

UNICHEM

A Division of BJ Services Company

Lab Test No : 14977

Santa Fe Energy

Sample Date : 2/5/97

Lab Date In : 2/14/97

Lab Date Out : 2/27/97

Water Analysis

Listed below please find water analysis report from : Watkins 32 St.

#1

Specific Gravity : 1.130

Total Dissolved Solids : 181742

pH : 6.50

Conductivity (µmhos):

Ionic Strength : 3.207

Cations:

		mg/l
Calcium	(Ca++):	2400
Magnesium	(Mg++):	486
Sodium	(Na+):	68006
Iron	(Fe++):	34.50
Dissolved Iron	(Fe++):	
Barium	(Ba++):	1.80
Strontium	(Sr):	
Manganese	(Mn++):	0.30

Resistivity :

Anions:

Bicarbonate	(HCO3-):	525
Carbonate	(CO3--):	0
Hydroxide	(OH-):	0
Sulfate	(SO4--):	325
Chloride	(Cl-):	110000

Gases:

		ppm		
Carbon Dioxide	(CO2):	70.00	Oxygen	(O2):
Hydrogen Sulfide	(H2S):	8.50		

Scale Index (positive value indicates scale tendency) a blank indicates some tests were not run

Temperature	CaCO3 SI	CaSO4 SI
86F 30.0C	0.33	
104F 40.0C	0.57	-60.89
122F 50.0C	0.87	-60.89
140F 60.0C	1.15	-60.41
168F 70.0C	1.51	-60.09
176F 80.0C	1.89	-60.09
		-60.73

Comments :

If you have any questions or require further information, please contact us.
Sincerely,

Laboratory Technician

cc: John Offutt

Jay Brown

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