

WATER ANALYSIS

Prepared for WOOD, MCSHANE AND THAMS
KERMIT, TEXAS

WAYNE NAIL
NALCO Chemical Company
16-Jul-85

Well Number : SOUTH LEONARD QUEENS
Water Source : COMINGLED

*injected fluid - combination of Queen grade
water and San Andres Make-Up Water*

DISSOLVED SOLIDS

Cations	mg/l	meq/l	mg/l
=====	=====	=====	=====
Sodium Na+	19,050.76	828.29	as NaCl
Calcium Ca++	2,680.00	134.00	as CaCO3 6,700.00
Magnesium Mg++	2,405.70	197.99	as CaCO3 9,900.00
Barium Ba++			as CaCO3
Total Cations	24,136.46	1,160.28	

Anions	mg/l	meq/l	mg/l
=====	=====	=====	=====
Chloride Cl-	38,241.00	1,078.40	as NaCl 63,000.00
Sulfate SO4=	3,359.72	69.88	as Na2SO4 4,970.00
Carbonate CO3=			as CaCO3
Bicarb. HCO3-	732.00	12.00	as CaCO3 600.00
Total Anions	42,332.72	1,160.28	

Total Solids 66,469.18

Total Iron, Fe		as Fe	
acid to Phen, CO2	220.00	as CaCO3	500.00

SCALING INDICES

Temp	CaCO3	CaSO4	BaSO4
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50 F	+0.10	+14.62	
77 F	+0.34		
95 F	+0.55	+14.03	
122 F	+0.93	+14.39	
149 F	+1.38		
176 F	+1.92	+17.29	
203 F	+2.54		

Positive values indicate scaling is likely.
Scaling Indices calculated using ASTM standard practices.

OTHER PROPERTIES

pH 6.80
Specific Gravity 1.05
Turbidity
Oxygen, as O2 ppm
Sulfide as H2S ppm
Temperature F 70.00