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**ZALCO LABORATORIES, INC.**  
Analytical & Consulting Services

ARCO OIL & GAS  
P.O. BOX 147  
BAKERSFIELD CA 93302

LABORATORY NO : 21374-3  
DATE RECEIVED : 11/17/89  
DATE REPORTED : 11/29/89

ATTENTION : BOWAN ROBERTS

SAMPLE DESCRIPTION : 34-28-65 SAMPLE #1

GEOCHEMICAL WATER ANALYSIS

CONSTITUENTS	MG/L	MEQ/L	REACTING PERCENT
CALCIUM, CA	590.00	29.44	25.59
MAGNESIUM, MG	14.00	1.15	1.00
SODIUM, NA	1100.00	47.83	41.57
POTASSIUM, K	140.00	3.58	3.11
IRON, FE (TOTAL)	8.40	0.45	0.39
CHLORIDE, CL	540.00	15.22	13.23
SULFATE, SO4	775.00	16.13	14.02
SULFIDE, S	0.00		
BICARBONATE, HCO3	75.00	1.22	1.06
CARBONATE, CO3	0.00	0.00	0.00
HYDROXIDE	0.00	0.00	0.00
TOTALS (SUM)	3204.27	115.04	100.00
BORON	0.42		
TOTAL DIS SOLIDS (GRAV)	6960.00		
TOTAL HARDNESS AS CaCO3	1545.90		
SODIUM CHLORIDE, TOTAL	2271.80		
PH	5.20	PRIMARY SALINITY	54.51
SPECIFIC GRAVITY @ 60 F	1.005	SECONDARY SALINITY	0.00
		TOTAL SALINITY	54.51
ELECTRICAL CONDUCTIVITY, (E.C., MILLIMHO/CM @ 25C )	5.84	PRIMARY ALKALINITY	35.65
RESISTIVITY @ 25 C (OHM-METERS)	1.711	SECONDARY ALKALINITY	2.13
		TOTAL ALKALINITY	37.78
		LANGELIER SCALE INDEX	-1.69

Note: This sample contains some anion not analyzed here which affect the ionic balance.

*Jim Etherton*  
JIM ETHELTON  
LABORATORY DIRECTOR

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LABORATORY NO : 21374-4  
DATE RECEIVED : 11/17/89  
DATE REPORTED : 11/29/89

ATTENTION : BOWAN ROBERTS

SAMPLE DESCRIPTION : 34-28-65 SAMPLE #2

GEOCHEMICAL WATER ANALYSIS

CONSTITUENTS	MG/L	MEQ/L	REACTING PERCENT
CALCIUM, CA	980.00	48.90	22.85
MAGNESIUM, MG	18.00	1.48	0.69
SODIUM, NA	1420.00	61.74	28.85
POTASSIUM, K	60.00	1.53	0.71
IRON, FE (TOTAL)	13.00	0.69	0.32
CHLORIDE, CL	420.00	11.83	5.53
SULFATE, SO4	4180.00	87.02	40.67
SULFIDE, S	0.00		
BICARBONATE, HCO3	45.00	0.73	0.34
CARBONATE, CO3	0.00	0.00	0.00
HYDROXIDE	0.00	0.00	0.00
TOTALS (SUM)	7113.12	213.96	100.00
BORON	0.58		
TOTAL DIS SOLIDS (GRAV)	7950.00		
TOTAL HARDNESS AS CaCO3	2544.44		
SODIUM CHLORIDE, TOTAL	4131.25		
PH	6.10	PRIMARY SALINITY	57.71
SPECIFIC GRAVITY @ 60 F	1.005	SECONDARY SALINITY	34.69
		TOTAL SALINITY	92.41
ELECTRICAL CONDUCTIVITY, (E.C., MILLIMHO/CM @ 25C )	8.10	PRIMARY ALKALINITY	0.00
RESISTIVITY @ 25 C (OHM-METERS)	1.234	SECONDARY ALKALINITY	0.68
		TOTAL ALKALINITY	0.68
		LANGELIER SCALE INDEX	-1.82

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