

# APPENDIX 7

## WATER ANALYSES

### LAWRENCE-1

Sample ID. 1369551

Chemical Composition				Derived Data				
		mg/L	me/L			mg/L		
Cations				Total Dissolved Solids				
Calcium	(Ca)	4630.0	231.038	A. Based on E.C.		42866		
Magnesium	(Mg)	940.0	77.366	B. Calculated (HCO3=CO3)		35225		
Sodium	(Na)	7560.0	328.839					
Potassium	(K)	240.0	6.138					
Anions				Total Hardness		15427		
Hydroxide	(OH)			Carbonate Hardness		238		
Carbonate	(CO3)			Non-Carbonate Hardness		15190		
Bi-Carbonate	(HCO3)	223.7	3.668	Total Alkalinity		238		
Sulphate	(SO4)	116.0	2.415	(Each as CaCO3)				
Chloride	(Cl)	21627	609.202					
Nitrate	(NO3)	<0.1						
Other Analyses				Totals and Balance				
				Cations (me/L)	643.4	Diff=	28.10	
				Anions (me/L)	615.3	Sum =	1258.67	
				ION BALANCE	(Diff*100/Sum) =		2.23%	
				Sodium / Total Cation Ratio				51.1%
				Remarks				
IMBALANCE UNKNOWN ALL RESULTS CHECKED AND VERIFIED.								

Sample ID. 1369552

Chemical Composition				Derived Data	
		mg/L	me/L		mg/L
Cations				Total Dissolved Solids	
Calcium	(Ca)	4590.0	229.042	A. Based on E.C.	45068
Magnesium	(Mg)	938.0	77.202	B. Calculated (HCO <sub>3</sub> =CO <sub>3</sub> )	35949
Sodium	(Na)	7350.0	319.704		
Potassium	(K)	221.0	5.652		
Anions				Total Hardness	15319
Hydroxide	(OH)			Carbonate Hardness	190
Carbonate	(CO <sub>3</sub> )			Non-Carbonate Hardness	15129
Bi-Carbonate	(HCO <sub>3</sub> )	179.0	2.934	Total Alkalinity	190
Sulphate	(SO <sub>4</sub> )	96.0	1.999	(Each as CaCO <sub>3</sub> )	
Chloride	(Cl)	22665	638.439	Totals and Balance	
Nitrate	(NO <sub>3</sub> )	<0.1		Cations (me/L)	631.6
Other Analyses				Anions (me/L)	643.4
				Diff=	11.77
				Sum =	1274.97
				ION BALANCE (Diff*100/Sum) =	0.92%
				Sodium / Total Cation Ratio	50.6%
				Remarks	
Reaction - pH			6.5		
Conductivity (E.C)			54000		
(micro -S/cm at 25°C)					
Resistivity Ohm.M at 25°C			0.185		
				Note:	mg/L = Milligrams per litre
					me/L = MilliEquivs.per litre

DEPTH - APPROXIMATELY 284M (0730 HRS, 1/10/88)

Sample ID. 1369553

Chemical Composition				Derived Data	
		mg/L	me/L		mg/L
Cations				Total Dissolved Solids	
Calcium	(Ca)	4640.0	231.537	A. Based on E.C.	42866
Magnesium	(Mg)	944.0	77.695	B. Calculated (HCO3=CO3)	35737
Sodium	(Na)	7370.0	320.574		
Potassium	(K)	226.0	5.780		
Anions				Total Hardness	15469
Hydroxide	(OH)			Carbonate Hardness	213
Carbonate	(CO3)			Non-Carbonate Hardness	15256
Bi-Carbonate	(HCO3)	200.2	3.282	Total Alkalinity	213
Sulphate	(SO4)	102.0	2.124	(Each as CaCO3)	
Chloride	(Cl)	22355	629.724		
Nitrate	(NO3)	<0.1			
				Totals and Balance	
				Cations (me/L)	635.6
				Anions (me/L)	635.1
				Diff=	0.46
				Sum =	1270.72
Other Analyses				ION BALANCE (Diff*100/Sum) =	0.04%
				Sodium / Total Cation Ratio	50.4%
				Remarks	
Reaction - pH		6.7			
Conductivity (E.C)		52000			
(micro -S/cm at 25°C)					
Resistivity Ohm.M at 25°C		0.192			
				Note:	
				mg/L = Milligrams per litre	
				me/L = MilliEquivs.per litre	

DEPTH - APPROXIMATELY 300M (0300 HRS, 1/10/88)