

KANSAS GEOLOGICAL SURVEY OPEN-FILE REPORT 77-11

**REVIEW OF OIL AND GAS WELLS, AND PIPELINES, IN A PART OF
BUTLER COUNTY INCLUDED IN THE PROPOSED EL DORADO
LAKE, ON THE WALNUT RIVER**

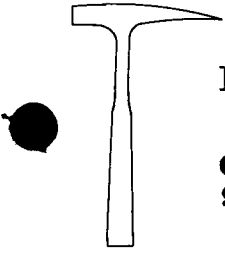
by

M. O. Oros

Disclaimer

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Kansas Geological Survey
1930 Constant Avenue
University of Kansas
Lawrence, KS 66047-3726



KANSAS GEOLOGICAL SURVEY

The University of Kansas
Lawrence, Kansas 66044

Oil and Gas Division
913-864-3690

MEMO TO: Paul L. Hilpman ✓
FROM: Margaret O. Oros, Oil and Gas Division
SUBJECT: Review of oil and gas wells, and pipelines, in a part of Butler County included in the proposed El Dorado Lake, on the Walnut River. Preliminary work has been directed by the U. S. Army Corps of Engineers, Tulsa District, Tulsa, Oklahoma.
DATE: November 9, 1972

Locations of oil wells and dry holes of record, oil fields, and natural gas and products pipelines for which we have information, are shown on the attached De Graff, El Dorado, Pontiac, and Rosalia NW 7½" topographic maps. The maps also show locations of present highways, railroads, cemeteries, and buildings. The area covered includes portions of Townships 24 and 25 South, Ranges 5, 6, and 7 East. The 1350' elevation contour has been outlined to show the areal extent of the proposed lake.

Two lakes already exist in the proposed El Dorado Lake area. These are the present Lake El Dorado, which was created by damming Satchel Creek, section 20, Township 25 South, Range 6 East, and Lake Bluestem, which has a dam on the Bemis Creek, in section 28, Township 25 South, Range 6 East.

OIL WELLS

Records of five holes drilled for oil and gas in the lake area are on file in the Survey's Oil and Gas Division. None of these were completed as producing wells. At least thirty-three others have been drilled near the lake, and a number of dry holes have been drilled in the surrounding area. The De Graff topographic map has an oil well shown at NE SE SW, sec. 10, T. 25S., R. 6E., but no information is on file for that well.

El Dorado Field, discovered in 1915, lies about 2½ miles west of the proposed dam. This multi-pay field had produced 272,881,008 barrels of oil through the year 1970, and about

1.6 million barrels were produced that year. Butler County's cumulative oil production now totals over one-half billion barrels.

Oil fields within the watershed area are:

1) Flint, discovered in 1957, located in sec. 6, T. 24S., R. 6E., with cumulative oil production of about 10,000 barrels from Mississippian rocks, before abandonment.

2) Pontiac oil Field (now abandoned) sec. 7, T. 26S., R. 7E. had production from Mississippian "chat." Production figures are not available.

3) Rosalia oil Field, in T. 25S., R. 7E., was discovered in 1965. Production from "Squirrel" sandstone (Pennsylvanian) totaled 416,000 barrels through 1970.

PIPELINES

1) Cities Service Gas Company has a 20" natural gas pipeline, running from southwest to northeast, across the proposed lake area. Over four miles of this pipeline would be in the affected area.

2) Mobil Pipe Line Company has a 6" products pipeline running from southwest to northeast across the proposed lake area. Almost three miles of this pipeline would be in the affected area.

3) Phillips Pipeline Company has two 8" and one 12" products pipelines running from west to east across the area. About two and one-fourth miles of their three lines would be in the proposed lake area.

4) Williams Brothers Pipe Line Company has 10" and 16" products pipelines running from southwest to northeast across the proposed lake area. About four and one-half miles of the two pipelines are in the proposed lake area.

RAILROADS

Atchison, Topeka, and Santa Fe Railroad Company has about 18 miles of railroad lines, running southwest-northeast across the proposed lake area.

HIGHWAYS

Kansas Turnpike has about 6 miles of highway in the northern part of the lake area. About 10 miles of Kansas Highway No. 13 crosses the area, and a number of secondary roads would also be affected.

CEMETERIES

Two cemeteries are within the proposed area. They are the Chelsea Cemetery in sec. 4, T. 25S., R. 6E., and Foster Cemetery in sec. 29, T. 25S., R. 6E.

CONCLUSIONS

The El Dorado and Rosalia oil fields are indicative of the large amount of oil that can be produced in Butler County, if subsurface conditions are favorable. At least two types of structures have trapped oil in this area -- 1) anticlines, as represented by the El Dorado oil field, and 2) off-shore bars, represented in this area by the Rosalia oil field. The off-shore bars (shoestring sands) are difficult to find, as they are sinuous and narrow.

Oil and brine pollution could be a problem in the area.

Four pipeline companies have about 14 miles of right-of-way in this area. Two of the companies have only one line at the present time, but the other two are operating two and three pipelines each.

Right-of-way purchases around the lake, cost of new pipe, and the expense of laying the pipe, would be considerable.

The Atchison, Topeka, and Santa Fe Railroad Company would need to relocate about 18 miles of its lines. Six miles of the Kansas Turnpike, 10 miles of Kansas Highway No. 13, and many miles of secondary roads would be affected.

REFERENCES

Bulletin 7, Geology of the El Dorado Oil and Gas Field, Butler County, Kansas," by A. E. Fath.

Bulletin 23, "Origin of the Shoestring Sands of Greenwood and Butler Counties, Kansas," by N. Wood Bass.

Page 4 - El Dorado Dam and Reservoir

Map M-2, Map of oil and gas pipelines and industries in
Kansas," by Margaret O. Oros.

AAPG Vol. II, Structure of Typical Oil Fields, "El Dorado
Field, Butler County, Kansas," by John R. Reeves.

November 22, 1972

Mr. Timothy Atkeson
Council on Environmental Quality
Executive Office of the President
772 Jackson Place, N.W.
Washington, D.C. 20506

Dear Mr. Atkeson:

The enclosed materials are sent in regard to the final revised Environmental Statement for Eldorado Lake, Walnut River, Kansas. These comments are submitted at this time for two reasons:

1. Our agency did not have the opportunity to review or comment on the draft statement.
2. Data used in the evaluation of oil and gas developments are approximately three years old and we felt it might be of assistance to the project if we reported on activity in the interim.

I trust that this information may be of value to you in this matter and that you will not hesitate to call on us if we can be of further aid.

Very truly yours,

Paul L. Hilpman
Chief

PLH:kh

Enc.

cc: W. E. Read

November 29, 1972

Mr. Buell Atkins
c/o Environmental Resources Division
U.S. Army Corps of Engineers
Tulsa District
P.O. Box 61
Tulsa, Oklahoma

Dear Mr. Atkins:

In response to your phone call, I am sending (enclosed) our duplicate copy of materials sent to the Council on Environmental Quality regarding Eldorado Lake, Walnut River, Kansas. In copying these materials I trust your staff will remain cognizant of the fact that these represent our only record of the correspondence in question,

Very truly yours,

Paul L. Hilpman
Chief

PLH/sgb

MEMO TO: All Section Chiefs

FROM: Paul L. Hilpman

SUBJECT: Pre-Construction Planning Study

file
I've attached, for your cursory review, preliminary plans of flood protection projects in the vicinity of El Dorado (Butler County) and Winfield (Cowley County). Because planning is in a very early stage, little information is available and critical evaluation is not possible at this time.

I seek your reaction to the projects only if you or your staff are aware of any obvious difficulties that would be faced in implementing the proposed plans. It is assumed that, we will be asked to evaluate the environmental impact statement in greater detail at a later date. Your assistance in rapidly circulating these plans will be appreciated.

MEMO TO: Halepaska, Ron Hardy, Oros, and Wilson
FROM: Paul L. Hilpman
SUBJECT: Environmental Statement, Eldorado Lake, Walnut
River, Kansas
DATE: October 9, 1972

Attached is a condensation I have prepared of the subject project. It should be sufficient for evaluation in your specific area. The original report is a three volume work of approximately 400 pages and I deem inadvisable to circulate all the extraneous material. Should any of you desire to look at the detailed report, please contact me.

As usual, data regarding oil, gas, and mineral resources have been supplied by the Bureau of Mines and are sadly out of date. In addition, the report contains very sketchy geologic data and no mention of special engineering properties associated with Permian strata of the project area. I think particular attention needs to be focused on oil, gas, and dry holes in the inundated area, mining and quarry sites, and leakage problems associated with the Sumner and Chase Groups.

I would appreciate having your comments and supporting information in ten days time, so I can submit a composite evaluation. Should any of you elect to correspond directly, your response should be sent to Mr. Timothy Atkeson, Council on Environmental Quality, Executive Office of the President, 772 Jackson Place, N.W., Washington, D.C. 20506, (with carbons to the Tulsa District of the Army Corps of Engineers and Mr. John N. Dewey, Kansas Water Resources Board).

TO: PAUL HILPMAN

FROM: WATER RESOURCES

No comment, most problems relate to O&G and Engineering.

KANSAS GEOLOGICAL SURVEY
Mineral Resources Section

The University of Kansas
Lawrence, Kansas 66044
913-864-3996

Memo to: Paul Hilpman

From: Larry Brady

L. Brady

Date: October 19, 1972

Subject: Mineral resources in the proposed Eldorado Lake area

In reviewing our mineral resources records of existing mineral production in the proposed Eldorado Lake area, the following was determined:

- (1) No present quarry operations exist in the proposed site.
- (2) Two abandoned quarry sites present in the Fort Riley Limestone Member of the Barnston Limestone. These two quarry sites are located in SW $\frac{1}{4}$, Sec. 5, T.25, R.6 (8 acres) and NW $\frac{1}{4}$, Sec. 29, T.25, R.6 (4 acres).

From a materials standpoint I see no objection to construction of the dam. The 1:1.12 cost benefit ratio seems a little low to me.

I assume Margaret is checking on the oil and gas wells in the area. All the borings on my map indicate dry holes in the reservoir site area.

KANSAS WATER RESOURCES BOARD
4th Floor, Mills Building
109 W. 9th
Topeka, Kansas 66612

October 3, 1972 .

Paul H. H. H. H.



Gentlemen:

Attached for your information is a copy of the final revised environmental statement for El Dorado Lake, Walnut River, Kansas, which has been furnished by the Corps of Engineers. This statement was filed with the President's Council on Environmental Quality on September 21, 1972. Any comments which you would like to make on the statement should be addressed to Mr. Timothy Atkeson, Council on Environmental Quality, Executive Office of the President, 772 Jackson Place, N.W., Washington, D. C. 20506, with a copy to the Corps' office in Tulsa.

Very truly yours,

John M. Dewey
John M. Dewey
Assistant Chief Engineer

JMD:ss

Attachment

Distribution:

Mel Gray
William Hambleton ✓
Richard M. Davis
Floyd Smith
Harold G. Gallagher

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Earle Wilkinson
Bob Bohannon

Guy Gibson
Richard Wettersten
Frank Cross
Nyle Miller

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