

CORE ANALYSIS REPORT

FOR

CITIES SERVICE OIL COMPANY  
DAVIS E NO. 1 WELL  
DECATUR COUNTY, KANSAS

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

October 14, 1976

REPLY TO  
6 N. W. 42ND ST.  
OKLAHOMA CITY, OKLA.  
73118

Cities Service Oil Company  
3545 N. W. 58th Street  
Oklahoma City, Oklahoma 73112

Attn: Mr. Donald G. Wright

Subject: Core Analysis Data  
Davis E No. 1 Well  
Decatur County, Kansas  
CLI File 3402-8761

Gentlemen:

Cores taken in the subject well in the Kansas City-Lansing formation were received at the Oklahoma City laboratory for special analytical testing described on the procedure page.

The accompanying coregraph presents the Surface Core-Gamma Log and binomially averaged core analysis data in graphical form to aid correlation with downhole electrical surveys.

Tabular presentation of the measured physical properties may be found on pages one and two of this report.

Data averages reflecting zone changes are presented on page three along with certain interpretive comments of interest.

Large diameter cylindrical plugs have been prepared for requested electrical resistivity measurements. The results of these additional laboratory tests will be issued in a separate report.

It is a pleasure to have this opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.



Dale E. Boyle  
District Manager

DEB:VJP:es

7 cc - Addressee

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

Cities Service Oil Company  
- Davis E No. 1 Well  
CLI File 3402-8761

Procedure Page

Handling and Analytical Procedures

Diamond coring equipment and water base mud were used to obtain 3.5 inch diameter cores between 3976 to 4002 feet and 4074 to 4098 feet.

The cores were preserved at the well site in plastic bags by CLI personnel.

The cores were transported to Oklahoma City by CLI personnel.

A Core-Gamma Log was recorded for downhole E-Log correlation.

Core analysis was made in the intervals requested on right cylinder full diameter samples.

Fluid removal was accomplished using vacuum retorts.

Porosity was determined by density balance method.

Air permeability in two horizontal directions and vertical direction measured without Klinkenberg correction.

Cores were slabbed for future geological study.

Slab segments have been delivered to Cities Service Oil Company in Oklahoma City.

Cores will be shipped to the Cities Service Research Laboratory in Tulsa, Oklahoma.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
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CITIES SERVICE OIL COMPANY  
 JAVIS E NO. 1 WELL  
 WILDCAT  
 DECATUR COUNTY, KANSAS

DATE: 9/27/76  
 FORMATION: KANSAS CITY-LANSING  
 DRLG. FLUID: WATER BASE MUD  
 LOCATION: C NE SE SEC. 25-5S-30W

FILE NO: 3402-8761  
 ENGINEER: PUGH  
 ELEVATION: 2841' KB

\* INDICATES PLUG PERM

SMP. NO.	DEPTH	PERM. TO AIR MD.			POROSITY PER CENT	FLUID SATS.		GR. DEN.	DESCRIPTION
		MAXIMUM	90 DEG	VERT.		OIL	WTR.		
WHOLE CORE ANALYSIS									
	3976.0-77.0								SH
1	3977.0-78.0	78.0	0.2	0.4	4.8	30.4	41.9	2.71	LM, OOL, FISS, VF
2	3978.0-79.0	2.8	0.1	<0.1	5.3	31.4	35.2	2.71	LM, OOL, PP VGS, FISS
3	3979.0-80.0	1.4	0.1	<0.1	6.9	25.1	42.8	2.72	LM, OOL, PP VGS, SL/SH
4	3980.0-81.0	0.1	0.1	<0.1	5.9	24.7	50.6	2.72	LM, OOL, PP VGS, FISS
5	3981.0-82.0	2.4	0.4	<0.1	7.7	17.9	53.7	2.71	LM, OOL, STY, FISS
6	3982.0-83.0	7.0	0.3	<0.1	7.6	10.5	57.4	2.71	LM, OOL, VGY, STY, VF
7	3983.0-84.0	0.1	0.1	<0.1	5.2	0.0	69.1	2.72	LM, OOL, PP VGS, STY
8	3984.0-85.0	0.1	0.1	<0.1	4.5	0.0	72.4	2.75	LM, STY, PYR, PP VGS
9	3985.0-86.0	<0.1	<0.1	<0.1	4.4	0.0	76.5	2.72	LM, SHY
10	3986.0-87.0	0.2	0.2	<0.1	11.5	0.0	80.3	2.78	LM, SHY, PYR, VF
11	3987.0-88.0	0.1	0.1	<0.1	8.3	2.4	76.6	2.74	LM, PYR, PP VGS
12	3988.0-89.0	1.5	0.1	0.1	8.8	2.5	75.1	2.74	LM, PYR, FISS, VF
13	3989.0-90.0	0.1	0.1	<0.1	7.1	0.0	79.5	2.74	LM, PYR, PP VGS
14	3990.0-91.0	*	<0.1	<0.1	2.8	0.0	80.3	2.74	LM, SHY, PYR, STY, VF
15	3991.0-92.0	0.8	0.1	<0.1	2.1	1.9	73.2	2.72	LM, STY, FISS, VF
16	3992.0-93.0	1306.0	0.1	1191.0	4.0	2.2	54.3	2.72	LM, STY, PP VGS, VF
17	3993.0-94.0	*	<0.1	<0.1	2.4	0.0	77.8	2.72	LM, STY, VF
18	3994.0-95.0	514.0	<0.1	6.6	3.9	0.0	70.8	2.72	LM, V/SHY, VF
19	3995.0-96.0	120.0	<0.1	93.0	3.6	1.5	58.3	2.72	LM, V/SHY, VF
20	3996.0-97.0	1150.0	<0.1	1046.0	4.3	1.6	59.8	2.72	LM, V/SHY, VF
21	3997.0-98.0	*	<0.1	<0.1	3.8	3.6	52.4	2.72	LM, STY, VF
22	3998.0-99.0	0.5	0.1	<0.1	5.5	3.5	46.3	2.72	LM, VGY, FISS, STY
23	3999.0-00.0	3.5	0.6	<0.1	4.3	1.8	59.3	2.71	LM, VGY, FISS, STY, VF
24	4000.0-01.0	46.0	14.0	<0.1	4.6	1.9	56.6	2.74	LM, DOL, CHTY, FISS
25	4001.0-02.0	1453.0	0.5	609.0	1.6	6.4	64.3	2.72	LM, STY, FISS, VF

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

CITIES SERVICE OIL COMPANY  
 DAVIS E NO. 1 WELL

DATE: 9/27/76  
 FORMATION: KANSAS CITY-LANSING

FILE NO: 3402-8761  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. TO AIR MD.			POROSITY PER CENT	FLUID SATS.		GR. DEN.	DESCRIPTION
		MAXIMUM	90 DEG	VERT.		OIL	WTR.		
	4002.0-74.0	DRILLED							
	4074.0-78.0							SH, LMY	
	4078.0-93.0							LM, SHY	
	4093.0-98.0							SH, LMY	

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**DALLAS, TEXAS**

CORE SUMMARY

COMPANY CITIES SERVICE OIL COMPANY  
WELL DAVIS E NO. 1  
PAGE 3 OF 3 FILE 3402-8761

<u>DEPTH</u>	<u>PERMEABILITY</u>			<u>POROSITY</u>	<u>SATURATION</u>		<u>GRAIN DENSITY</u>	<u>PRODUCTIVITY</u>	<u>COMMENTS</u>
	<u>MAXIMUM</u>	<u>90 DEGREES</u>	<u>VERTICAL</u>		<u>OIL</u>	<u>WATER</u>			
3977-83	15	0.2	0.1	6.4	23.3	46.9	2.71	Oil	Low porosity
3983-86	0.1	0.1	<0.1	4.7	0.0	72.7	2.73	Water	Low matrix K & $\emptyset$
3986-87	0.2	0.2	<0.1	11.5	0.0	80.3	2.78	Water	
3987-90	0.6	0.1	<0.1	8.1	1.6	77.1	2.74	Water	
3990-94	653	0.1	298	2.8	1.0	71.4	2.73	Water	Low matrix K & $\emptyset$ , perm (vf)
3994-02	470	1.9	219	4.0	2.5	58.5	2.72	Water	Low matrix K & $\emptyset$ , perm (vf, fiss)

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