

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(W-1007
J. T. Goethe No. 1)

P. O. Drawer 631
Tallahassee, Florida

August 2, 1946

File → Mr. D. J. Munroe,
Sun Oil Company,
Midyette-Moor Bldg.,
Tallahassee, Fla.

Dear Mr. Munroe:

I am enclosing analyses of two samples of water from the oil test well which the Sun Oil Company recently drilled near Gulf Hammock in Levy County, one sample being taken when the well was 1,089 feet deep and the other when the well was 2,650 feet deep.

You will note that practically all the constituents, with the exception of bicarbonate, increased greatly with the increase in depth. The bicarbonate decreased from 253 to 158 parts per million. Mr. Love, of our Quality of Water Division, indicates that the decrease in bicarbonate would be expected if the source of the more concentrated water were ocean water. He indicates that ocean water normally contains about 150 parts per million of bicarbonate, whereas a large part of the ground water in Florida contains greater concentration of bicarbonate.

Your courtesy in making these samples of water available to us for analysis is very much appreciated.

Very truly yours,

H. H. Cooper, Jr.,
Engineer in Charge.

Enclosures 2.

cc: Dr. Herman Gunter
Mr. O. E. Meinzer.

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Analyses of water from oil test well owned by Sun Oil Company, near Tallahassee, Fla.

Analyses by Geological Survey, United States Department of the Interior
(Parts per million)

Depth (Ft.).....	1,089	2,650
Date of collection, 1946.....	<u>Apr. 16</u>	<u>May 11</u>
Silicia (SiO ₂).....	18	
Iron (Fe).....	.18	
Calcium (Ca).....	165	
Magnesium (Mg).....	42	
Sodium (Na).....	22	
Potassium (K).....	2.6	
Bicarbonate (HCO ₃).....	253	158
Sulfate (SO ₄).....	359	
Chloride (Cl).....	39	248
Fluoride (F).....	.9	
Nitrate (NO ₃).....	.2	
Total dissolved solids.....	807	
Total hardness as CaCO ₃	584	
Specific conductance (Kx10 ² at 25° C.).....	111	263
pH.....	7.4	
Color.....	4	
Temperature (°F.).....	84	

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Analysis of water from oil test well owned by Sun Oil Company, near Gulf Hammock, Fla.

Analysis by Geological Survey, United States Department of the Interior
(Parts per Million)

Depth (Ft.).....	2,650 (reported)
Date of collection, 1946.....	<u>May 11</u>
Silicia (SiO ₂).....	18
Iron (Fe).....	
Calcium (Ca).....	388
Magnesium (Mg).....	83
Sodium (Na).....	132
Potassium (K).....	8.0
Bicarbonate (HCO ₃).....	158
Sulfate (SO ₄).....	1,060
Chloride (Cl).....	248
Fluoride (F)	
Nitrate (NO ₃).....	.2
Total dissolved solids.....	2,210
Total hardness as CaCO ₃	1,310
Specific conductance (Kx10 ⁵ at 25° C.).....	263