

# NOTAS DE AFOROS

## POR: TOPOGRAFIA Y AFOROS



PARA: **CELSIA**

|                                                              |                                              |                       |                         |                                     |                                                                          |          |       |       |          |           |             |        |  |
|--------------------------------------------------------------|----------------------------------------------|-----------------------|-------------------------|-------------------------------------|--------------------------------------------------------------------------|----------|-------|-------|----------|-----------|-------------|--------|--|
| Quebrada:                                                    | La Montera.<br>Central Hidroeléctrica Lorena |                       |                         |                                     |                                                                          | N/A      | Hora  |       |          |           |             |        |  |
|                                                              |                                              |                       | Ubicación: 940529 Norte |                                     |                                                                          | 0.685    | 10:53 |       |          |           |             |        |  |
| Nº Aforo:                                                    | 17                                           |                       | 355589 Este             |                                     |                                                                          | 0.685    | 11:25 |       |          |           |             |        |  |
| Aforador:                                                    | J. Enrique González                          | Calculado y Revisado: | J. Enrique González     |                                     |                                                                          |          |       |       |          |           |             |        |  |
| Fecha: 20 de diciembre 2017                                  |                                              |                       |                         |                                     | Aforo realizado a ±1.2 Km aguas arriba de la confluencia a Río Chiriquí. |          |       |       |          |           |             |        |  |
| Método: 0.6                                                  |                                              |                       | Molinete:               |                                     | Red Back serie 16-15<br>Prueba de giro: 2min 45 Seg                      |          |       |       |          |           |             |        |  |
| Temperatura y aspecto general del agua: clara y fresca, 25°C |                                              |                       |                         |                                     | Tipo de Aforo: Por vadeo                                                 |          |       |       |          |           |             |        |  |
| Área=                                                        | 3.638 M²                                     |                       | Caudal=                 | 1.432 M³/Seg = 1432 Litros/Segundos |                                                                          |          |       |       | RadHid=  | 0.321 M   |             |        |  |
| Ancho=                                                       | 11.35 M                                      |                       | Vel=                    | 0.394 M/Seg                         |                                                                          |          |       |       | Pmojado= | 11.65 M   |             |        |  |
| # Est                                                        | Estación                                     | Profund.              | Revoluc.                | Tiempo                              | V. Punto                                                                 | V. Media | Área  | Ancho | Caudal   | Per_Mojad | Caudal en % |        |  |
| 1                                                            | 1.40                                         | 0.00                  |                         |                                     | 0.048                                                                    | 0.048    | 0.036 | 0.43  | 0.002    | 0.458     | 0.001       | 0.0012 |  |
| 2                                                            | 2.25                                         | 0.17                  | 8                       | 40                                  | 0.143                                                                    | 0.143    | 0.136 | 0.80  | 0.019    | 0.851     | 0.014       | 0.015  |  |
| 3                                                            | 3.00                                         | 0.29                  | 11                      | 42                                  | 0.186                                                                    | 0.186    | 0.218 | 0.75  | 0.041    | 0.769     | 0.028       | 0.043  |  |
| 4                                                            | 3.75                                         | 0.34                  | 18                      | 41                                  | 0.310                                                                    | 0.310    | 0.255 | 0.75  | 0.079    | 0.753     | 0.055       | 0.098  |  |
| 5                                                            | 4.50                                         | 0.36                  | 22                      | 40                                  | 0.387                                                                    | 0.387    | 0.225 | 0.63  | 0.087    | 0.625     | 0.061       | 0.159  |  |
| 6                                                            | 5.00                                         | 0.35                  | 24                      | 41                                  | 0.412                                                                    | 0.412    | 0.175 | 0.50  | 0.072    | 0.508     | 0.050       | 0.210  |  |
| 7                                                            | 5.50                                         | 0.45                  | 23                      | 41                                  | 0.395                                                                    | 0.395    | 0.225 | 0.50  | 0.089    | 0.500     | 0.062       | 0.272  |  |
| 8                                                            | 6.00                                         | 0.37                  | 27                      | 40                                  | 0.475                                                                    | 0.475    | 0.185 | 0.50  | 0.088    | 0.502     | 0.061       | 0.333  |  |
| 9                                                            | 6.50                                         | 0.40                  | 34                      | 40                                  | 0.597                                                                    | 0.597    | 0.200 | 0.50  | 0.119    | 0.512     | 0.083       | 0.416  |  |
| 10                                                           | 7.00                                         | 0.48                  | 25                      | 40                                  | 0.440                                                                    | 0.440    | 0.240 | 0.50  | 0.106    | 0.500     | 0.074       | 0.490  |  |
| 11                                                           | 7.50                                         | 0.38                  | 25                      | 42                                  | 0.419                                                                    | 0.419    | 0.190 | 0.50  | 0.080    | 0.512     | 0.056       | 0.546  |  |
| 12                                                           | 8.00                                         | 0.37                  | 25                      | 41                                  | 0.429                                                                    | 0.429    | 0.185 | 0.50  | 0.079    | 0.501     | 0.055       | 0.601  |  |
| 13                                                           | 8.50                                         | 0.41                  | 30                      | 40                                  | 0.527                                                                    | 0.527    | 0.205 | 0.50  | 0.108    | 0.510     | 0.075       | 0.676  |  |
| 14                                                           | 9.00                                         | 0.47                  | 30                      | 40                                  | 0.527                                                                    | 0.527    | 0.235 | 0.50  | 0.124    | 0.508     | 0.086       | 0.763  |  |
| 15                                                           | 9.50                                         | 0.32                  | 24                      | 40                                  | 0.422                                                                    | 0.422    | 0.160 | 0.50  | 0.068    | 0.531     | 0.047       | 0.810  |  |
| 16                                                           | 10.00                                        | 0.29                  | 24                      | 40                                  | 0.422                                                                    | 0.422    | 0.181 | 0.63  | 0.077    | 0.625     | 0.053       | 0.864  |  |
| 17                                                           | 10.75                                        | 0.30                  | 24                      | 40                                  | 0.422                                                                    | 0.422    | 0.263 | 0.88  | 0.111    | 0.875     | 0.077       | 0.941  |  |
| 18                                                           | 11.75                                        | 0.26                  | 17                      | 40                                  | 0.300                                                                    | 0.300    | 0.260 | 1.00  | 0.078    | 1.044     | 0.054       | 0.995  |  |
| 19                                                           | 12.75                                        | 0.00                  |                         |                                     | 0.100                                                                    | 0.100    | 0.065 | 0.50  | 0.007    | 0.564     | 0.005       | 1.000  |  |