

*to file*

**SUN OIL COMPANY  
Water Analysis**

*D.P.H. ...*

D. W. No. \_\_\_\_\_

Operator: Sun Oil Co County: Atkinson GA  
 Lease and Well No: Doster-Ladson #1 Field: Wildcat  
 Location: \_\_\_\_\_  
 Name of Sand: Tuscaloosa Depth: From 3261 To 3276; T.D. \_\_\_\_\_  
 Method of Collecting Sample: DST  
 Date Collected: \_\_\_\_\_ Date Received: 1-29-45 Date Analyzed: 1-31-45  
 Collected By: \_\_\_\_\_ Analyzed By: D. J. Causey Approved: M. Back

Constituent	P.P.M.	Factor	Reacting Value	% Reacting Value
Sodium	1128	.0435	49.09	48.64
Calcium	21	.0499	1.05	1.04
Magnesium	4	.0822	0.32	0.32
Sulfates	4	.0208	0.28	0.08
Chlorides	1198	.0282	33.78	33.47
Carbonates	-0-	.0833	-0-	-0-
Bicarbonates	1012	.0164	16.60	16.45
Iron and Aluminum	-0-			
Silicious Matter	-0-			
<b>TOTALS</b>	<b>3367</b>		<b>100.92</b>	<b>100.00</b>

Calculated Combinations	
Compound	P.P.M.
Na <sub>2</sub> SO <sub>4</sub>	
NaCl	
Na <sub>2</sub> CO <sub>3</sub>	
NaHCO <sub>3</sub>	
CaSO <sub>4</sub>	
CaCl <sub>2</sub>	
CaCO <sub>3</sub>	
Ca(HCO <sub>3</sub> ) <sub>2</sub>	
MgSO <sub>4</sub>	
MgCl <sub>2</sub>	
MgCO <sub>3</sub>	
Mg(HCO <sub>3</sub> ) <sub>2</sub>	
Total	

Total Solids (By Evaporation) \_\_\_\_\_  
 pH of Sample as Received \_\_\_\_\_  
 Sp. Gravity 0.9974

Properties of Reaction		
Primary Salinity	6710	%
Secondary Salinity	-0-	%
Primary Alkalinity	30.18	%
Secondary Alkalinity	2.72	%
Total	100.00	%

Drill Stem Test Data - D.S.T.# <u>1</u>		
Tool Open	17	Minutes; Chokes <u>1/4" x 1/4"</u> "T & B"
Max. Working Pressure		lbs./sq. in.
BHP (Open)	lbs./sq. in.	Rec: <u>985</u> rods/sec/rod
BHP (Closed)	lbs./sq. in.	
Mud Weight		<u>water</u>

**Remarks:**

*Muddy sediment, very slight odor of hydrogen sulfide.  
 Sample taken 420' below top fluid, 465' above tool*

1.2.2.1/17

# SUN OIL COMPANY Water Analysis

D. W. No. \_\_\_\_\_

Operator: Sun Oil Co County: Wilkes, Ga  
 Lease and Well No: Dexter 407327 "1" Field: Wilkes  
 Location: \_\_\_\_\_  
 Name of Sand: Tuscaloosa Depth: From 5454 To 5618; T.D. \_\_\_\_\_  
 Method of Collecting Sample: L.T.  
 Date Collected: \_\_\_\_\_ Date Received: 1-29-45 Date Analyzed: 2-1-45  
 Collected By: \_\_\_\_\_ Analyzed By: D. J. Casey Approved: H. Beck

Constituent	P.P.M.	Factor	Reacting Value	% Reacting Value
Sodium	580	.0485	25.34	37.11
Calcium	211	.0499	10.53	14.38
Magnesium	9	.0822	0.74	1.01
Sulfates	66	.0208	1.37	1.87
Chlorides	717	.0282	20.22	27.62
Carbonates	-0-	.0838	-0-	-0-
Bicarbonates	916	.0164	15.02	20.51
Iron and Aluminum	-0-			
Silicious Matter	-0-			
<b>TOTALS</b>	<b>2499</b>		<b>73.22</b>	<b>100.00</b>

Calculated Combinations	
Compound	P.P.M.
Na <sub>2</sub> SO <sub>4</sub>	
NaCl	
Na <sub>2</sub> CO <sub>3</sub>	
NaHCO <sub>3</sub>	
CaSO <sub>4</sub>	
CaCl <sub>2</sub>	
CaCO <sub>3</sub>	
Ca(HCO <sub>3</sub> ) <sub>2</sub>	
MgSO <sub>4</sub>	
MgCl <sub>2</sub>	
MgCO <sub>3</sub>	
Mg(HCO <sub>3</sub> ) <sub>2</sub>	
Total	

Total Solids (By Evaporation) \_\_\_\_\_  
 Sp. Grav. \_\_\_\_\_  
 Diff of Sample as received: 0.9961  
 Sp. Gravity \_\_\_\_\_

Properties of Reaction		
Primary Salinity	58.98	%
Secondary Salinity	-0-	%
Primary Alkalinity	30.24	%
Secondary Alkalinity	10.78	%
Total	100.00	%

Drill Stem Test Data -- D.S.T.# <u>2</u>		
Tool Open	8 1/2	Minutes; Chokes <u>1/4 x 1/4</u> " T & B.
Max. Working Pressure		lbs./sq. in.
BHP (Open)		lbs./sq. in.
BHP (Closed)	16.25	lbs./sq. in.
Mud Weight	15.25	sp. gr.
Rec:	<u>1250' mud fresh</u> <u>water and sand</u>	

Remarks:

Slightly cloudy, no perceptible odor.  
 Sample taken 65' down hole, 100' from surface.

# SUN OIL COMPANY Water Analysis

*D.P. 1-10-45*

D. W. No. \_\_\_\_\_

Operator: Sun Oil Co County: Atkinson, Ga  
 Lease and Well No: Dexter Lawson #1 Field: wildcat  
 Location: \_\_\_\_\_  
 Name of Sand: \_\_\_\_\_ Depth: From 3959 To 4296; T.D. \_\_\_\_\_  
 Method of Collecting Sample: DST  
 Date Collected: \_\_\_\_\_ Date Received: 2-10-45 Date Analyzed: 2/13-14/45  
 Collected By: \_\_\_\_\_ Analyzed By: \_\_\_\_\_ Approved: M. Solt

Constituent	P.P.M.	Factor	Reacting Value	% Reacting Value
Sodium	10671	.0435	464.18	38.19
Calcium	2192	.0499	109.38	9.00
Magnesium	415	.0822	34.11	2.81
Sulfates	270	.0208	5.61	.46
Chlorides	21288	.0282	600.32	49.40
Carbonates	-0-	.0833	-0-	-0-
Bicarbonates	106	.0164	1.74	.14
Iron and Aluminum	-0-		-0-	-0-
Silicious Matter	-		-	-
<b>TOTALS</b>	<b>34972</b>		<b>1215.34</b>	<b>100.00</b>

Calculated Combinations	
Compound	P.P.M.
Na <sub>2</sub> SO <sub>4</sub>	
NaCl	
Na <sub>2</sub> CO <sub>3</sub>	
NaHCO <sub>3</sub>	
CaSO <sub>4</sub>	
CaCl <sub>2</sub>	
CaCO <sub>3</sub>	
Ca(HCO <sub>3</sub> ) <sub>2</sub>	
MgSO <sub>4</sub>	
MgCl <sub>2</sub>	
MgCO <sub>3</sub>	
Mg(HCO <sub>3</sub> ) <sub>2</sub>	
<b>Total</b>	

Total Solids (By Evaporation) \_\_\_\_\_  
 pH of Sample as received \_\_\_\_\_  
 Sp. Gravity 1.0229

Properties of Reaction		
Primary Salinity	76.38	%
Secondary Salinity	23.54	%
Primary Alkalinity	-0-	%
Secondary Alkalinity	0.28	%
<b>Total</b>	<b>100.00</b>	<b>%</b>

Drill Stem Test Data - D.S.T.# <u>3</u>		
Tool Open	<u>5</u>	Minutes; Chokes <u>1/4 open</u> ; T & B _____
Max. Working Pressure	<u>4</u>	lbs./sq. in.
BHP (Open)	lbs./sq. in.	Rec: _____
BHP (Closed)	<u>1200</u>	lbs./sq. in.
Mud Weight	<u>2275</u>	_____

Remarks:

Clear water  
 Probably formation or diluted formation water.

1.2.2.1/19