNTY	Logan STATE KANSAS
Location	Other Services:
440' FNL - 440' FWL NE/4	G-GRD-SwN
Sec. 11 Twp. 11S Rge. 32W	
Permanent Datum	GROUND LEVEL Elev. 3036'
Log Measured From	KELLY BUSHING 5 Ft. Above Perm. Datum
Drilling Measured From	KELLY BUSHING Elev.: K.B. 3041'
	D.F. _____
	G.L. 3036'
Date	9-14-83
Run No.	ONE
Type Log.	DENSITY
Depth—Driller	4655'
Depth—Acme	4655'
Bottom Logged Interval	4654'
Top Logged Interval	3500'
Type Fluid in Hole	SALT STARCH
Salinity, PPM Cl	61,000
Density	9.6
Level	FULL
Max. rec. temp., deg. F	124°
Operating Rig time	1 HOUR
Recorded by	J. SMITH
Witnessed by	S. JONES

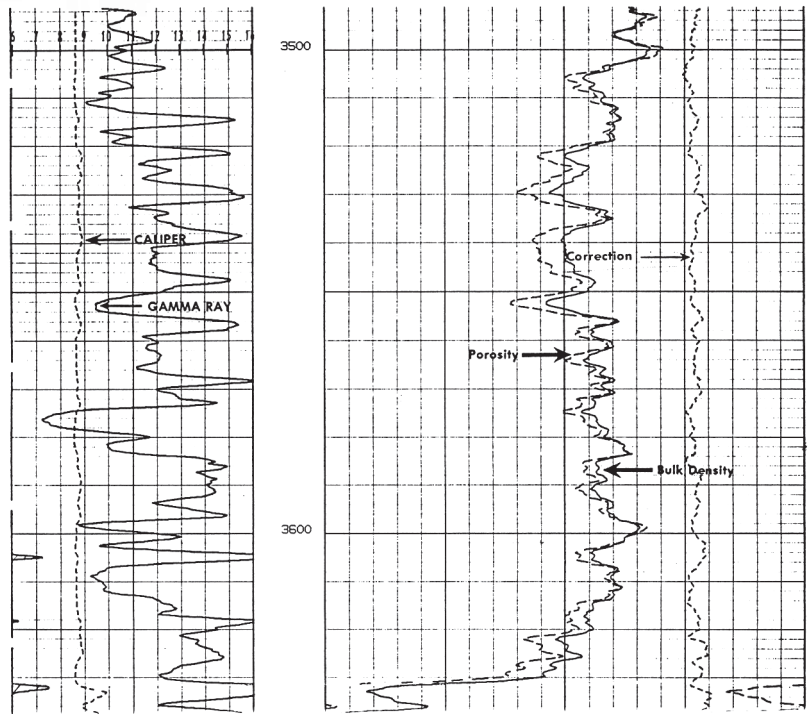


Figure 3. Sample geophysical well log based on actual data from an oil well in Logan County, Kansas. (A) The header lists the well's location and ownership and provides other information about the drilling of the well. K.B. = Kelly Bushing, D.F. = Drill Floor, and G.L. = Ground Level. (B) The curves indicate geophysical and electrical properties of the layers of rocks down the hole. Many older wells, particularly in eastern Kansas, have had no geophysical logs taken, whereas many recent wells may have sets of at least five or more different curves for each well.

STATE:	KANSAS	COUNTY:	STAFFORD	REISSUE	13-23S-12W
FIELD:	WENDELBURG NORTHWEST 1 1/4 MI S BROCK FLD				SE SW SE
OPER:	GENERAL ATLANTIC RES				500 FSL 1700 FEL SEC
WELL:	1 RUSSELL	WELL CLASS:	WFD	ELEV:	1848 KB
API:	15-185-22956	STATUS:	OIL		1840 GR
SPUD:	04/16/94	COMP:	05/21/94		
DTD:	3746	LTD:	FTD: ARBUCKLE	PBTD:	
LOC:	1 1/2 MI NE BEDFORD, KS				
IP:	COMP 5/21/94, IPP EST 32 BO, 50 BWPD PROD ZONE- ARBUCKLE 3734-3746(OPENHOLE) NO CORES, FOUR DSTS (ARBUCKLE DISCOVERY - NEW FIELD)				
LOG TOPS:					
STONE CORRAL	611 1237	B/ KANSAS CITY		3593 -1745	
HEEBNER	3172 -1324	VIOLA		3614 -1766	
DOUGLAS	3206 -1358	SIMPSON		3673 -1825	
BROWN LIME	3314 -1466	ARBUCKLE		3730 -1882	
LANSING	3341 -1493				
TD	3746 -1898				
LOG TYPES:	BHCS, CNDL, DI, DM, ML;				
CSGS:	8 5/8 @ 406 W/225 SX, 5 1/2 @ 3734 W/150 SX; TBG: 2 3/8 @ 3732; DRLG COMP 04/25/94				
(OVER)					
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Figure 4. Example of a scout card for an oil well in Stafford County. These cards contain information about the name, date, location, and ownership of the well, as well as producing zones and formation tops. Additional information is available on the backs of some cards (reproduced with permission from Petroleum Information/Dwights).

of success in water-well drilling and make better judgments about where to locate their well. Estimates can be made about drilling depths, potential yields, and the types of rocks that may be encountered while drilling. Information about general hydrological conditions may also be gleaned from these records. Questions concerning these matters may be addressed to KGS staff, who are available for answering public inquiries. It is helpful if such inquiries are accompanied by legal descriptions of the properties involved (i.e., quarter, section, township, and range).

Anyone interested in Kansas oil and gas may find the records stored at KGS useful. The completion forms, scout cards, and geophysical logs can be used to make inferences about depths from the surface to various formations and intervals, characteristics of those intervals, and indications about the presence, quantity, and recoverability of oil and gas. KGS staff are also available to answer questions concerning oil and gas.

Other geological studies can benefit from the information available in

the Data Resources Library as well. Stratigraphic studies involving regional correlations, hydrological and ecological studies, structural investigations, and geological engineering concerns may be enhanced by using the subsurface data available in these records.

Access

Access to records stored at the KGS Data Resources Library can be obtained by

1. a personal visit to the Library (1930 Constant Ave., Lawrence, KS),
2. a phone call (785-864-3965),
3. an e-mail message (datares@kgs.ku.edu), or
4. by visiting the KGS website (www.kgs.ku.edu) to view or download certain records.

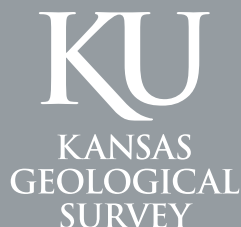
Anyone may use the Library facilities free of charge, but a small fee may be charged for photocopies of records. Publications produced by the Kansas Geological Survey on certain areas of the state or on subjects pertinent to the geological and hydrological resources of the state may be purchased through Publications Sales at the KGS.

Summary

Archival records of water-well and oil and gas well drilling activities stored at the Data Resources Library of the Kansas Geological Survey are easily accessible to the public in paper and electronic form. Other related information also is available. This information may be obtained by visiting or calling the Data Resources Library or by visiting the KGS website. Such information resources can be useful to those considering drilling for water or for oil and gas in Kansas.

References

Baars, D. L., Watney, W. L., Steeples, D., and Brostuen, E. A., 1993, *Petroleum--A primer for Kansas*: Kansas Geological Survey, Educational Series 7, 40 p.



The University of Kansas

The Kansas Geological Survey (KGS) is a research and service division of the University of Kansas that investigates and provides information about the state's natural resources. KGS scientists pursue research related to surface and subsurface geology, energy resources, groundwater, and environmental hazards. They develop innovative tools and techniques, monitor earthquakes and groundwater levels, investigate water-quality concerns, and map the state's surface geology.

The KGS has no regulatory authority and does not take positions on natural resource issues. The main headquarters of the KGS is in Lawrence in the West District of the University of Kansas, and the Kansas Geologic Sample Repository of the KGS is in Wichita.

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