OEC Sample ID: 1100XXX-01

GEOCHEM SUMMARY

Client: XXX Oil & Energy
Client Sample ID: XXX Water
Project: XXX Plant, Santa Maria
Project ID: XXX Evaluation, Santa Maria, CA

Anions	mg/L	meq/L	Method	RL
Bicarbonate, HCO_3^{-1}	1100	18	SM 2320B	61
Bromide, Br^{-1}	57	0.71	EPA 300.0	2.0
Carbonate, CO_3^{-1}	ND	0	SM 2320B	6
Chloride, Cl^{-1}	12000	340	EPA 300.0	400
Fluoride, F^{-1}	ND	0	EPA 300.0	2.0
Hydroxide, OH^{-1}	ND	0	SM 2320B	2
Sulfate, SO_4^{-2}	6.5	0.14	EPA 300.0	2.0
Nitrite, NO_2^{-1}	ND	0	EPA 300.0	6.6
Nitrate, NO_3^{-1}	ND	0	EPA 300.0	9

Cations	mg/L	meq/L	Method	RL
Barium, Ba^{+2}	ND	0	EPA 6010B	0.25
Boron, B^{+3}	22	6.1	EPA 6010B	0.25
Calcium, Ca^{+2}	15	0.75	EPA 6010B	1.0
Iron, Fe^{+3}	1.5	0.081	EPA 6010B	0.12
Magnesium, Mg^{+2}	0.74	0.061	EPA 6010B	0.12
Manganese, Mn^{+2}	ND	0	EPA 6010B	0.025
Potassium, K^{+1}	72	1.8	EPA 6010B	0.050
Sodium, Na^{+1}	7200	310	EPA 6010B	100
Strontium, Sr^{+2}	ND	0	EPA 6010B	0.025
Zinc, Zn^{+2}	ND	0	EPA 6010B	0.50

Other	mg/L	meq/L	Method	RL
Lithium, Li	0.62	0.089	EPA 6010B	0.12
Silica, as SiO_2	44	1.50	EPA 6010B	0.54
Sodium, Na^{+1}	8500	370	Calculation	1

Calculations	Results	Units	Method	RL
Alkalinity, as HCO_3^{-1} (Total)	1100	mg/L	SM 2320B	100
Hardness, as $CaCO_3$ (Calc.)	ND	mg/L	SM 2340B	10
Salinity, as NaCl	22000	mg/L	Calculation	1

Calcium Carbonate	Results	Units	Method	RL
Stability Index (Langelier)	-0.27		SM 2330B	
Stability Index (Stiff & Davis)	-2.41		ASTM D4582	

Physical Data	Results	Units	Method	RL
Conductivity (Measured)	32000	umhos/cm	2510 B	20
Resistivity	31	Ohm·cm	Calculation	2.0
Specific Gravity (xx/60°F)		g/cc		
Ionic strength	0.35	mol/L	Calculation	
pH	7.2	pH Units	9040B	0.10
Temperature		°C	SM 2550B	
Total Diss. Solids (TDS Calc)	20000	mg/L	Calculation	10
Total Diss Solids @180°C	19000	mg/L	2540C	200

Quality Control	meq/L	Units	Acceptable
	SUM		% Diff.
Anion-Cation Balance=	9.9	%	0-5%

NA* = Not Analyzed

ND = Not Detected at or above the Reporting Limit (RL)