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**Cenref Labs**

Century Refining Company

OCT 14 1986

001-07900

#113705

WATER ANALYSIS**COLD OIL & GAS CONS. COMM.**Lab No. # C86FW3747  
Date Received October 03, 1986Date Completed October 08, 1986  
Date Sampled September 29, 1986Company Frank Resource Devlp. Co. Well Name Champlin 485 Amoco "A"  
Location Sec. 25 T1S R61W County \_\_\_\_\_ State \_\_\_\_\_  
Field \_\_\_\_\_ Formation \_\_\_\_\_ Depth \_\_\_\_\_ To \_\_\_\_\_  
Sampled From \_\_\_\_\_ Requested By Paul McCulliss Sampled By J. D. PapePARAMETERSSpecific Gravity 1.015 at 60 degrees FpH 7.4Water Resistivity 0.43OHM-Meters at 60 degrees F

Reaction

Value %

\*Sodium, Na (Calc.)

mg/l

ppm

me/l

48.89

Calcium, Ca

6798.00

6698.00

295.70

0.80

Magnesium, Mg

97.00

95.57

4.84

0.31

Chloride, Cl

23.00

22.66

1.89

46.64

Carbonate, CO<sub>3</sub>

10000.00

9852.00

282.06

0.00

Bicarbonate, HCO<sub>3</sub>

0.00

0.00

0.00

3.26

Sulfate, SO<sub>4</sub>

1200.00

1182.30

19.67

0.10

Hydroxide, OH

30.00

29.56

0.63

0.00

Total Dissolved Solids (Calc.)

18148.00

17880.09

604.79

100.00

Primary Salinity

93.49

% Total Reaction Value

Secondary Salinity

0.00

% Total Reaction Value

Primary Alkalinity

4.28

% Total Reaction Value

Secondary Alkalinity

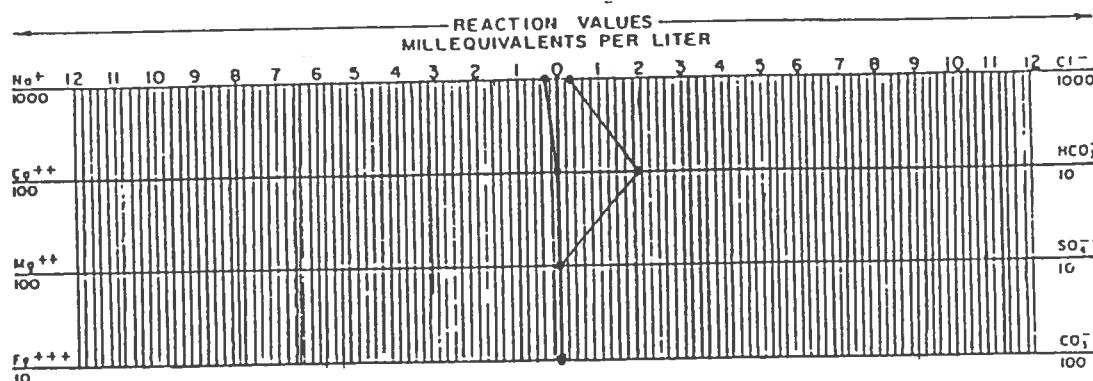
2.23

% Total Reaction Value

CaCl<sub>2</sub>/Mg Cl<sub>2</sub>

2.98

\*Includes all cations other than Calcium and Magnesium



Executive Offices: P.O. Box 411197, Kansas City, Missouri 64141-1197

Mid-Continent Area: R.R. 2, Box 119, Liberal, Kansas 67901 • (316) 624-4292

Rocky Mountain Area: P.O. Box 68, Brighton, Colorado 80601 • (303) 659-0497