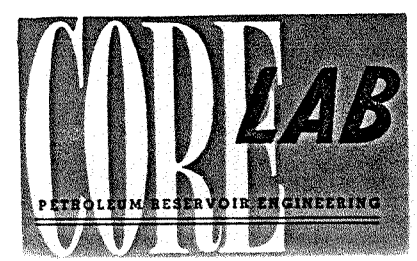


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**CORE ANALYSIS REPORT  
FOR  
PENNZOIL COMPANY**

**L. S. GOFF W-15 NO. WELL  
SPENCER FIELD  
ROANE COUNTY, WEST VIRGINIA**



CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

September 25, 1964

Pennzoil Company  
Union Trust Building  
Parkersburg, West Virginia

Attention: Mr. P. J. Burns

Subject: Core Analysis  
L. S. Goff No. W-15 Well  
Spencer Field  
Roane County, West Virginia  
Our File Number: SCAL-64281

Gentlemen:

Recorded in tabular and graphical form on the attached Coregraph are the results of core analysis obtained on samples of Big Injun sand from the subject well.

Two permeable samples were analyzed in the interval 1949.5 through 1953.5 feet. The measured fluid saturations obtained on these samples indicate the possibility of gas production. The more porous samples analyzed between 1958.5 and 1987.5 feet yielded residual fluid saturations indicating the zone to possibly be oil productive. However, the measured permeabilities are extremely low and it is not believed that a successful well completion could be made in this interval even with successful well stimulation techniques. Below 1987.5 feet the formation is interpreted to be water productive.

The sand analyzed in this well appears to be high in clay content and it is possible that dehydration of the clays has caused the measured porosity values to be too high. Additional testing is currently underway on samples from this zone in an attempt to obtain a more accurate evaluation of the porosity and to provide a guide for future methods of analysis of this sand.

We are pleased to be of service.

Very truly yours,

Core Laboratories, Inc.

*W. R. Aufricht* (1964)

W. R. Aufricht, Supervisor  
Special Core Analysis Laboratory

WRA:mb  
10 cc. - Addressee



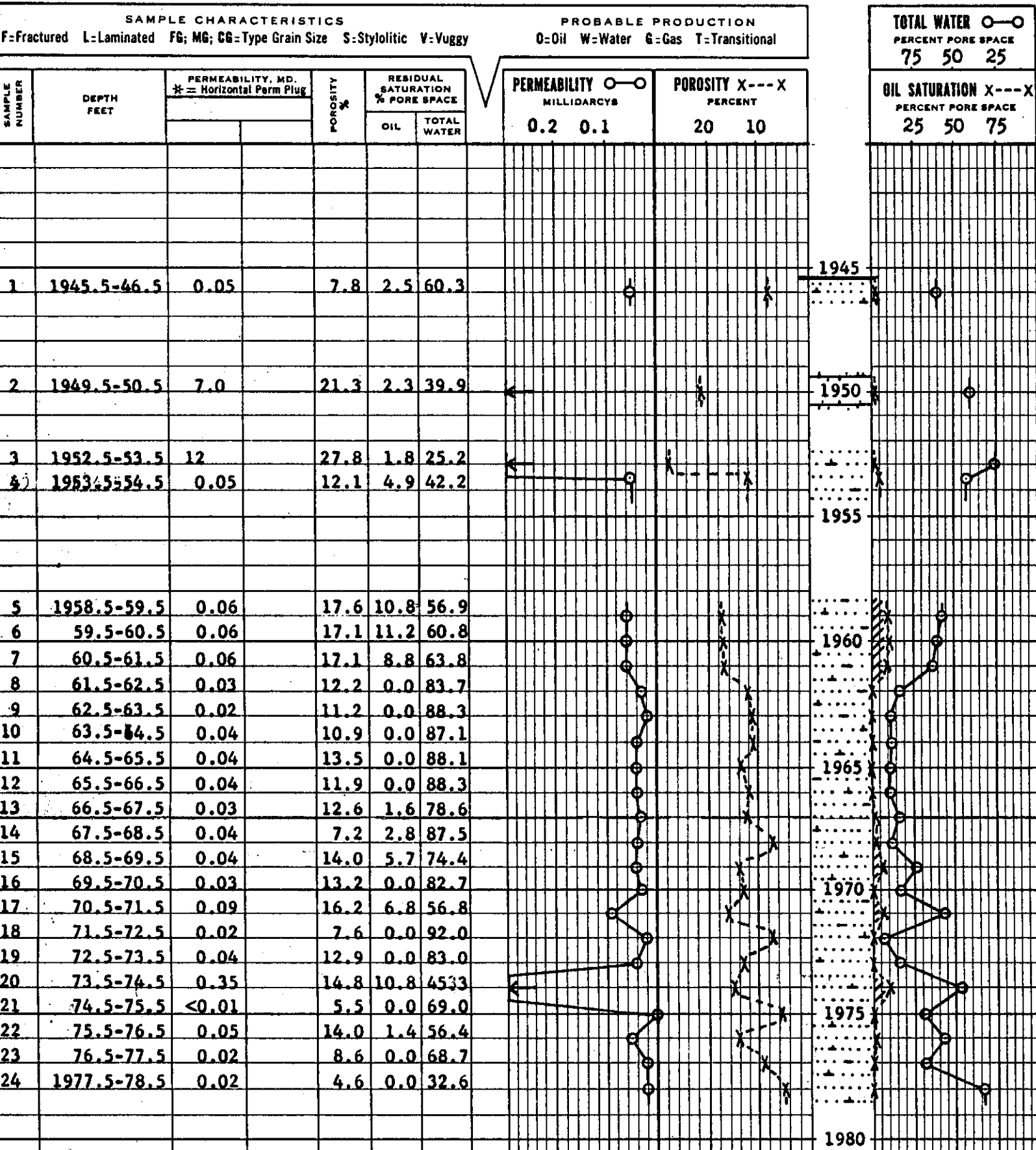
Roa 1101

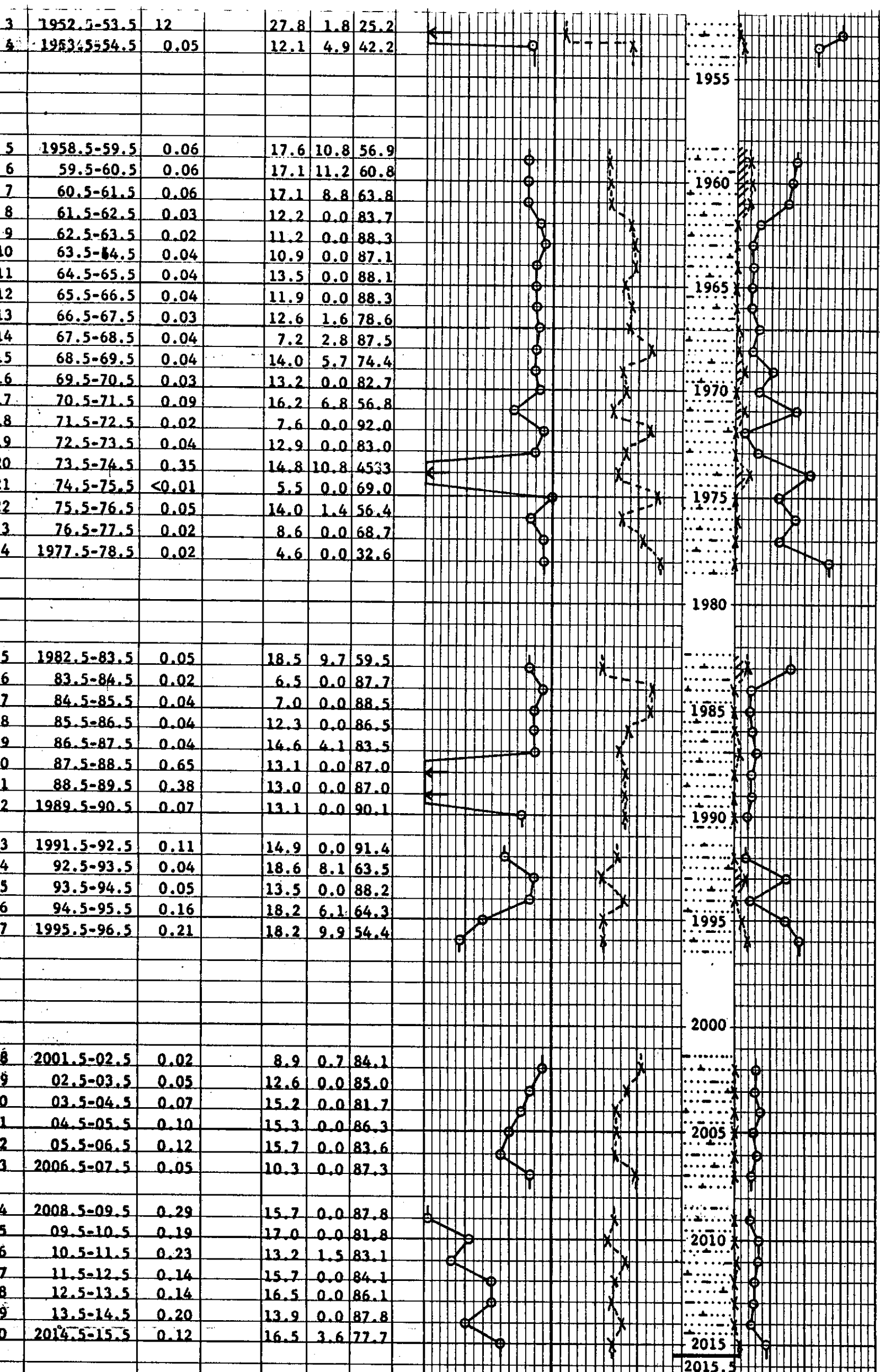
COMPANY PENNZOIL COMPANY FILE NO. SCAL-64281  
 WELL L. S. GOFF NO. W-15 DATE 9-14-64 ENGRS. BS  
 FIELD SPENCER FORMATION BIG INJUN ELEV. \_\_\_\_\_  
 COUNTY ROANE STATE W. VIRGINIA DRLG. FLD. WATER BASE MUD CORES. DIAMOND  
 LOCATION \_\_\_\_\_ REMARKS \_\_\_\_\_

# COMPLETION COREGRAPH

These analyses, opinions or interpretations are based on observations and material 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 operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

SAND	LIMESTONE	CONGLOMERATE	CHERT	ANHYDRITE
SHALE	DOLOMITE	OOLITES		





3	1952.5-53.5	12	27.8	1.8	25.2
4	1953.5-54.5	0.05	12.1	4.9	42.2
5	1958.5-59.5	0.06	17.6	10.8	56.9
6	59.5-60.5	0.06	17.1	11.2	60.8
7	60.5-61.5	0.06	17.1	8.8	63.8
8	61.5-62.5	0.03	12.2	0.0	83.7
9	62.5-63.5	0.02	11.2	0.0	88.3
10	63.5-64.5	0.04	10.9	0.0	87.1
11	64.5-65.5	0.04	13.5	0.0	88.1
12	65.5-66.5	0.04	11.9	0.0	88.3
13	66.5-67.5	0.03	12.6	1.6	78.6
14	67.5-68.5	0.04	7.2	2.8	87.5
15	68.5-69.5	0.04	14.0	5.7	74.4
16	69.5-70.5	0.03	13.2	0.0	82.7
17	70.5-71.5	0.09	16.2	6.8	56.8
18	71.5-72.5	0.02	7.6	0.0	92.0
19	72.5-73.5	0.04	12.9	0.0	83.0
20	73.5-74.5	0.35	14.8	10.8	45.3
21	74.5-75.5	<0.01	5.5	0.0	69.0
22	75.5-76.5	0.05	14.0	1.4	56.4
23	76.5-77.5	0.02	8.6	0.0	68.7
24	1977.5-78.5	0.02	4.6	0.0	32.6
5	1982.5-83.5	0.05	18.5	9.7	59.5
6	83.5-84.5	0.02	6.5	0.0	87.7
7	84.5-85.5	0.04	7.0	0.0	88.5
8	85.5-86.5	0.04	12.3	0.0	86.5
9	86.5-87.5	0.04	14.6	4.1	83.5
10	87.5-88.5	0.65	13.1	0.0	87.0
11	88.5-89.5	0.38	13.0	0.0	87.0
12	1989.5-90.5	0.07	13.1	0.0	90.1
13	1991.5-92.5	0.11	14.9	0.0	91.4
14	92.5-93.5	0.04	18.6	8.1	63.5
15	93.5-94.5	0.05	13.5	0.0	88.2
16	94.5-95.5	0.16	18.2	6.1	64.3
17	1995.5-96.5	0.21	18.2	9.9	54.4
18	2001.5-02.5	0.02	8.9	0.7	84.1
19	02.5-03.5	0.05	12.6	0.0	85.0
20	03.5-04.5	0.07	15.2	0.0	81.7
21	04.5-05.5	0.10	15.3	0.0	86.3
22	05.5-06.5	0.12	15.7	0.0	83.6
23	2006.5-07.5	0.05	10.3	0.0	87.3
24	2008.5-09.5	0.29	15.7	0.0	87.8
25	09.5-10.5	0.19	17.0	0.0	81.8
26	10.5-11.5	0.23	13.2	1.5	83.1
27	11.5-12.5	0.14	15.7	0.0	84.1
28	12.5-13.5	0.14	16.5	0.0	86.1
29	13.5-14.5	0.20	13.9	0.0	87.8
30	2014.5-15.5	0.12	16.5	3.6	77.7

AVERAGE GRAIN DENSITY OF PRODUCTIVE SAND - 2.69