

ANNEX V
WATER TEST RESULTS

ATTN: MR. Jose Garcia

BELIZE BREWING COMPANY LIMITED

WATER and WASTEWATER LABORATORY

Sample ID: False Caye

DATE: 9 February, 2007

INORGANIC CHEMISTRY

| PHYSICAL | UNIT | METHOD | RESULTS | | | | | | |
|------------------------------------|-------|--|----------------|----------|----------|----------|----------|----------|--|
| | | | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | |
| COLOUR, TRUE | units | Platinum - Cobalt Standard/ UV VIS Spectro | | | | | | | |
| COLOUR, APPARENT | units | Platinum - Cobalt Standard/ UV VIS Spectro | | | | | | | |
| CONDUCTIVITY | µs/cm | CONDUCTIVITY (probe) | 51,200 | 52,000 | 51,900 | 52,200 | 52,200 | 51,600 | |
| LANG. INDEX | units | Calculated/ Titration | | | | | | | |
| OIL IN WATER | ppm | | | | | | | | |
| pH*** | unit | pH/ISE meter (probe) | 7.84 | 8.07 | 8.05 | 7.95 | 8.13 | 8.12 | |
| SALINITY | ppt | Mercuric Nitrate titration | 34.2 | 35.1 | 34.8 | 34.9 | 34.3 | 34.8 | |
| SILT DENSITY INDEX (SDI) | units | Filtration | | | | | | | |
| TOTAL SUSPENDED SOLIDS (TSS)*** | ppm | Colorimeter | 21 | 19 | 22 | 20 | 21 | 17 | |
| TEMPERATURE (IN LAB) | °C | Probe/Termometer | | | | | | | |
| TOTAL DISSOLVED SOLIDS (TDS)*** | ppm | CONDUCTIVITY (probe) | 25,600 | 26,000 | 25,900 | 26,100 | 26,100 | 25,800 | |
| TURBIDITY | ntu | Nephelometric - Tungsten | | | | | | | |
| METALS | | | RESULTS | | | | | | |
| ALUMINUM (Al) | ppm | Aluminon/UV VIS Spectro | | | | | | | |
| BARIUM (Ba) | ppm | Turbidimetric/ UV VIS Spectro | | | | | | | |
| CALCIUM (Ca) | ppm | UV VIS Spectro/ Titration | | | | | | | |
| CHROMIUM (Cr) | ppm | 1,5-Diphenylcarbohydrazide/UV VIS Spectro | | | | | | | |
| COPPER (Cu) | ppm | Bicinchoninate/ UV VIS Spectro | | | | | | | |
| IRON, TOTAL (Fe) | ppm | UV VIS Spectro | | | | | | | |
| LEAD (Pb) | ppm | Dithizone/ UV VIS Spectro | | | | | | | |
| MANGANESE (Mn) | ppm | Periodate Oxidation/UV VIS Spectro | | | | | | | |
| MAGNESIUM (Mg) | ppm | UV VIS Spectro / Titration | | | | | | | |
| MERCURY (Hg) | ppm | Cold Vapor | | | | | | | |
| SELENIUM (Se) | ppm | Diaminobenzidine/ UV VIS Spectro | | | | | | | |
| SILVER (Ag) | ppm | Colorimetric/ UV VIS Spectro | | | | | | | |
| SODIUM (Na) | ppm | Probe | | | | | | | |
| ZINC (Zn) | ppm | Zincon/ UV VIS Spectro | | | | | | | |
| NON-METALS | | | RESULTS | | | | | | |
| CHLORINE, FREE (Cl) | ppm | UV VIS Spectro /DPD | | | | | | | |
| CHLORINE, TOTAL (Cl) | ppm | UV VIS Spectro/DPD | | | | | | | |
| FLUORIDE (F) | ppm | SPADNS/UV VIS Spectro | | | | | | | |
| NITROGEN, TOTAL (N) | ppm | Cadmium Reduction/ UV VIS Spectro | | | | | | | |
| DISSOLVED OXYGEN (DO) | ppm | PROBE | | | | | | | |
| PHOSPHATE, TOTAL (PO4)*** | ppm | PhosVer / Orthophosphate/ UV VIS Spectro | 0.02 | N/D | 0.04 | 0.05 | 0.09 | 0.04 | |
| INORGANIC COMPOUNDS | | | RESULTS | | | | | | |
| ACIDITY (as CaCO) | | | | | | | | | |
| CARBON DIOXIDE (CO2) | ppm | Titration | | | | | | | |
| CARBONATE (CO) | | | | | | | | | |
| CHROMATE (CrO4) | ppm | Titration | | | | | | | |
| CYANIDE (CN) | ppm | Pyridine-Pyrazalone/ UV VIS Spectro | | | | | | | |
| TOTAL HARDNESS (as CaCO) *** | | | 5,810 | 6,120 | 6,200 | 6,100 | 5,890 | 6,010 | |
| HYDROGEN SULFIDE (H2S) | ppm | Titration / UV VIS Spectro | | | | | | | |
| HYPOCHLORITE (BLEACH) | ppm | Titration | | | | | | | |
| M ALKALINITY(TOTAL), (as CaCO) | | | 0.6 | 0.6 | 0.6 | 0.5 | 0.6 | 0.6 | |
| NITRATE NITROGEN (NO -N) | | | | | | | | | |
| NITRITE (NO2) | ppm | Diazotization/ UV VIS Spectro | | | | | | | |
| HYDROXIDE ALKALINITY (OH) | ppm | Titration | | | | | | | |
| OZONE (O) | | | | | | | | | |
| PHENOLPHTHALEIN ALKALINITY (as CaC | ppm | Sulfuric acid titration | | | | | | | |
| PHOSPHATE (PO4) | ppm | PhosVer / Orthophosphate/ UV VIS Spectro | | | | | | | |
| SILICA (SiO2) | ppm | Smcomolybdate/Colometric | | | | | | | |
| SODIUM CHLORIDE (NaCl) | ppm | UV VIS Spectro / Titration | | | | | | | |
| SULFIDE (S ⁻) | ppm | Methylene Blue Titration | | | | | | | |
| SULFITE (SO) | | | | | | | | | |
| SULPHATE (SO4) | ppm | Sulfa Ver 4/ UV VIS Spectro | 3,290 | 2,660 | 2,730 | 2,760 | 3,100 | 3,590 | |

ORGANIC CHEMISTRY

| | | | | | | | | | |
|-----------------------------------|------|-------------------------------|--|--|--|--|--|--|--|
| OXYGEN DEMAND, BIOCHEMICAL (BOD5) | mg/l | BODTRAK / 5 days Digestion | | | | | | | |
| OXYGEN DEMAND, CHEMICAL (COD) | mg/l | Reactor Digestion | | | | | | | |
| ORGANIC | 1/cm | Direct method/ UV VIS Spectro | | | | | | | |
| ORGANIC CARBON, TOTAL (TOC) | ppm | Direct method/UV VIS Spectro | | | | | | | |
| TRICHALOMETHANES (THMs) | ppb | Chloroform/UV VIS Spectro | | | | | | | |

MICROBIOLOGICAL ANALYSIS

SEE ATTACHED TEST RESULTS FOR DETAILS

| | UNIT | METHOD | RESULTS | | | | | |
|-----------------------------|-------|-------------------------|---------|---------|---------|---------|---------|---------|
| HETEROTROPHIC BACTERIA | count | R2A Agar (MF) | | | | | | |
| TOTAL COLIFORM** | count | m-ENDO Broth (MF) | | | | | | |
| ESCHERICHIA COLI (E.coli)** | count | m-ENDO Broth (MF) | | | | | | |
| FECAL COLIFORM | count | m-FC/ROSOLIC Broth (MF) | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml |
| ENTEROCOCCI | count | m-EL Broth (MF) | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml |
| YEAST | count | R. B. Agar (MF) | | | | | | |
| MOLD | count | R. B. Agar (MF) | | | | | | |

Analyst : Damian Espot

Signature: _____

ATTN: MR. Jose Garcia

BELIZE BREWING COMPANY LIMITED

WATER and WASTEWATER LABORATORY

Sample ID: False Caye

DATE: 21 April, 2007

INORGANIC CHEMISTRY

| PHYSICAL | UNIT | METHOD | RESULTS | | | | | | | | |
|------------------------------------|-------|--|----------------|----------|----------|----------|----------|----------|----------|--|--|
| | | | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | Sample 7 | | |
| COLOUR, TRUE | units | Platinum - Cobalt Standard/ UV VIS Spectro | | | | | | | | | |
| COLOUR, APPARENT | units | Platinum - Cobalt Standard/ UV VIS Spectro | | | | | | | | | |
| CONDUCTIVITY | µs/cm | CONDUCTIVITY (probe) | 54,200 | 54,300 | 54,100 | 53,900 | 54,000 | 53,600 | 55,200 | | |
| LANG. INDEX | units | Calculated/ Titration | | | | | | | | | |
| OIL IN WATER | ppm | | | | | | | | | | |
| pH*** | unit | pH/ISE meter (probe) | 8.47 | 7.96 | 8.31 | 8.41 | 8.15 | 8.4 | 7.36 | | |
| SALINITY | ppt | Mercuric Nitrate titration | 36.1 | 36 | 36 | 36 | 36.1 | 36 | 37.1 | | |
| SILT DENSITY INDEX (SDI) | units | Filtration | | | | | | | | | |
| TOTAL SUSPENDED SOLIDS (TSS)*** | ppm | Colorimeter | 39,360 | 41,800 | 39,620 | 39,720 | 39,900 | 40,140 | 40,920 | | |
| TEMPERATURE (IN LAB) | °C | Probe/Termometer | | | | | | | | | |
| TOTAL DISSOLVED SOLIDS (TDS)*** | ppm | CONDUCTIVITY (probe) | 27,100 | 27,200 | 27,000 | 27,000 | 27,000 | 26,800 | 27,600 | | |
| TURBIDITY | ntu | Nephelometric - Tungsten | | | | | | | | | |
| METALS | | | RESULTS | | | | | | | | |
| ALUMINUM (Al) | ppm | Aluminon/UV VIS Spectro | | | | | | | | | |
| BARIUM (Ba) | ppm | Turbidimetric/ UV VIS Spectro | | | | | | | | | |
| CALCIUM (Ca) | ppm | UV VIS Spectro/ Titration | | | | | | | | | |
| CHROMIUM (Cr) | ppm | 1,5-Diphenylcarbohydrazide/UV VIS Spectro | | | | | | | | | |
| COPPER (Cu) | ppm | Bicinchoninate/ UV VIS Spectro | | | | | | | | | |
| IRON, TOTAL (Fe) | ppm | UV VIS Spectro | | | | | | | | | |
| LEAD (Pb) | ppm | Dithizone/ UV VIS Spectro | | | | | | | | | |
| MANGANESE (Mn) | ppm | Periodate Oxidation/UV VIS Spectro | | | | | | | | | |
| MAGNESIUM (Mg) | ppm | UV VIS Spectro / Titration | | | | | | | | | |
| MERCURY (Hg) | ppm | Cold Vapor | | | | | | | | | |
| SELENIUM (Se) | ppm | Diaminobenzidine/ UV VIS Spectro | | | | | | | | | |
| SILVER (Ag) | ppm | Colorimetric/ UV VIS Spectro | | | | | | | | | |
| SODIUM (Na) | ppm | Probe | | | | | | | | | |
| ZINC (Zn) | ppm | Zincon/ UV VIS Spectro | | | | | | | | | |
| NON-METALS | | | RESULTS | | | | | | | | |
| CHLORINE, FREE (Cl) | ppm | UV VIS Spectro /DPD | | | | | | | | | |
| CHLORINE, TOTAL (Cl) | ppm | UV VIS Spectro/DPD | | | | | | | | | |
| FLUORIDE (F) | ppm | SPADNS/UV VIS Spectro | | | | | | | | | |
| NITROGEN, TOTAL (N) | ppm | Cadmium Reduction/ UV VIS Spectro | | | | | | | | | |
| DISSOLVED OXYGEN (DO) | ppm | PROBE | | | | | | | | | |
| PHOSPHATE, TOTAL (PO4)*** | ppm | PhosVer / Orthophosphate/ UV VIS Spectro | 0.02 | 0.08 | 0.05 | 0.01 | 0.08 | 0.11 | 0.06 | | |
| INORGANIC COMPOUNDS | | | RESULTS | | | | | | | | |
| ACIDITY (as CaCO) | | | | | | | | | | | |
| CARBON DIOXIDE (CO2) | ppm | Titration | | | | | | | | | |
| CARBONATE (CO) | | | | | | | | | | | |
| CHROMATE (CrO4) | ppm | Titration | | | | | | | | | |
| CYANIDE (CN) | ppm | Pyridine-Pyrazalone/ UV VIS Spectro | | | | | | | | | |
| TOTAL HARDNESS (as CaCO) *** | | | 6,345 | 6,415 | 6,380 | 6,230 | 6,280 | 6,370 | 6,750 | | |
| HYDROGEN SULFIDE (H2S) | ppm | Titration / UV VIS Spectro | | | | | | | | | |
| HYPOCHLORITE (BLEACH) | ppm | Titration | | | | | | | | | |
| M ALKALINITY(TOTAL), (as CaCO) | | | 3 | 3 | 2 | 3 | 3 | 3 | 4 | | |
| NITRATE NITROGEN (NO -N) | | | | | | | | | | | |
| NITRITE (NO2) | ppm | Diazotization/ UV VIS Spectro | | | | | | | | | |
| HYDROXIDE ALKALINITY (OH) | ppm | Titration | | | | | | | | | |
| OZONE (O) | | | | | | | | | | | |
| PHENOLPHTHALEIN ALKALINITY (as CaC | ppm | Sulfuric acid titration | | | | | | | | | |
| PHOSPHATE (PO4) | ppm | PhosVer / Orthophosphate/ UV VIS Spectro | | | | | | | | | |
| SILICA (SiO2) | ppm | Sm comolybdate/Colometric | | | | | | | | | |
| SODIUM CHLORIDE (NaCl) | ppm | UV VIS Spectro / Titration | | | | | | | | | |
| SULFIDE (S ⁻) | ppm | Methylene Blue Titration | | | | | | | | | |
| SULFITE (SO) | ppm | Sulfa Ver 4/ UV VIS Spectro | 2,910 | 3,050 | 3,215 | 3,000 | 2,995 | 3,055 | 3,005 | | |
| ORGANIC CHEMISTRY | | | RESULTS | | | | | | | | |
| OXYGEN DEMAND, BIOCHEMICAL (BODs) | mg/l | BODTRAK / 5 days Digestion | 4.6 | 8.2 | 10.2 | 14.4 | 16.8 | 15.2 | 21.8 | | |
| OXYGEN DEMAND, CHEMICAL (COD) | mg/l | Reactor Digestion | | | | | | | | | |
| ORGANIC | l/cm | Direct method/ UV VIS Spectro | | | | | | | | | |
| ORGANIC CARBON, TOTAL (TOC) | ppm | Direct method/UV VIS Spectro | | | | | | | | | |
| TRIHALOMETHANES (THMs) | ppb | Chloroform/UV VIS Spectro | | | | | | | | | |

MICROBIOLOGICAL ANALYSIS

SEE ATTACHED TEST RESULTS FOR DETAILS

| | UNIT | METHOD | RESULTS | | | | | | | |
|-----------------------------|-------|-------------------------|---------|---------|---------|---------|---------|---------|---------|--|
| HETEROTROPHIC BACTERIA | count | R2A Agar (MF) | | | | | | | | |
| TOTAL COLIFORM** | count | m-ENDO Broth (MF) | | | | | | | | |
| ESCHERICHIA COLI (E.coli)** | count | m-ENDO Broth (MF) | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | |
| FECAL COLIFORM | count | m-FC/ROSOLIC Broth (MF) | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | 0/100ml | |
| ENTEROCOCCI | count | m-EL Broth (MF) | | | | | | | | |
| YEAST | count | R. B. Agar (MF) | | | | | | | | |
| MOLD | count | R. B. Agar (MF) | | | | | | | | |

Analyst : Odair Quetzal

Signature: _____