

## APÊNDICE D - ESPELEOLOGIA

## RELATÓRIO FOTOGRÁFICO



A casa subterrânea revelou-se um fenômeno de origem antrópica que é conhecido na comunidade como “toca de índios”, sem relevância do ponto de vista espeleológico.



Pequena feição espeleológica junto à calha do rio dos Touros.





Pequena ressurgência do escoamento subsuperficial junto à calha do rio Pelotas.



**Depressão fechada tipo dolina na All entre Vacaria e Bom Jesus/RS.**







Gruta do Rio Cerquinha (Bom Jesus/RS) – Dissolução do material basáltico.





Gruta do Perau Branco I (Bom Jesus/RS, AID).



Gruta do Perau Branco II (Bom Jesus/RS, AID).



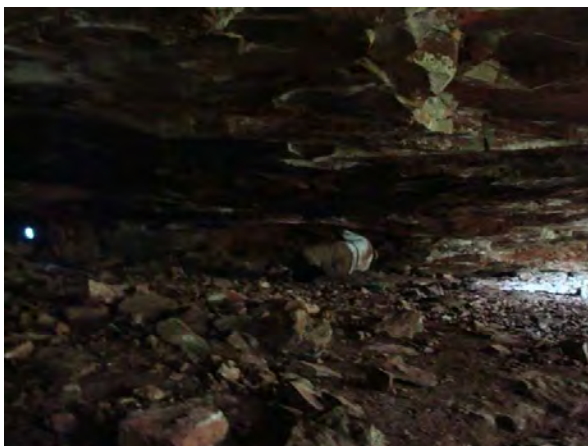


Furna do Perau da Santa ou Cabrito (Lages/SC, AID).



Furna do Perau da Santa ou Cabrito (Lages/SC, AID).





Furna do Perau da Santa ou Cabrito (Lages/SC, AID).





Furna do Perau da Santa ou Cabrito (Lages/SC, AID).



Caverna de solo formada pelo escoamento subsuperficial.

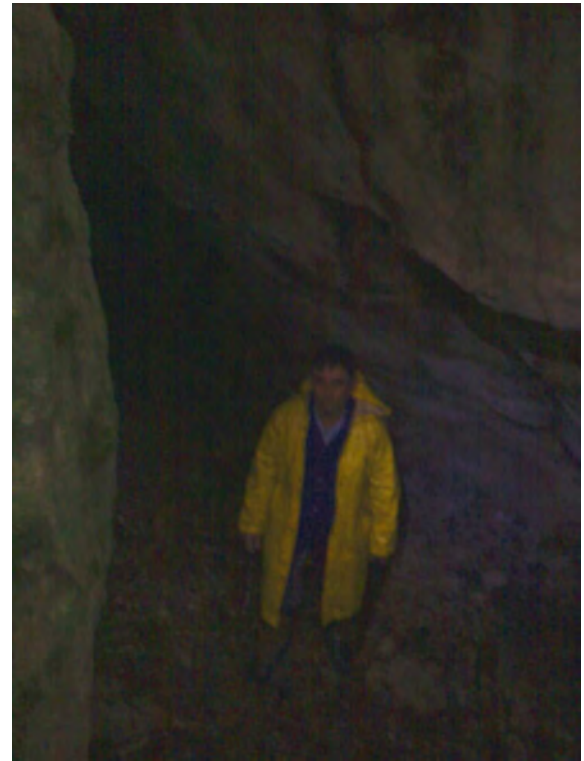




Furna dos Ossos (Bom Jesus/RS, AID).

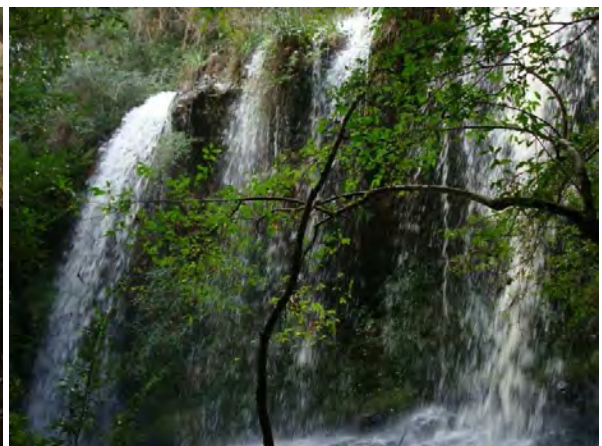
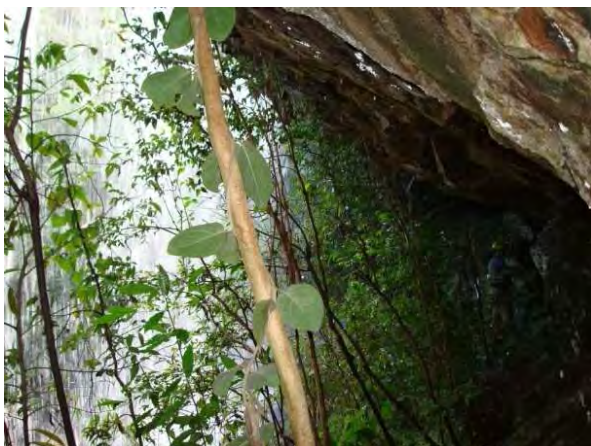
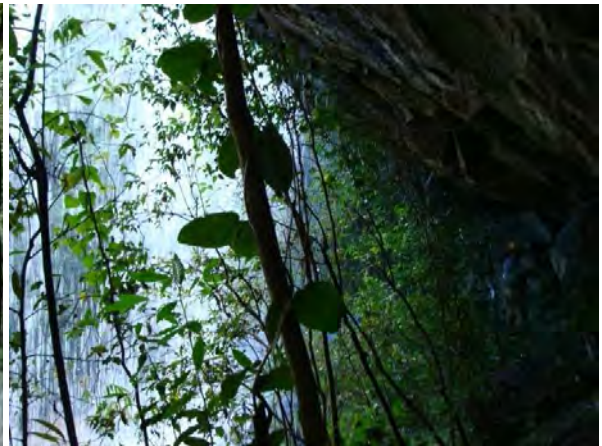


Furna da Furna, Zorrilho, Cipó e Xaximos Ossos (Bom Jesus/RS, AID).



Furna da Furna, Zorrilho, Cipó e Xaximos Ossos (Bom Jesus/RS, AID).





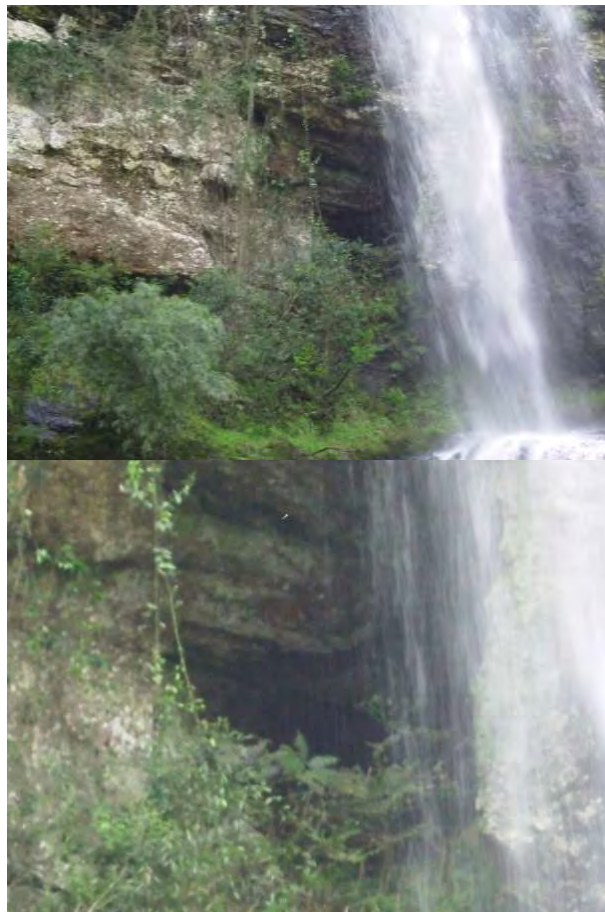
Furna da Fazenda do Geraldo (Lages/SC, AID).





Gruta do Perau do Caixão (São Joaquim/SC, AID).





Gruta do Arroio Tafona I e II (São Joaquim/SC, AID).





Furna da Usina (Bom Jesus/RS, AID).



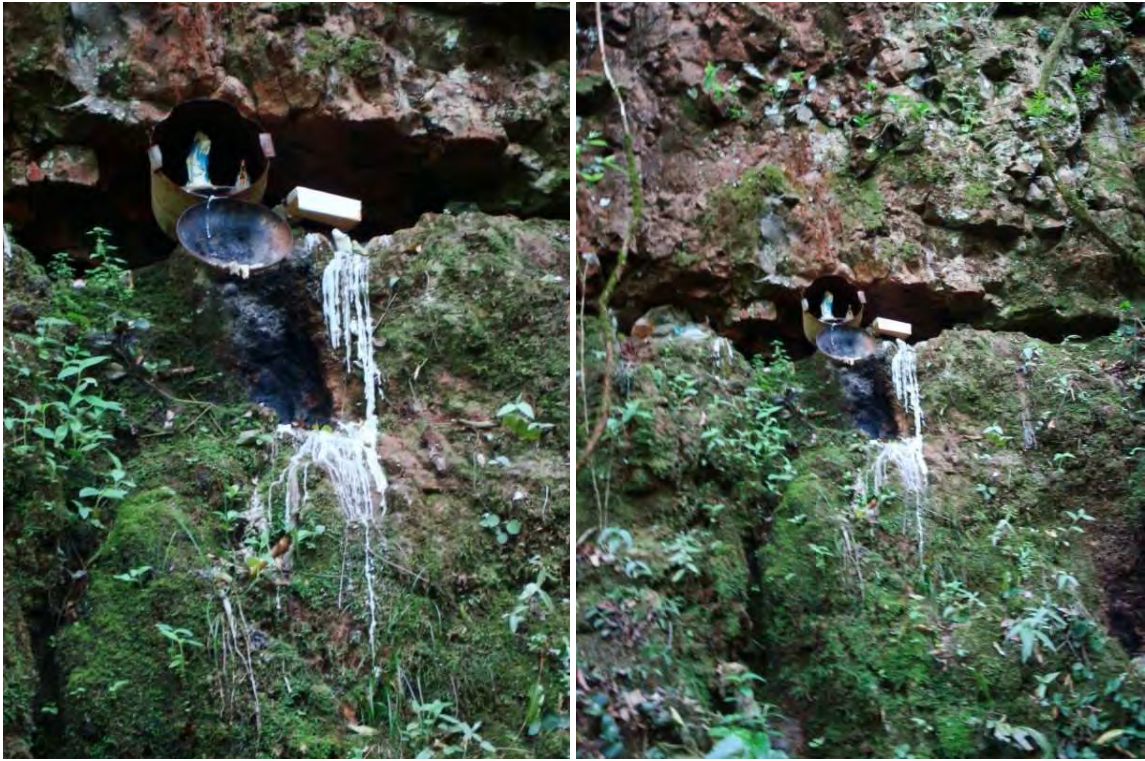


Furna da Usina (Bom Jesus/RS, AID).



**Furna da Usina (Bom Jesus/RS, AID).**





Pequena capela em cavidade.



Ponto de infiltração ou de recarga no escoamento subsuperficial.





Furna da Onça (Bom Jesus/RS, AID).





Furna da Onça (Bom Jesus/RS, AID).



Toca da Coruja (Bom Jesus/RS, AID).







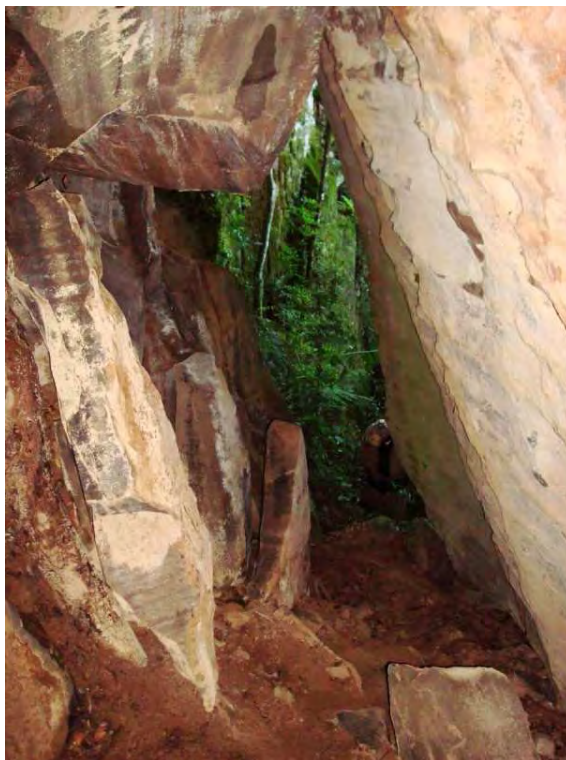
Gruta da Estrada da Goiabeira (São José dos Ausentes/RS, AI1).





Furna da Fazenda Santa Rosa I a VIII (Lages/SC, AID).





Furna da Fazenda Santa Rosa I a VIII (Lages/SC, AID).





Furna da Fazenda Santa Rosa I a VIII (Lages/SC, AID).





Furna da Fazenda Santa Rosa I a VIII (Lages/SC, AID).





Furna da Fazenda Santa Rosa I a VIII (Lages/SC, AID).





Furna da Fazenda Santa Rosa I a VIII (Lages/SC, AID).

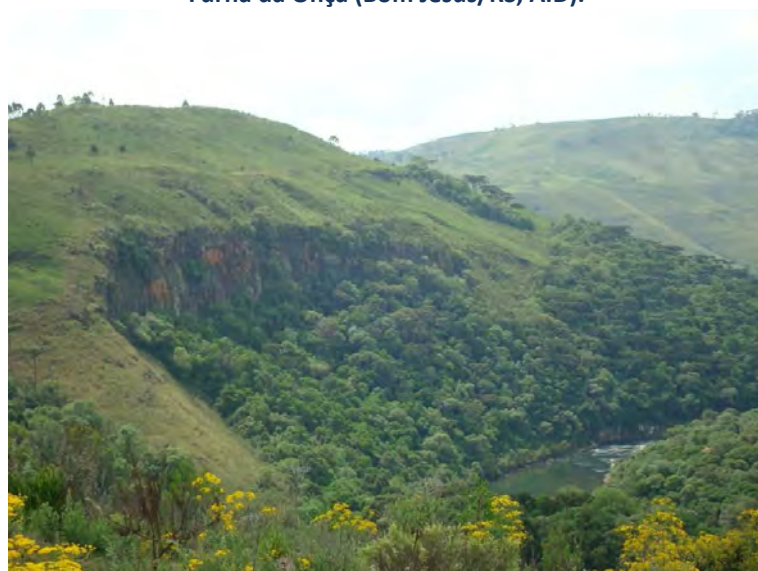


**Depressão fechada na Coxilha Rica (Lages/SC, AID).**





**Furna da Onça (Bom Jesus/RS, AID).**



**Gruta do Perau Vermelho (São Joaquim/SC, AID).**

## **A REPRESENTAÇÃO GRÁFICA DAS CAVIDADES DAS ÁREAS DE INFLUÊNCIA DO AHE PAI QUERÊ**

Nesta seção estão relacionados os mapas espeleológicos das cavidades inseridas na Área Diretamente Afetada - ADA do empreendimento e os croquis orientados das demais cavidades da Área de Influência Direta – AID e Área de Influência Indireta – AII.

Para a concretização das representações que seguem foram utilizadas as seguintes ferramentas:

A confecção da linha das medidas internas dos espaços subterrâneos das cavidades da ADA foi utilizada o aplicativo SURVEX que é capaz de gerar um arquivo de vetores tipo DXF.

Para a representação gráfica ou mapa final, foi utilizado a aplicativo CorelDRAW, e os para os mapas de localização o AutoCADMap.



**FURNA DOS OSSOS SBE RS-15; GRUTA DA FURNA SBE RS-18;  
CAVERNA DO ZORRILHO SBR RS-26 ; GRUTA DO CIPÓ SBE RS-22 ;  
GRUTA DO XAXIM SBE RS-21 .**

**Coordenado topo do Perau: 28°33'04,43957"S / 50°24'40,50665"W**

**UTM (22J): 557590,721 / 6841579,886**

**Altitude: 1.002 metros**

**Elipsóide: SAD/69**

**Erro do GPS: 2 metros em tela**

**Projeção Horizontal (estimada para o sistema): 63,50metros**

**Desnível: 5 metros**

**Litologia: Basalto**

**Grau BCRA: 2C**

**Mapa: Carlos Eduardo Martins**

**Trabalho de Campo:**

Carlos Eduardo Martins

Daisy Cirino de Oliveira

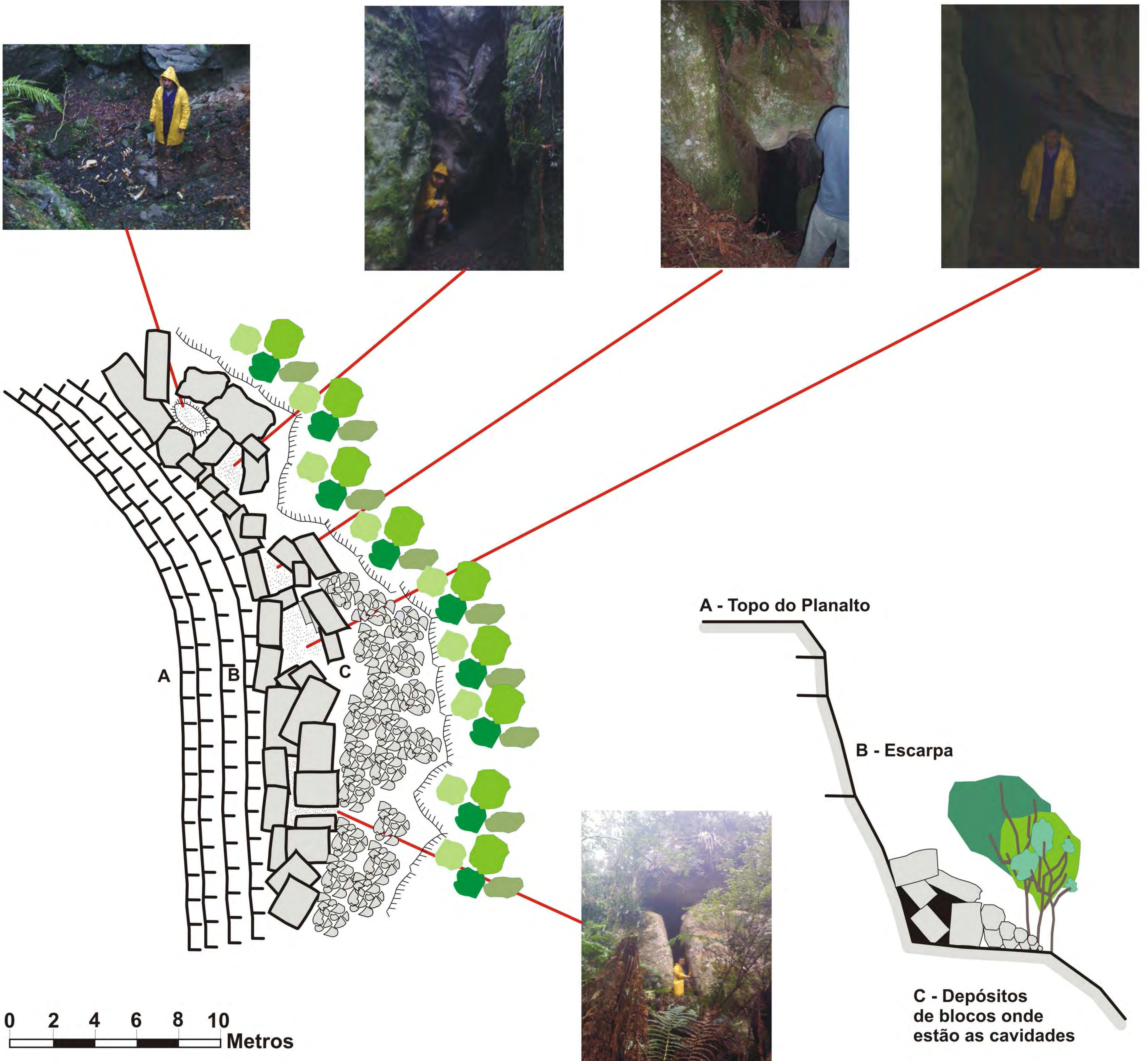
Ericson Cernawsky Igual

Sandro Secutti

**Convenções:**

-  Contorno de galeria
-  Desnível
-  Contorno do teto
-  Blocos
-  Sedimentos

NG





**FURNA DO PERAUZINHO DA SANTA OU DO CABRITO SBE SC-12**

**Coordenadas:** 28°24'10,81533"S / 50°28'23,17786"W

**UTM (22J):** 551612,223 / 6858029,707

**Altitude:** 899

**Elipsóide:** SAD/69

**Erro do GPS:** 3 metros em tela

**Desenvolvimento Linear:** metros

**Projeção Horizontal total (estimada):** 38,43 metros

**Desnível:** 0 metros

**Litologia:** Basalto

**Grau BCRA:** 2C

**Mapa:** Carlos Eduardo Martins

**Trabalho de Campo:**


Carlos Eduardo Martins

Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

**Convenções:**

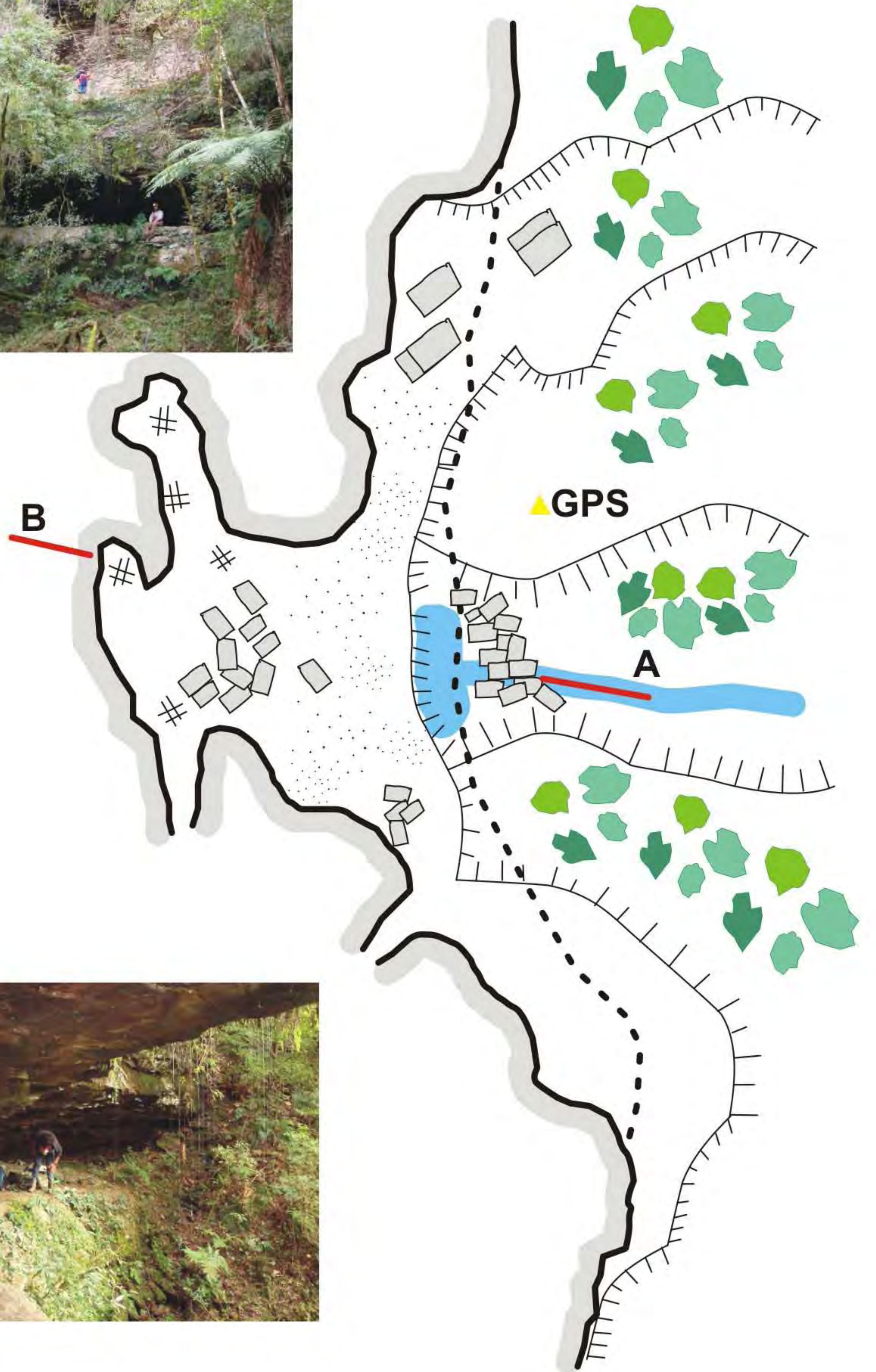
 Contorno de galeria

 Desnível

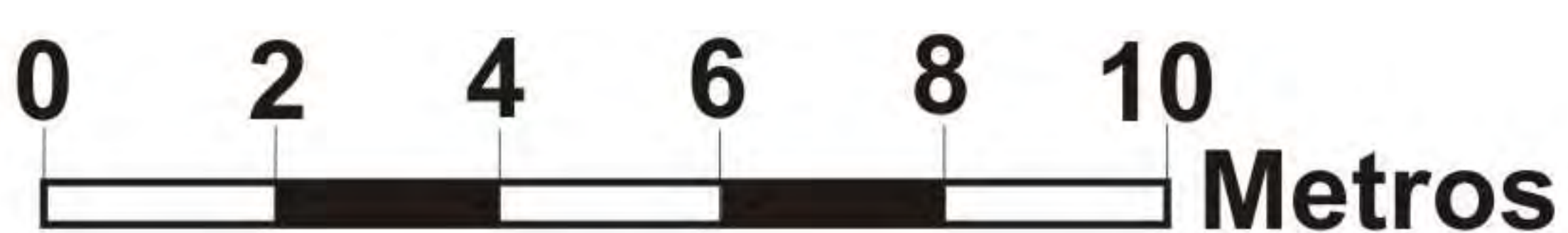
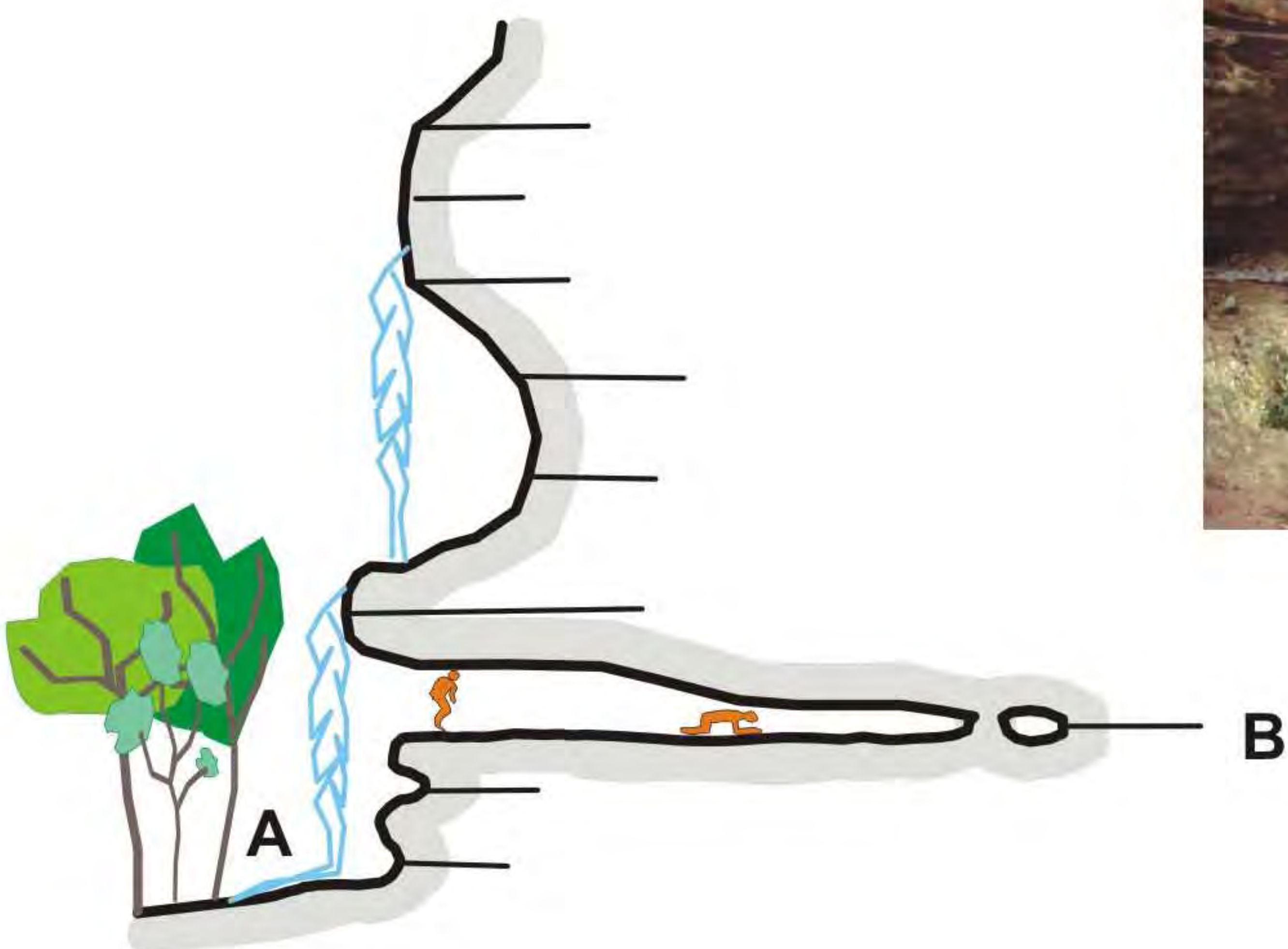
 Limite do teto

 Blocos

 Areia



NG





# GROTA DO PERAU DO CAIXÃO SBE SC-15

Coordenadas: 28°23'41,41204"S / 50°23'20,69952"W

UTM (22J): 532442,089 / 6866329,470

Altitude: 824 metros

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Projeção Horizontal (estimada): 37,86 metros

Desnível: 1 metros

Litologia: Basalto

Grau BCRA: 2C

Mapa: Carlos Eduardo Martins

Trabalho de Campo:

Carlos Eduardo Martins

Daisy Cirino de Oliveira

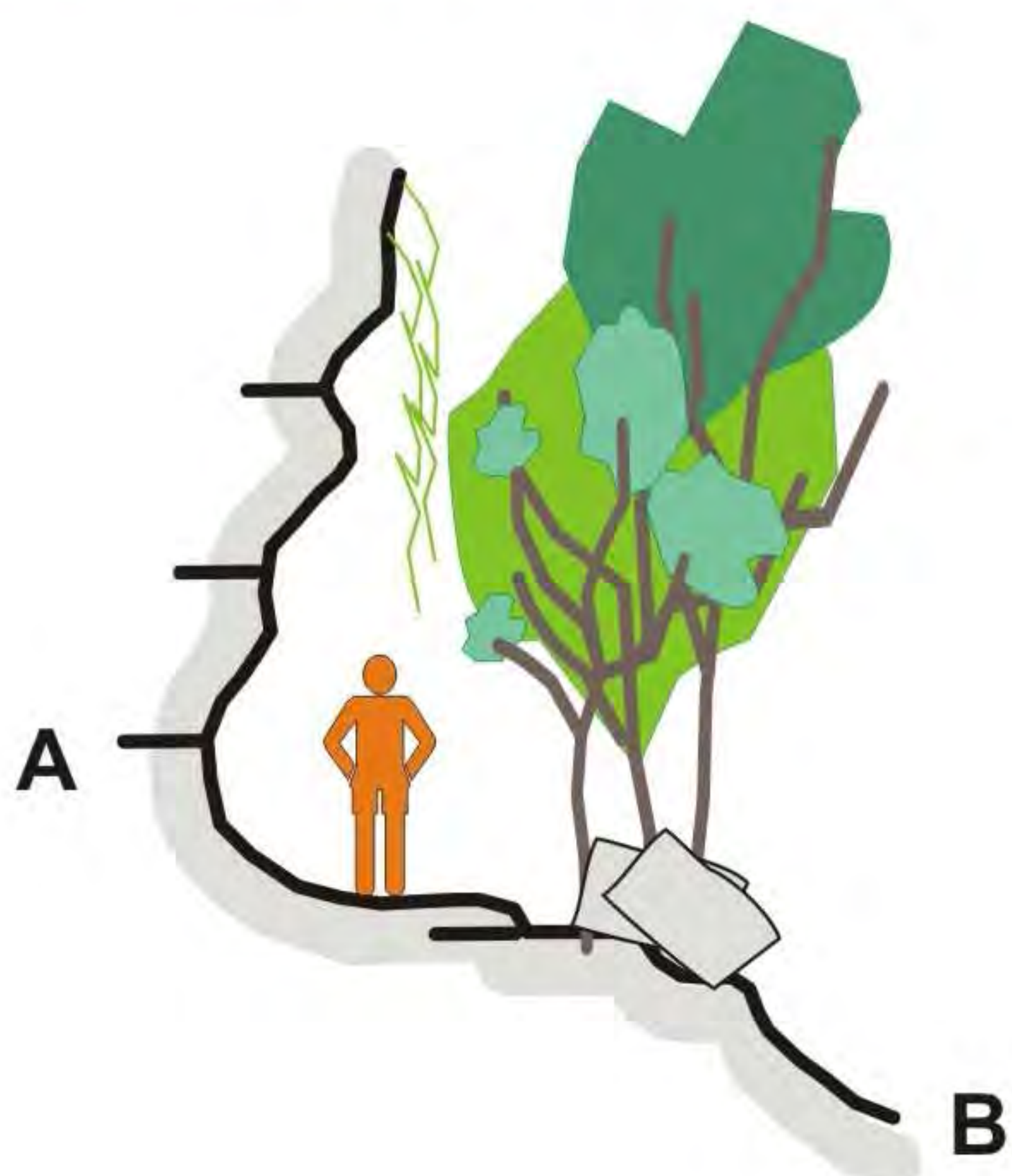
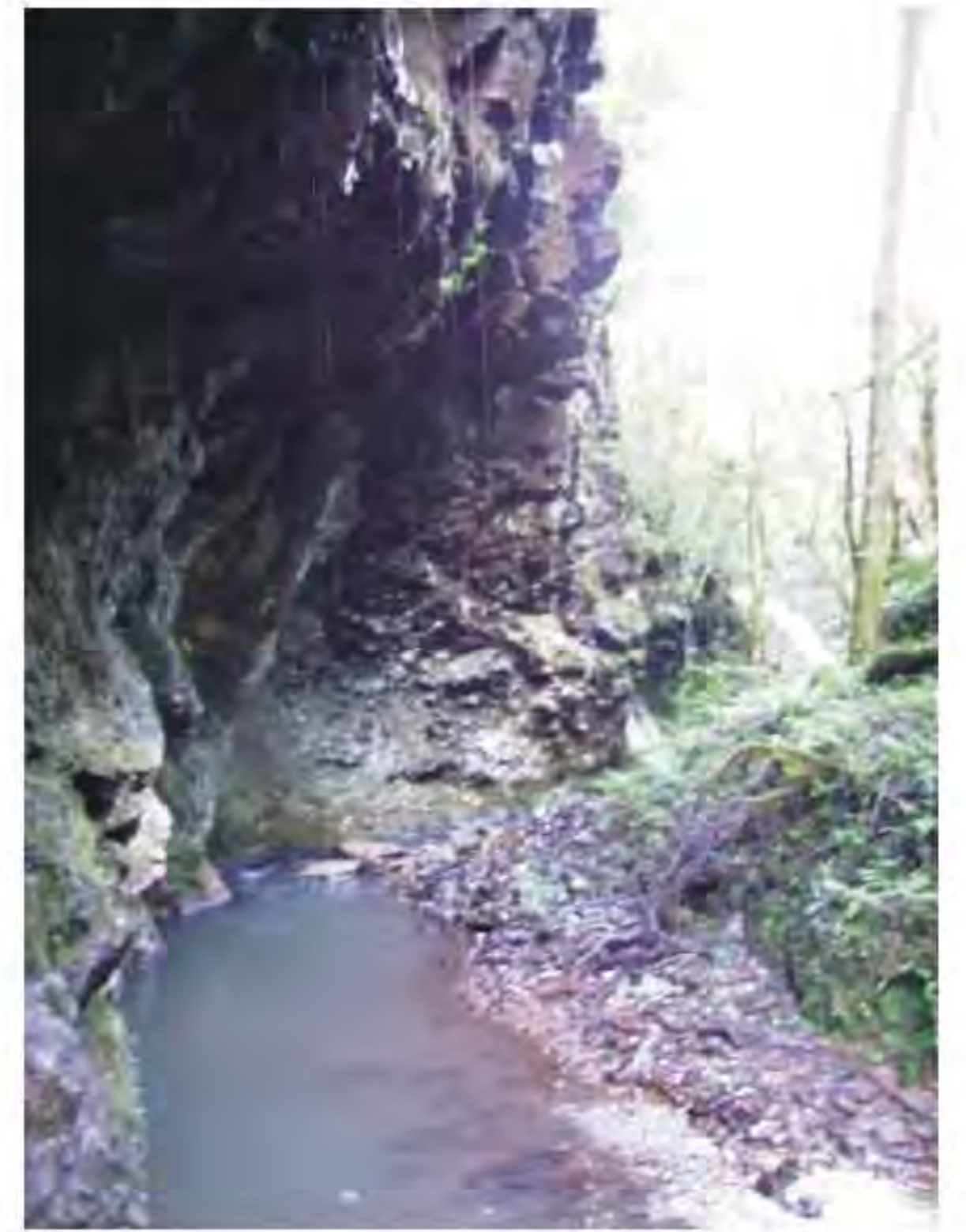
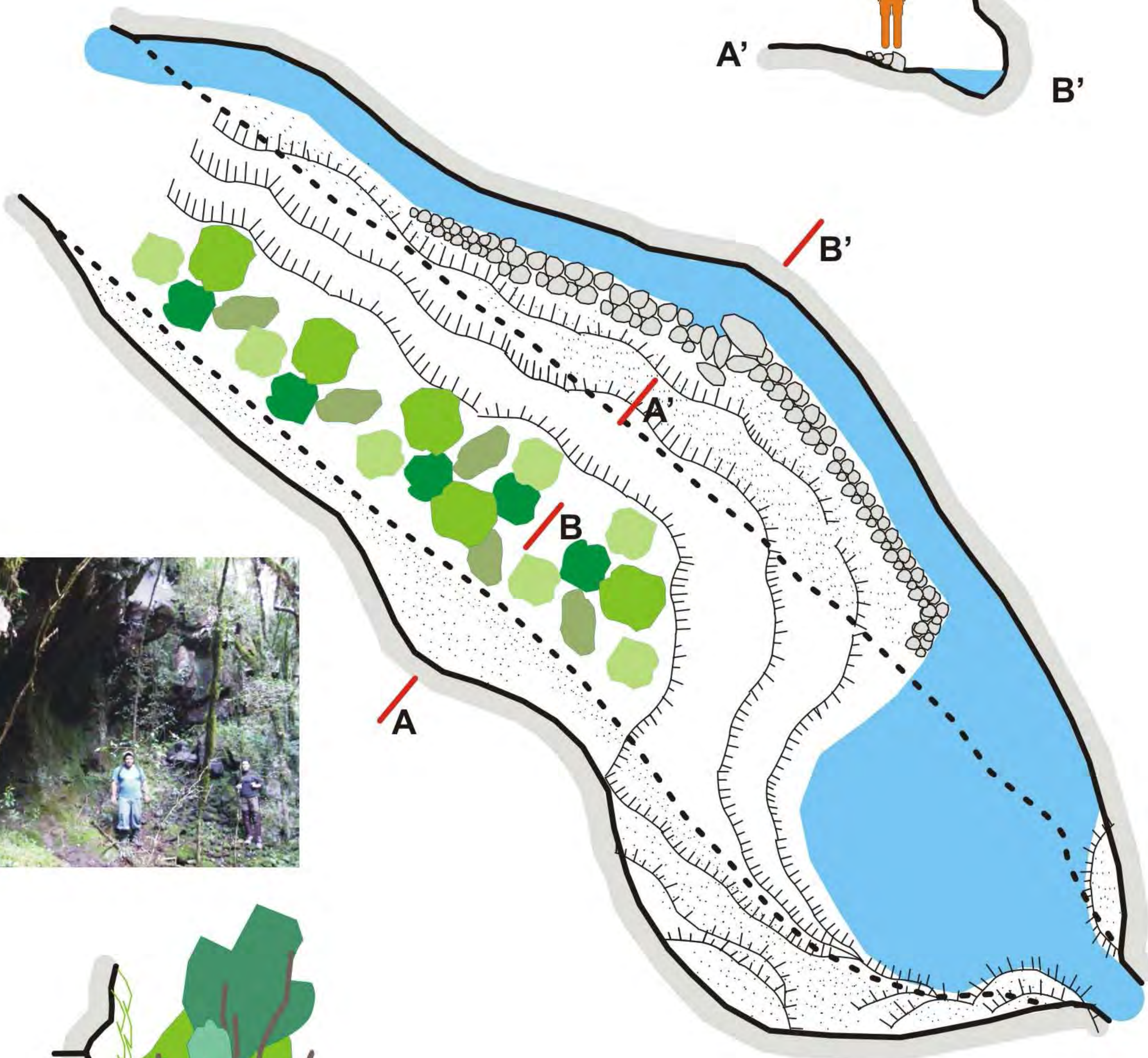
Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

-  Contorno de galeria
-  Desnível
-  Contorno do teto
-  Blocos
-  Sedimentos

NG



0 2 4 6 8 10 Metros



**FURNA DA FAZENDA DO GERALDO**  
**SBE SC13-13**

**Coordenadas:** 28°22'40.05"S; 50°36'49.18"W

**UTM (22J):** 544651,088 / 6861389,377

**Altitude:** 909 metros

**Elipsóide:** SAD/69

**Erro do GPS:** 4 metros

**Desenvolvimento Linear:** metros

**Projeção Horizontal (estimada):** 39,21metros

**Desnível:** 1,5 metros

**Litologia:** Basalto

**Grau BCRA:** 2C

**Croqui:** Carlos Eduardo Martins

**Trabalho de Campo:**

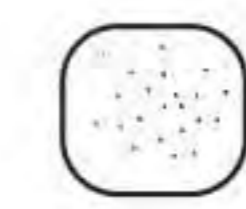
Carlos Eduardo Martins

Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Patricia Lucia Pereira

**Convenções:**



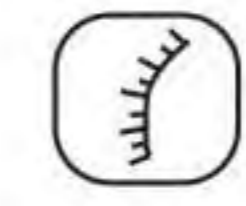
Sedimento



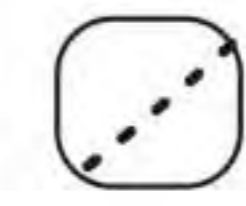
Blocos



Contorno da cavidade



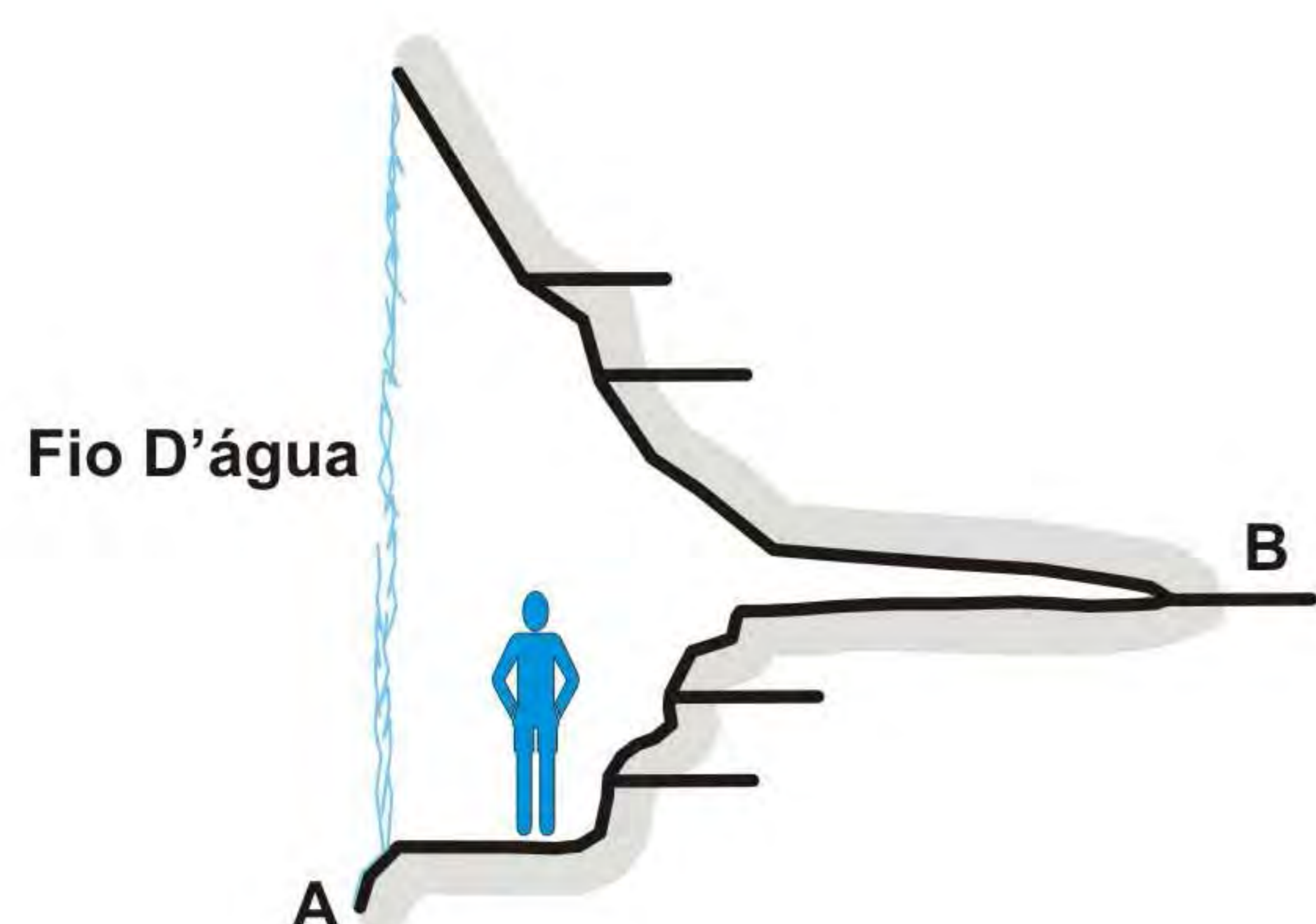
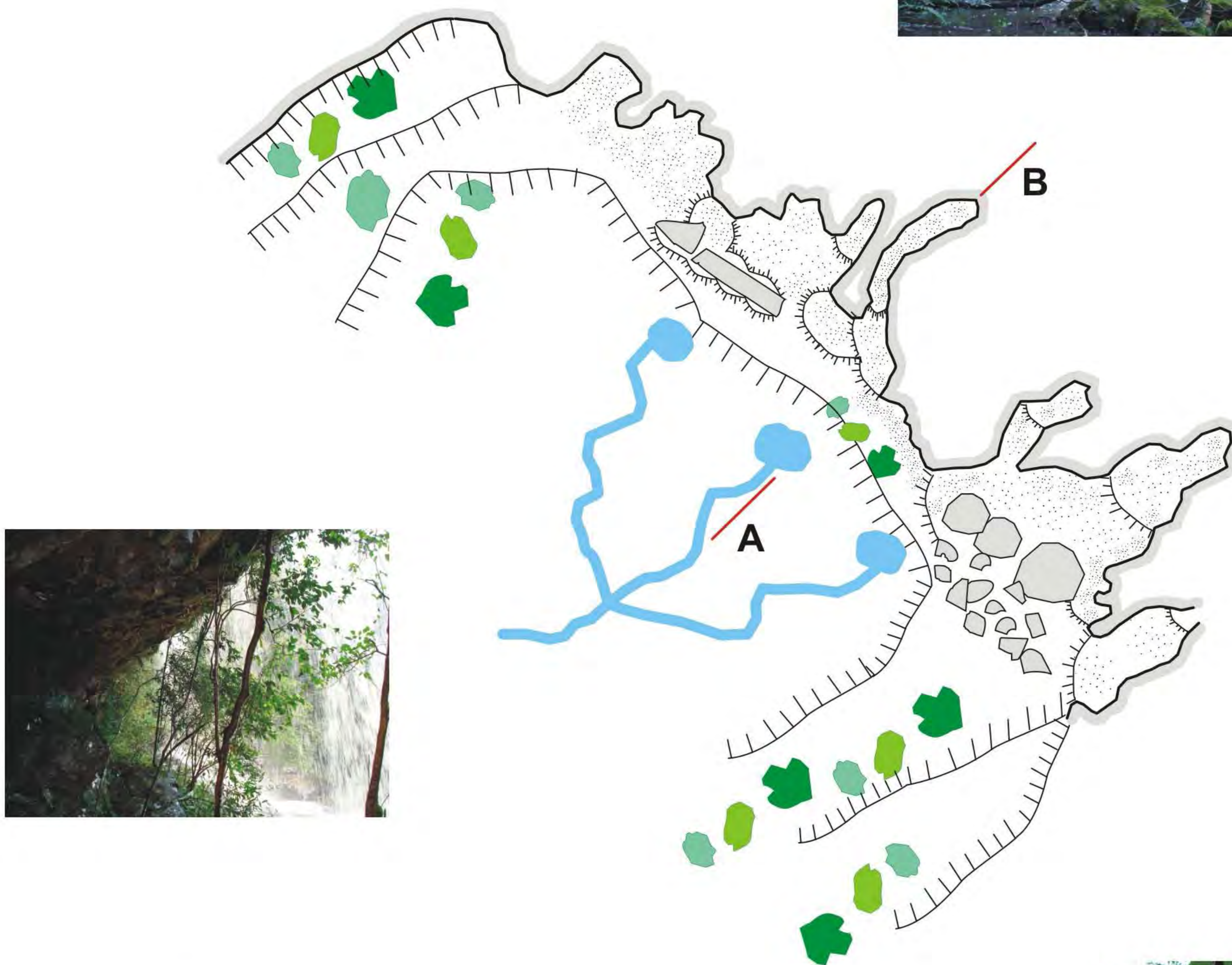
Desnível



Limite do teto



NG





**FURNA DA AEGLA I (SBE RS-23) E II SBE RS-24)**

**Coordenadas:** 28° 25' 29,39212"S / 50° 36' 38,42600"W

**UTM (22J):** 538128,648 / 6855662,898

**Altitude:** 836

**Elipsóide:** SAD/69

**Erro do GPS:** 1,2 metros em tela

**Desenvolvimento Linear:** 93.52

**Projeção Horizontal total:** 62,4 metros

Aegla I: 33,8 metros

Aegla II: 28,66 metros

**Desnível:** 3.86m

**Litologia:** Basalto

**Grau BCRA:** 4C

**Mapa:** Carlos Eduardo Martins

**Trabalho de Campo:**

Carlos Eduardo Martins

Daisy Cirino de Oliveira

Ericson Cernawsky Igual

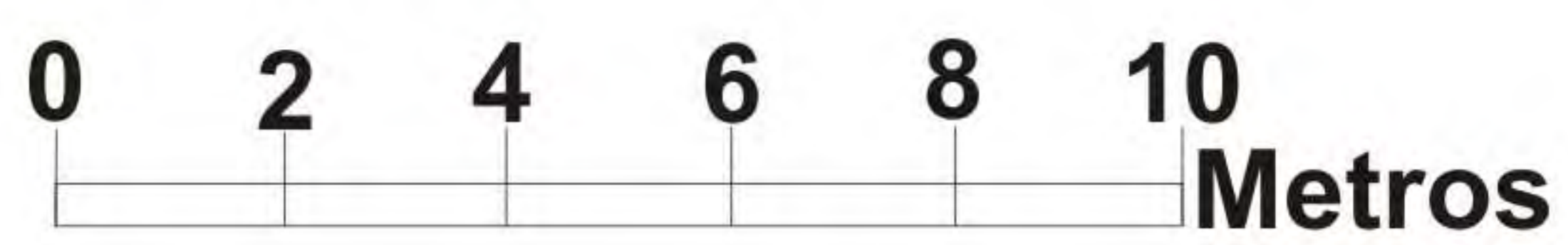
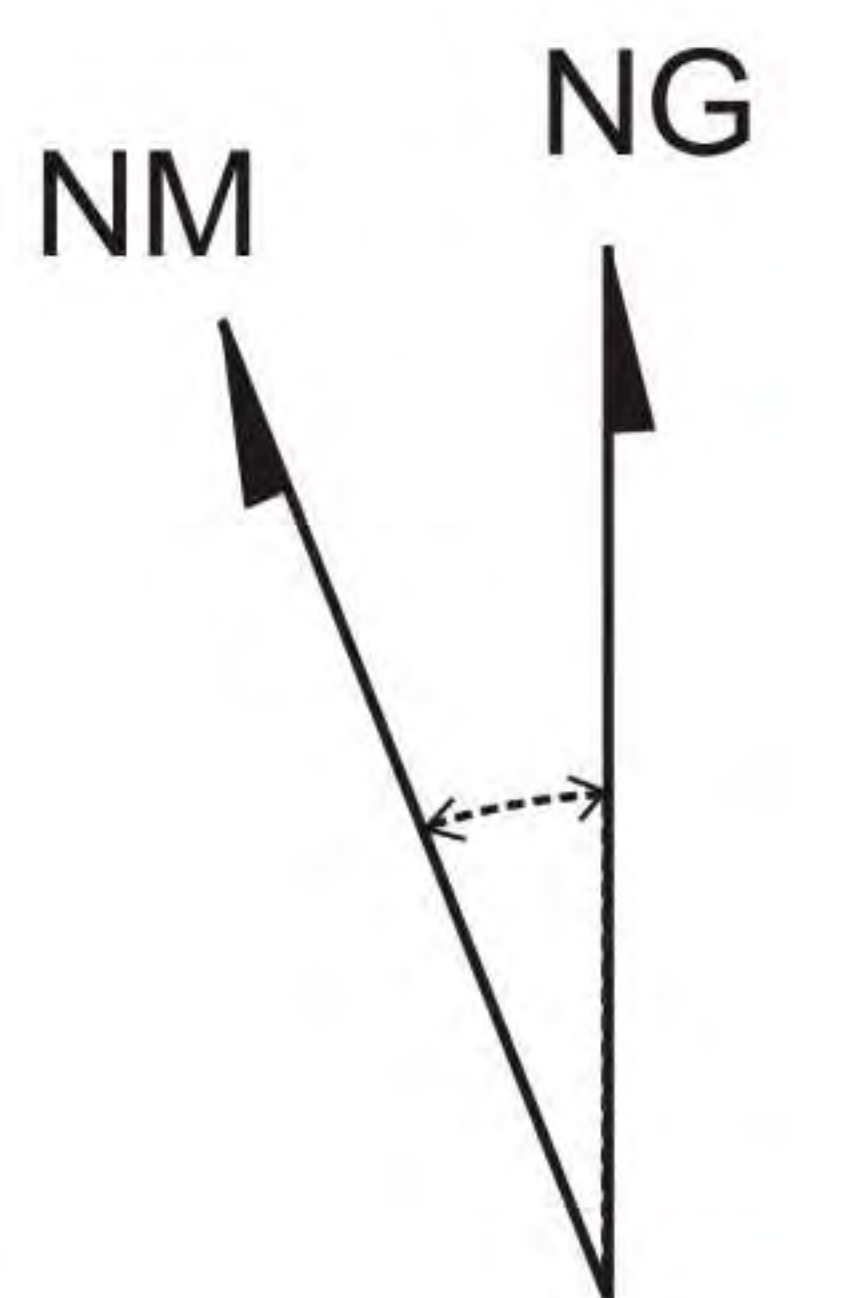
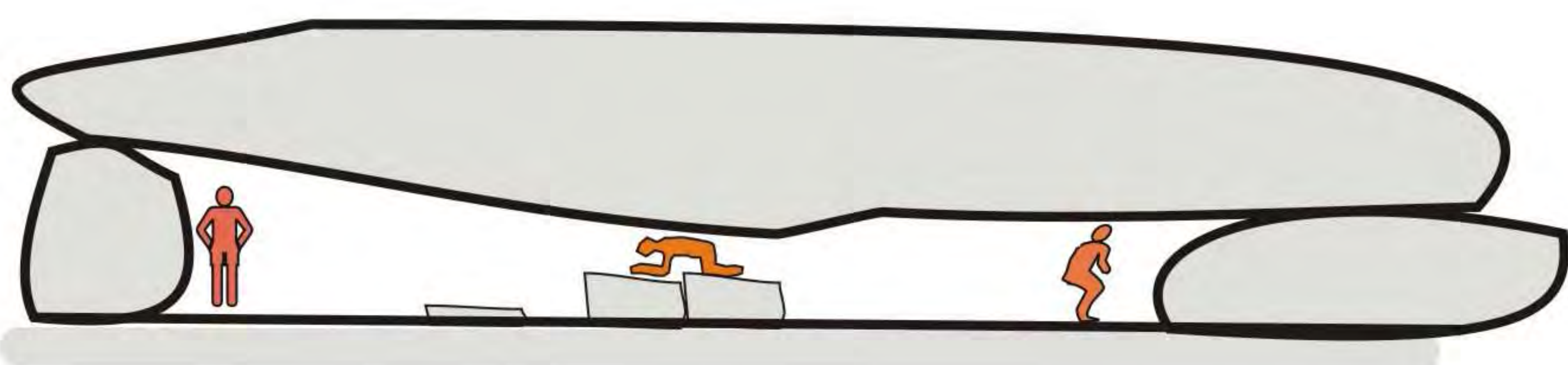
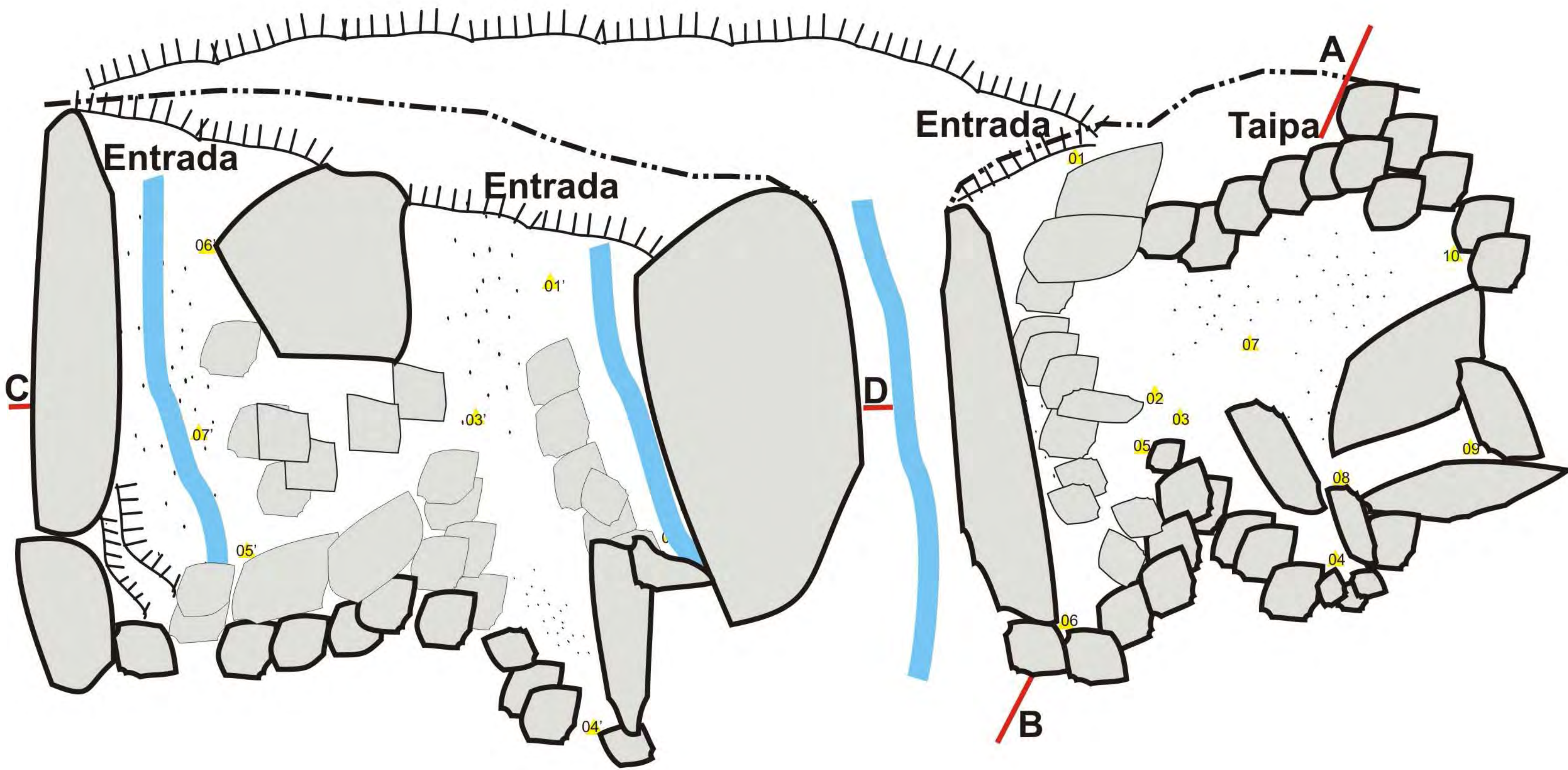
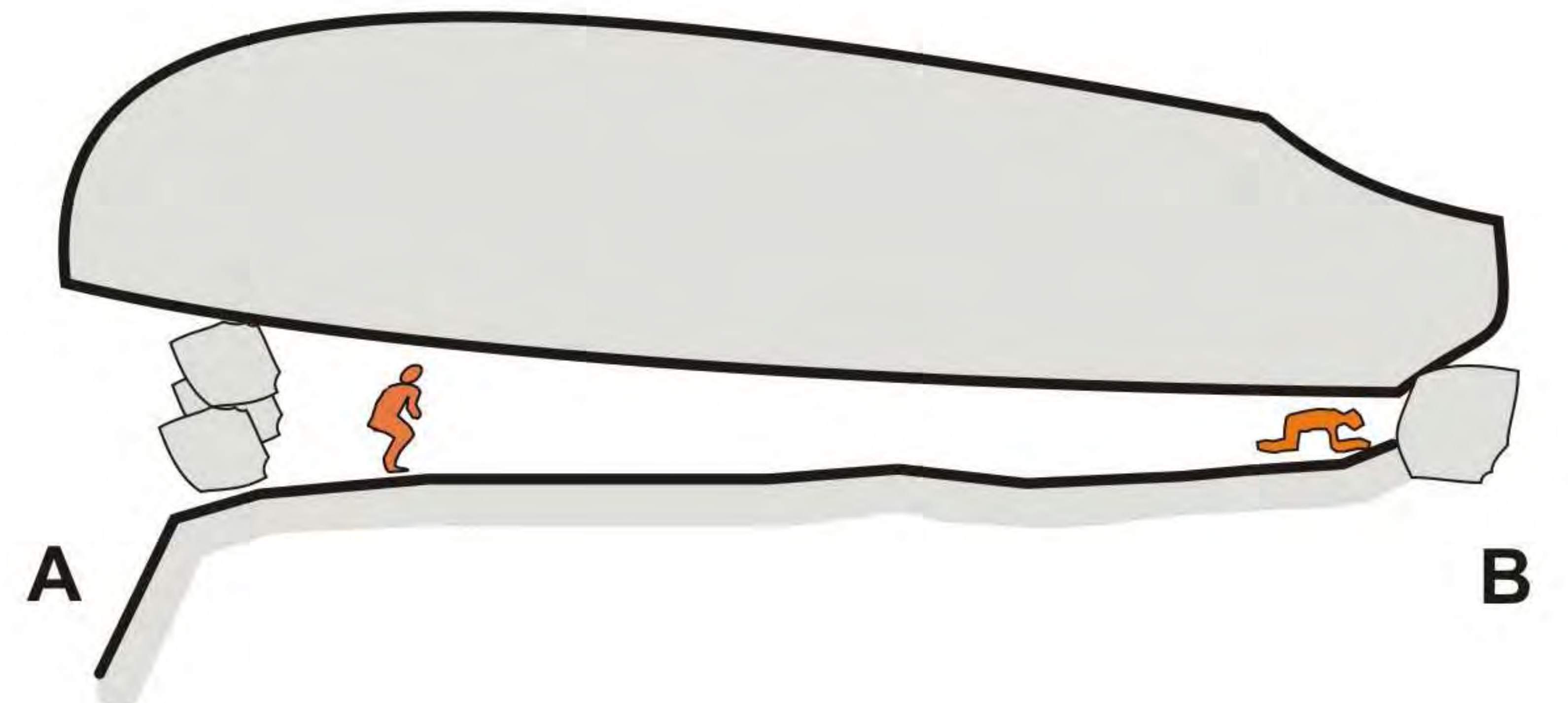
Sandro Secutti

**Convenções:**

-  Contorno de galeria
-  Desnível leve
-  Fuxo d'água
-  Base Topográfica
-  Blocos abatidos
-  Areia



GPS



**Declinação Magnética:** 16°58' W, 0° 9' W/ano

**Fonte:**

<http://www.ngdc.noaa.gov/geomagmodels/struts/calcDeclination>



# TOCA DA CORUJA SBE RS-25

Coordenadas: 28° 25' 33,38152"S / 50 36' 38,74070"W

UTM (22J): 538119,690 / 6855540,159

Altitude: 909

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Desenvolvimento Linear: 45.57

Projeção Horizontal total: 17.80 metros

Desnível: 7.13 metros

Litologia: Basalto

Grau BCRA: 4C

Mapa: Carlos Eduardo Martins

Trabalho de Campo:

Carlos Eduardo Martins

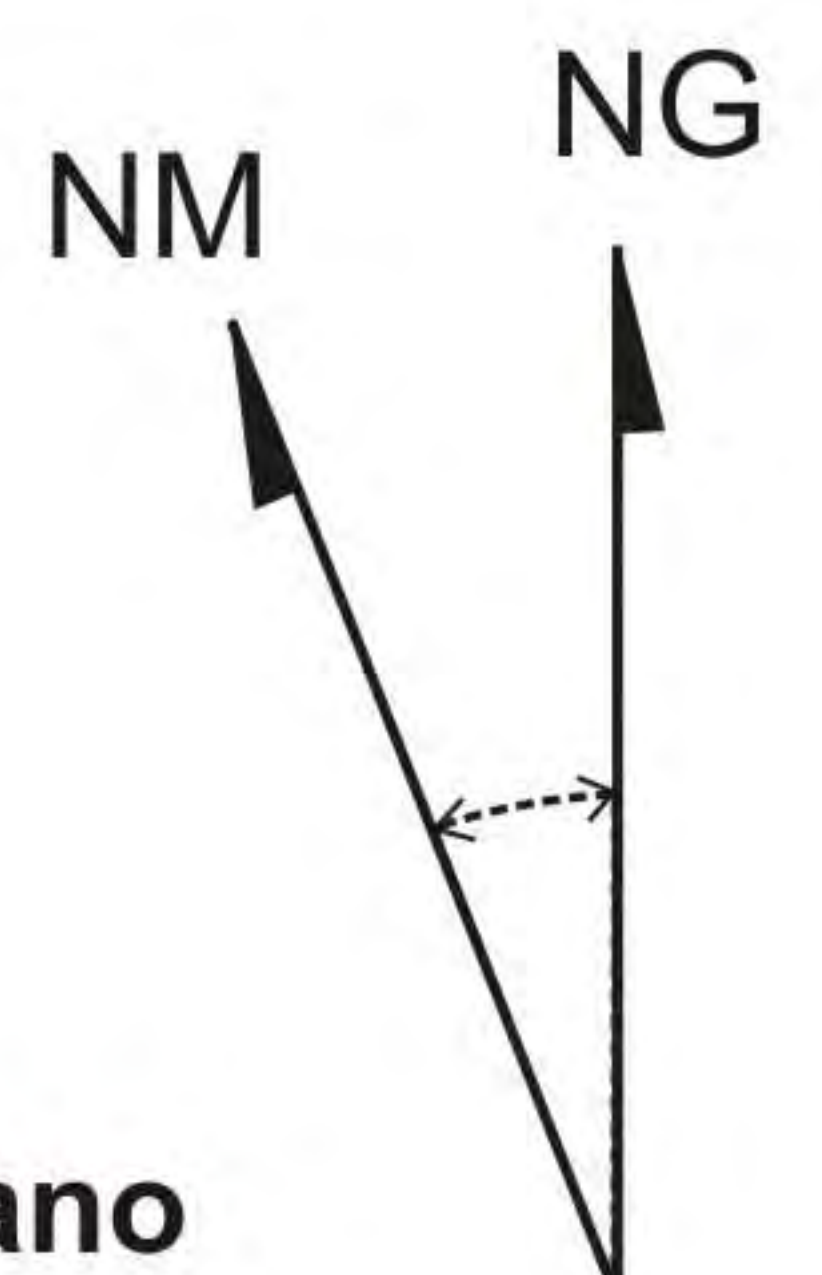
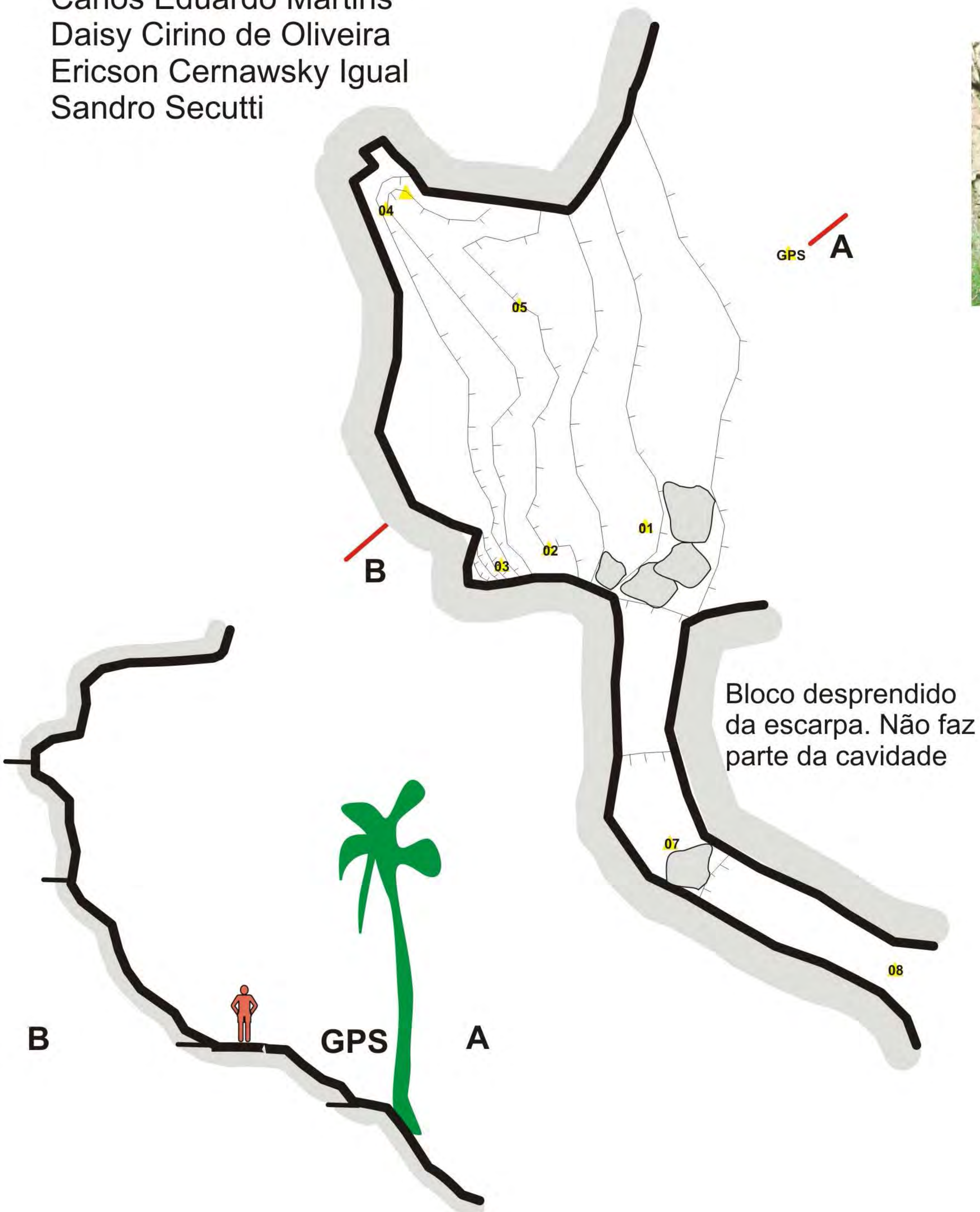
Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

-  Contorno de galeria
-  Desnível leve
-  Base Topográfica
-  Blocos abatidos
-  Areia



0 2 4 6 8 10 Metros

Declinação Magnética: 16°58' W, 0° 9' W/ano

Fonte:

<http://www.ngdc.noaa.gov/geomagmodels/struts/calcDeclination>



# FURNA DO PERAU VERMELHO SBE SC-17

Coordenadas: 28° 22' 50,77337"S / 50° 22' 05,05574"W

UTM (22J): 561913,994 / 6860443,406

Altitude: 888

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Desenvolvimento Linear: 25.08 metros

Projeção Horizontal total: 15.18 metros

Desnível: 7.59 metros

Litologia: Basalto

Grau BCRA: 4C

Mapa: Carlos Eduardo Martins

Trabalho de Campo:

Carlos Eduardo Martins

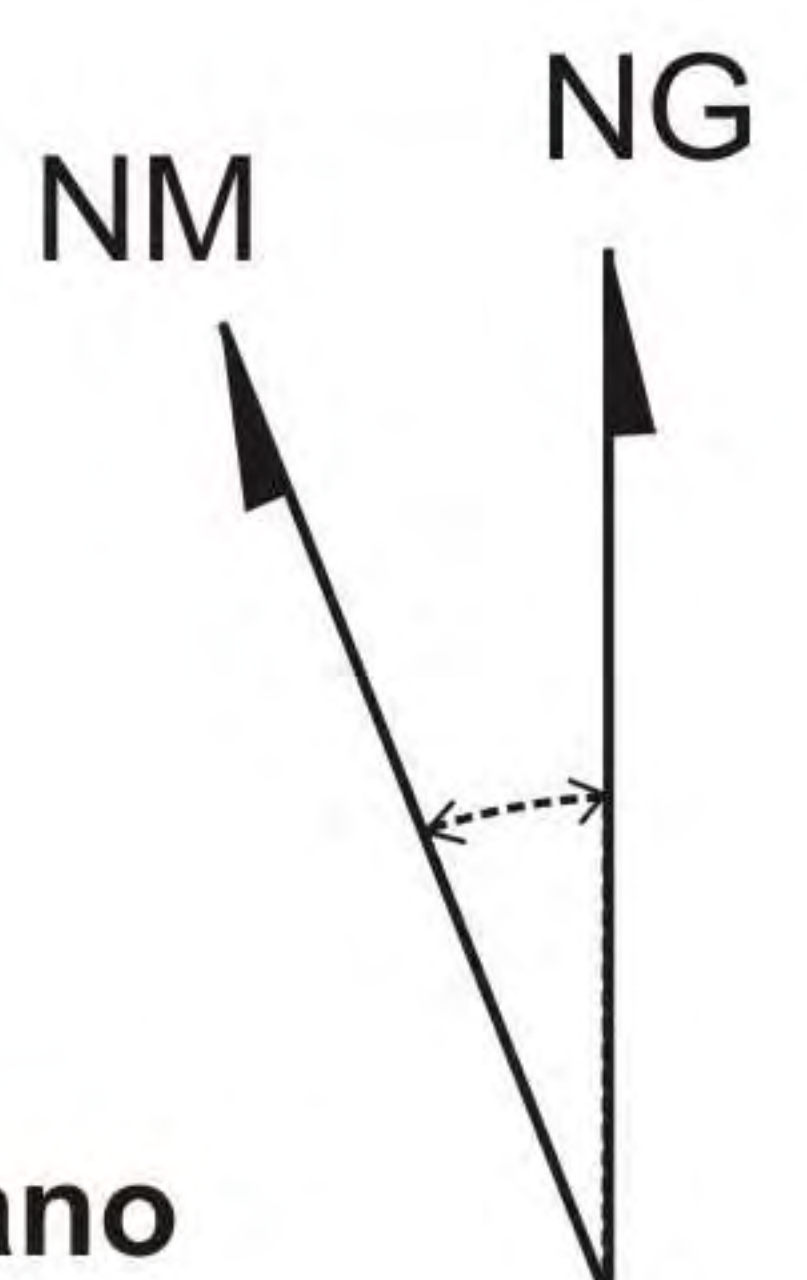
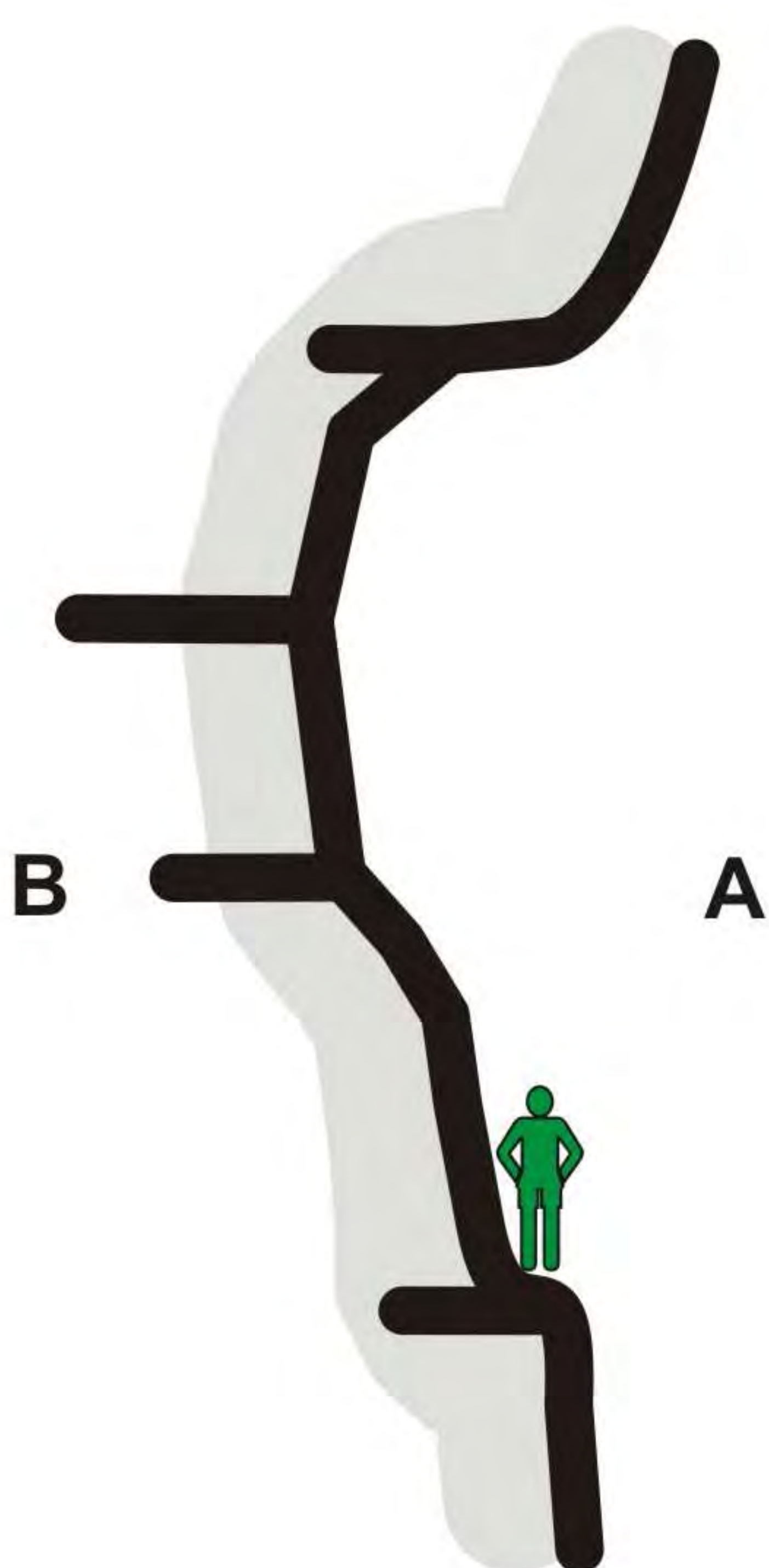
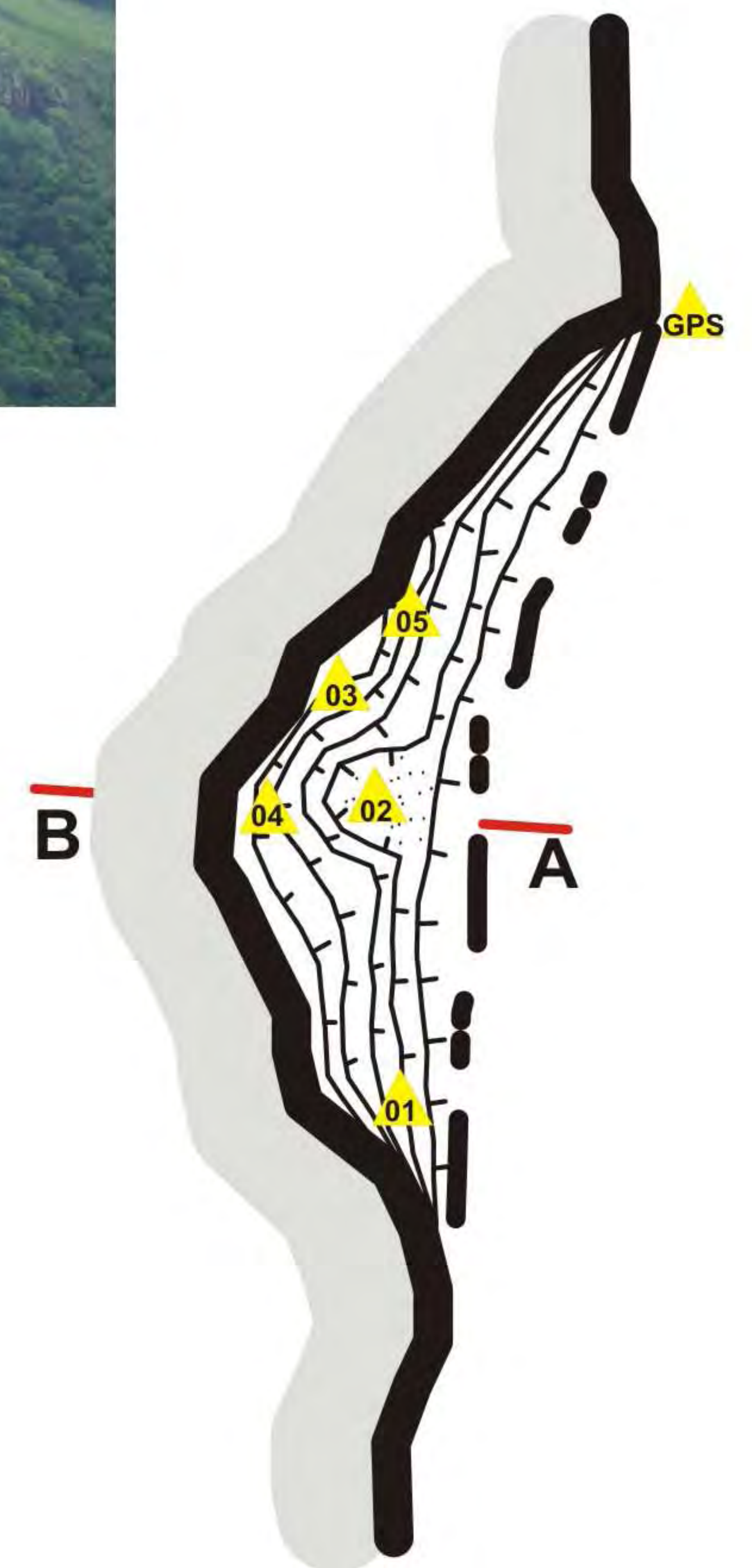
Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

-  Contorno de galeria
-  Desnível leve
-  Base Topográfica
-  Blocos abatidos
-  Areia



Declinação Magnética: 17°08' W, 0° 9' W/ano

Fonte:

<http://www.ngdc.noaa.gov/geomagmodels/struts/calcDeclination>



# TOCA DO MORCEGO SBE RS

Coordenadas: 28° 22' 50,77337"S / 50° 22' 05,05574"W

UTM (22J): 532442,089 / 6866329,470

Altitude: 888

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Projeção Horizontal (estimada): 33,27 metros

Desnível: 0 metros

Litologia: Basalto

Grau BCRA: 2C

Mapa: Carlos Eduardo Martins

## Trabalho de Campo:


Carlos Eduardo Martins

Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

 Contorno de galeria

 Desnível

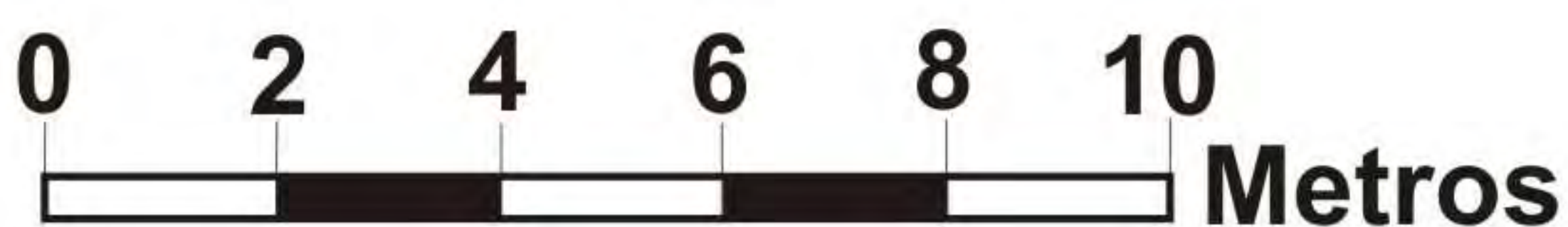
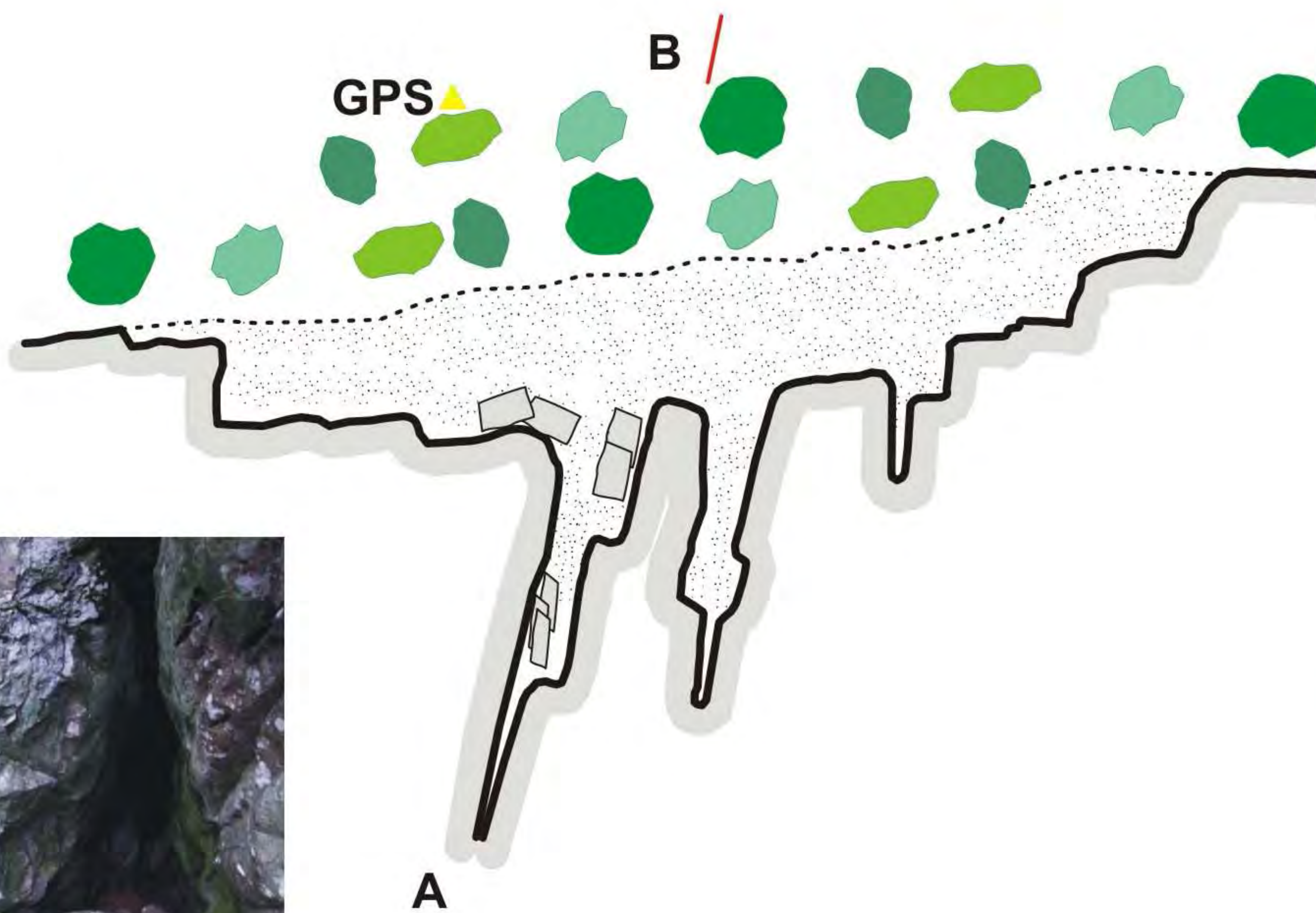
 Contorno do teto

 Blocos

 Sedimentos



NG





# GRUTA DO PERAU BRANCO SBE RS-15

Coordenadas: 28°27'32,64173"S / 50°20'46,04384"W

UTM (22J): 564017,286 / 564017,286

Altitude: 948 metros

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Projeção Horizontal (estimada): 5 metros

Desnível: 0 metros

Litologia: Basalto

Grau BCRA: 2C

Mapa: Carlos Eduardo Martins

## Trabalho de Campo:

Carlos Eduardo Martins

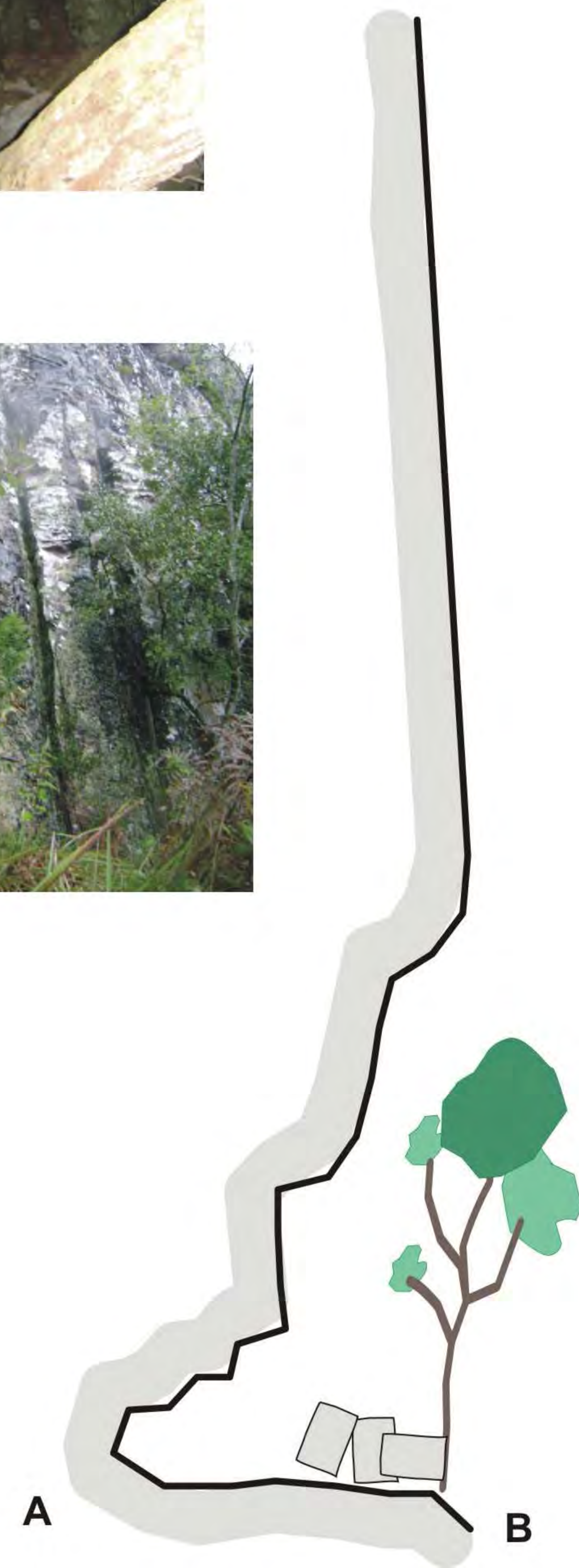
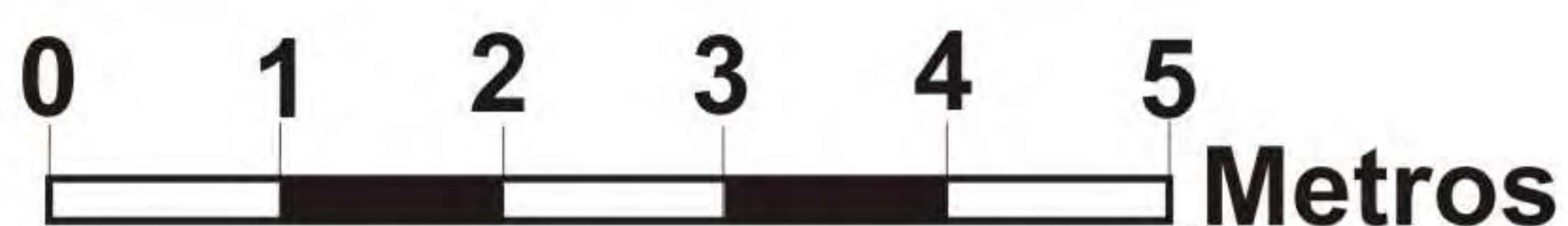
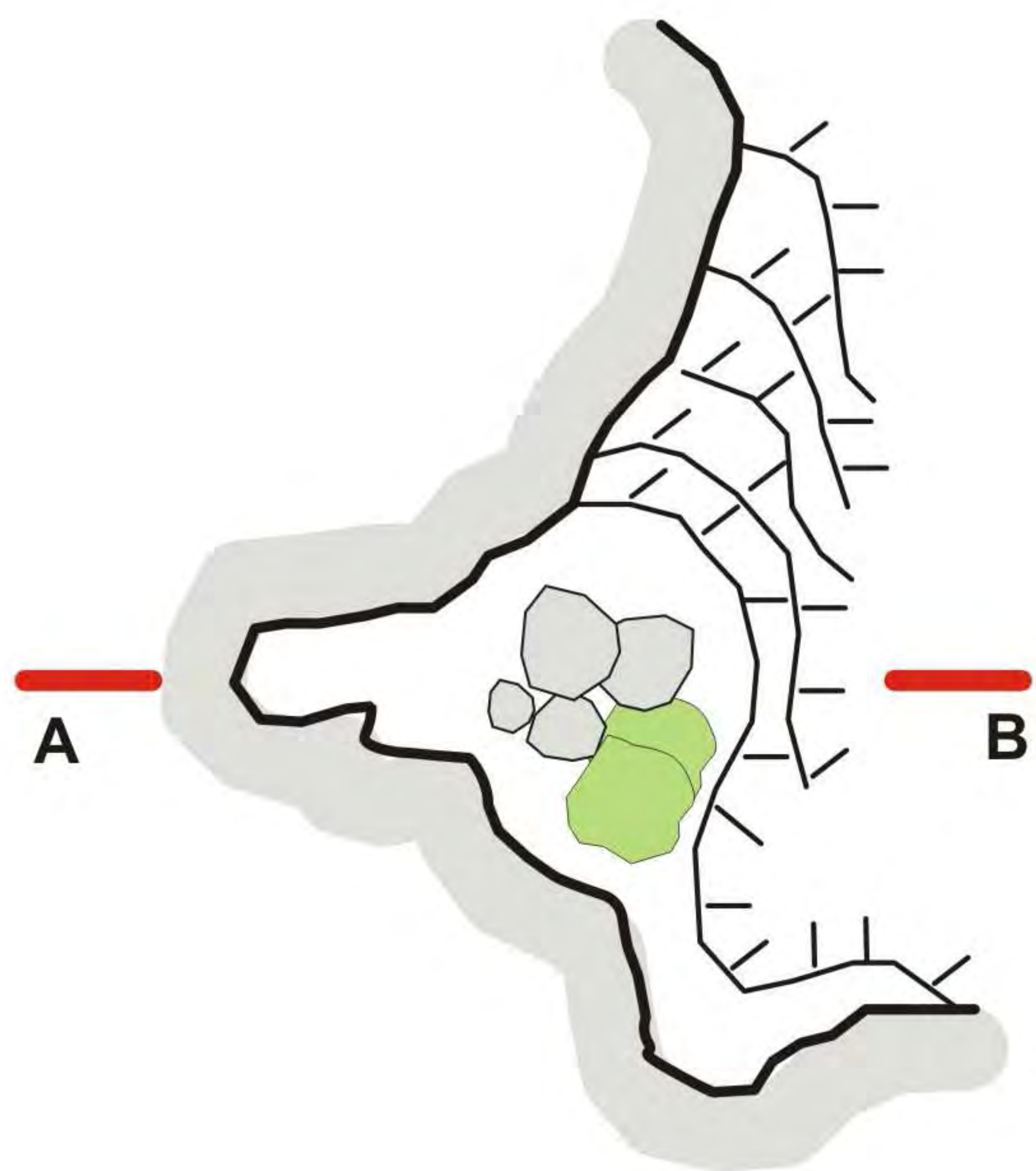
Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

-  Contorno de galeria
-  Desnível
-  Contorno do teto
-  Blocos
-  Sedimentos





# GRUTA DO PERAU BRANCO II

Coordenadas: 28°27'33,01320"S / 50°20'46,37964"W

UTM (22J): 564008,091 / 6851746,346

Altitude: 949 metros

Elipsóide: SAD/69

Erro do GPS: 2 metros em tela

Projeção Horizontal (estimada): 4 metros

Desnível: 1 metros

Litologia: Basalto

Grau BCRA: 2C

Mapa: Carlos Eduardo Martins

## Trabalho de Campo:


Carlos Eduardo Martins

Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

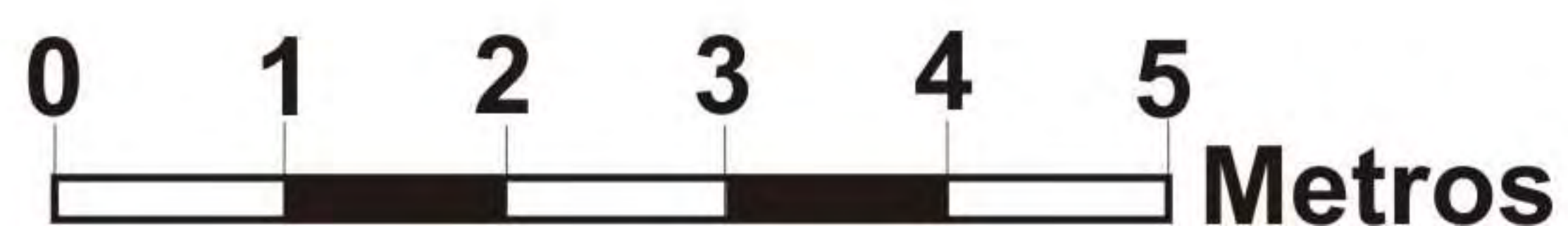
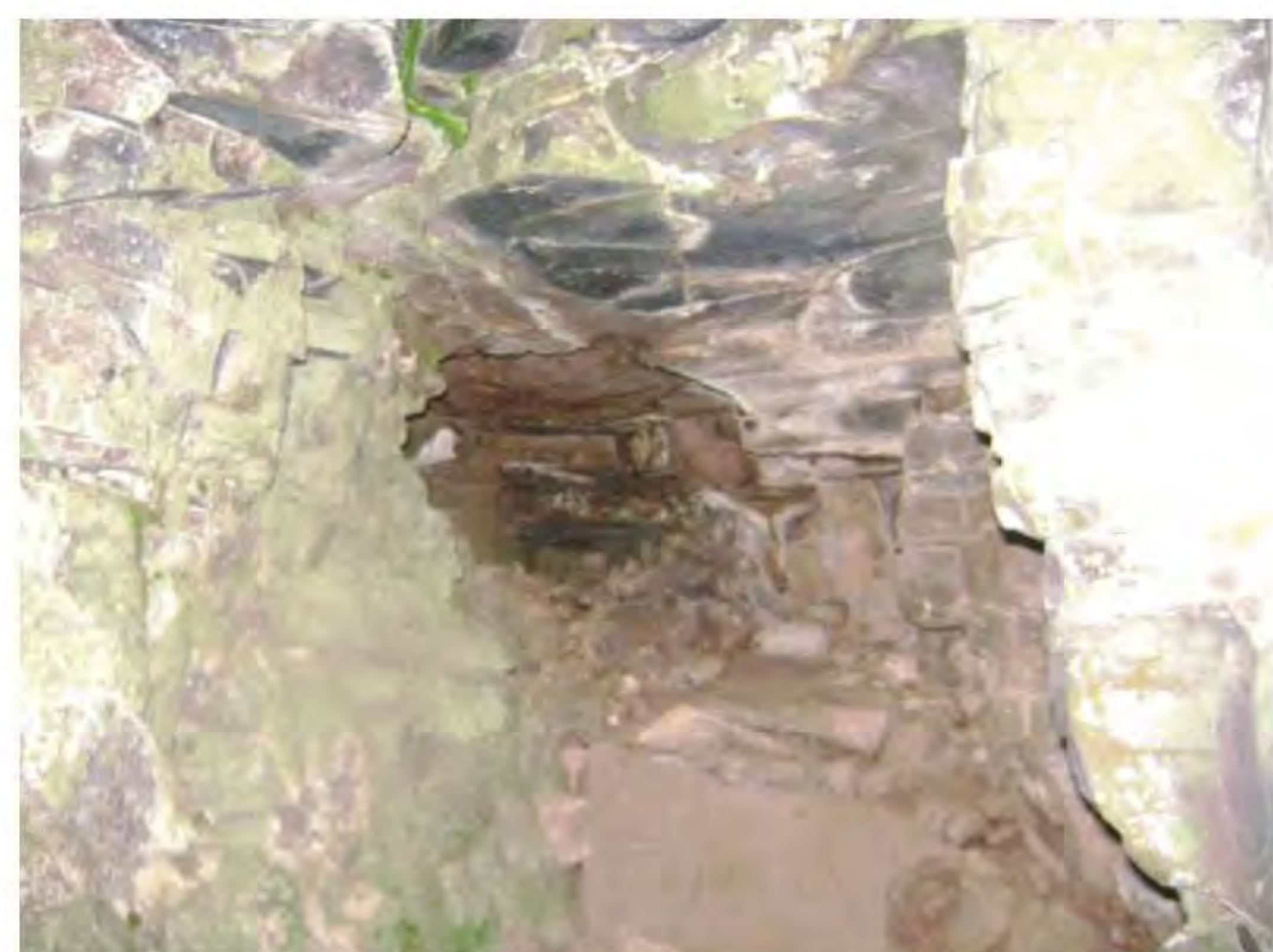
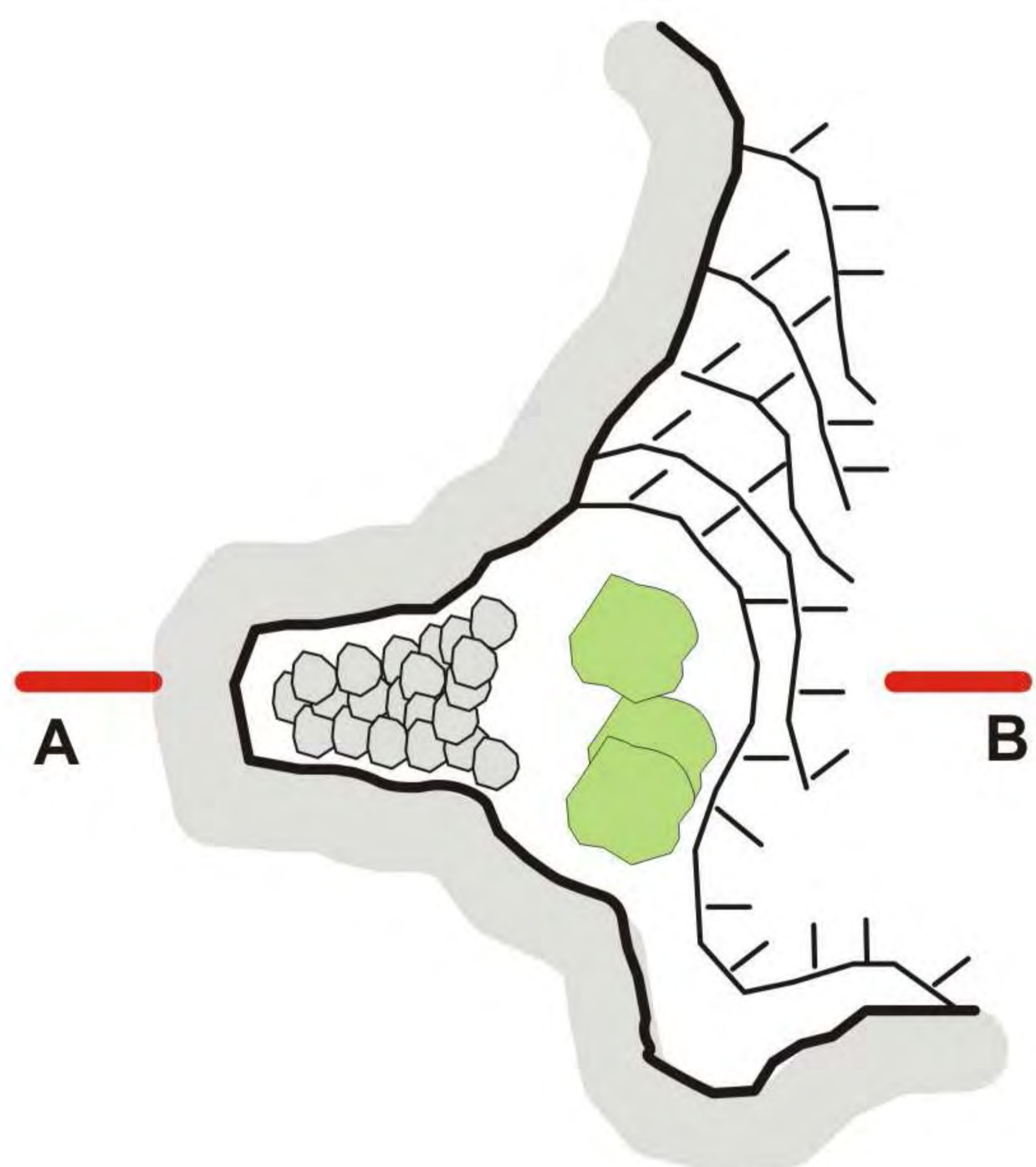
 Contorno de galeria

 Desnível

 Contorno do teto

 Blocos

 Sedimentos



A B



**FURNA DA FAZENDA SANTA ROSA SBE SC-16**

Coordenadas: 28°22'20,96929"S / 50°36'30,15191"W

UTM (22J): 538372,590 / 6861460,535

Altitude: 909

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Projeção Horizontal (estimada): 40,51 metros

Desnível: 2 metros

Litologia: Basalto

Grau BCRA: 2C

Mapa: Carlos Eduardo Martins

**Trabalho de Campo:**

Carlos Eduardo Martins

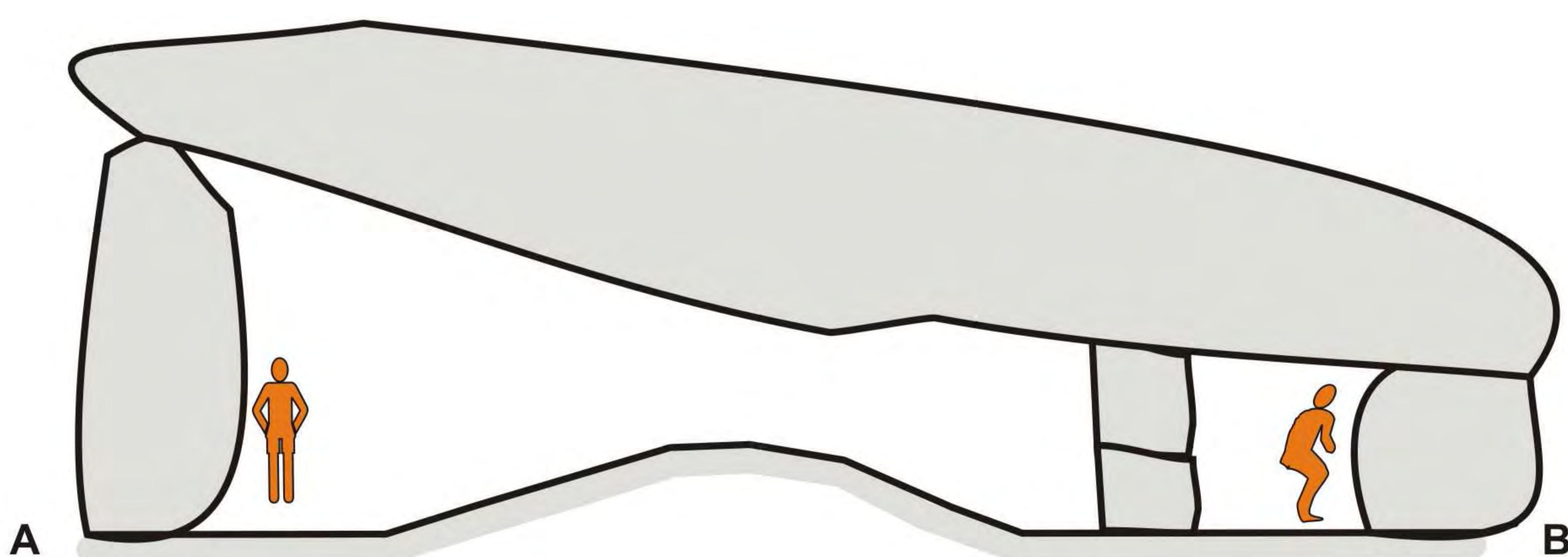
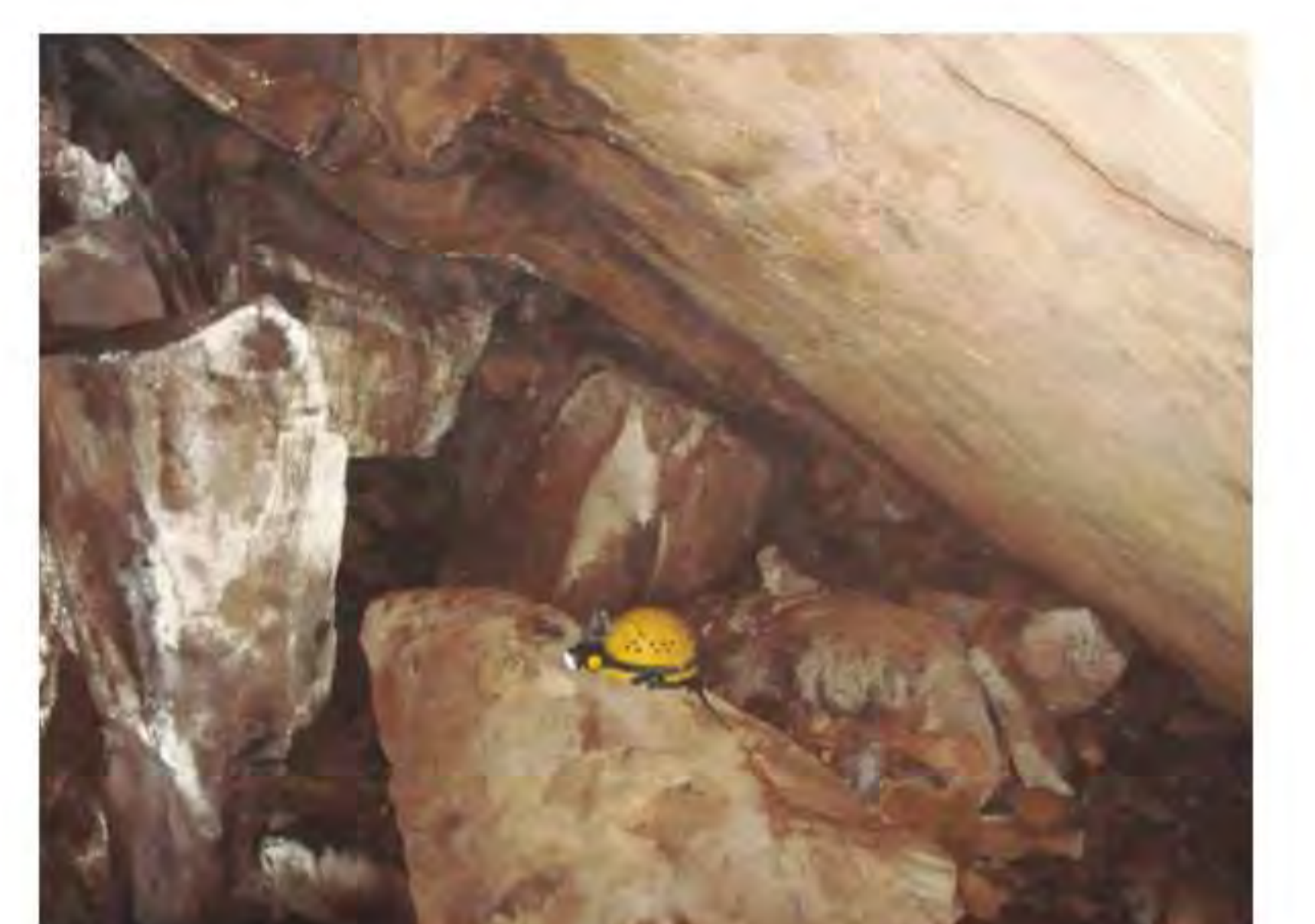
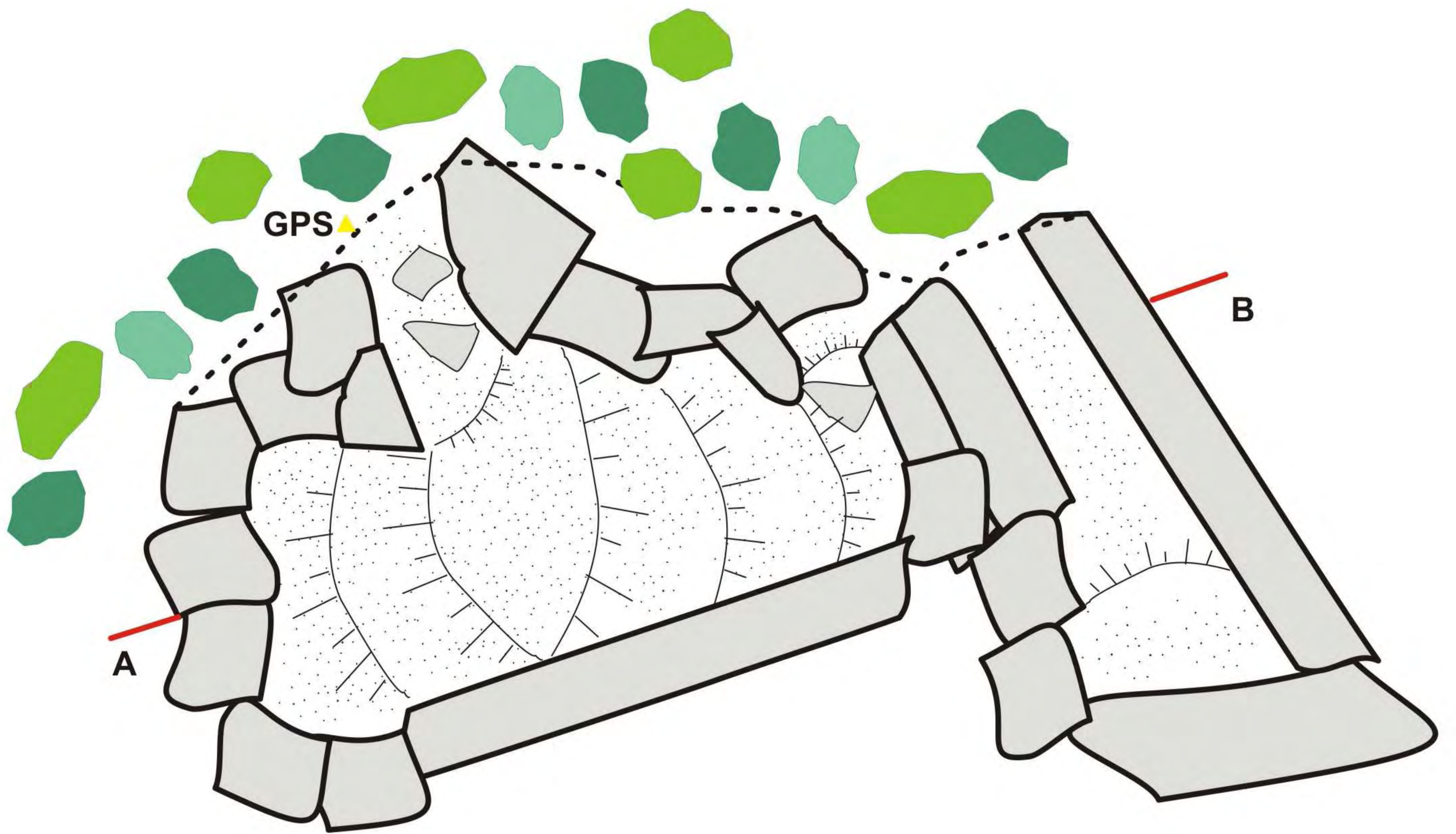
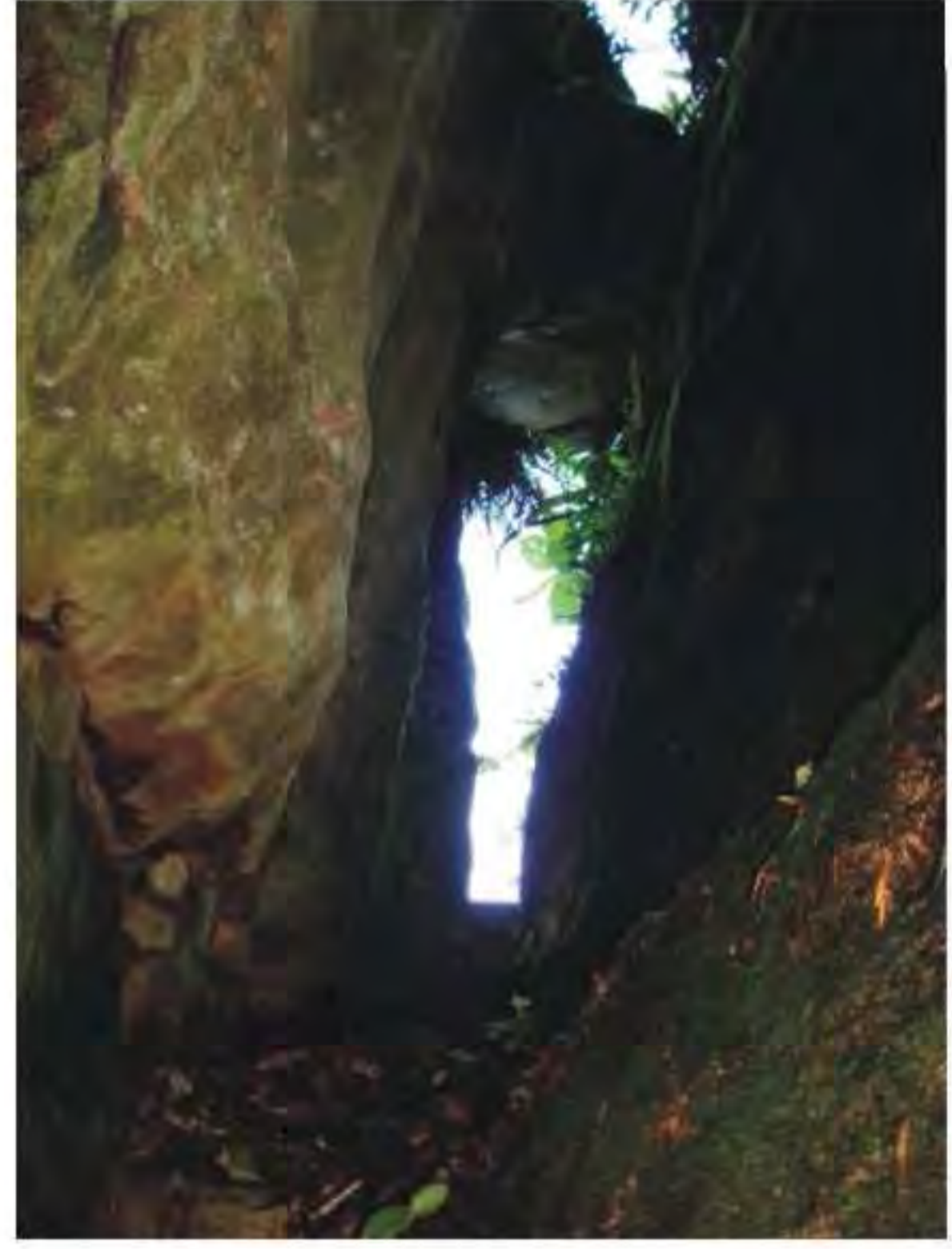
Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

**Convenções:**

-  Contorno de galeria
-  Desnível
-  Contorno do teto
-  Blocos
-  Sedimentos





# FURNA DA USINA SBE RS-29

Coordenadas: 28°25'33,26"S / 50°36'38,07"W

UTM (22J): 532047,230 / 6865827,715

Altitude: 828 metros

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Desenvolvimento Linear: metros

Projeção Horizontal (estimada): 89.67 metros

Desnível: 0 metros

Litologia: Basalto

Grau BCRA: 2C

Mapa: Carlos Eduardo Martins

Trabalho de Campo:

Carlos Eduardo Martins

Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

 Contorno de galeria

 Desnível

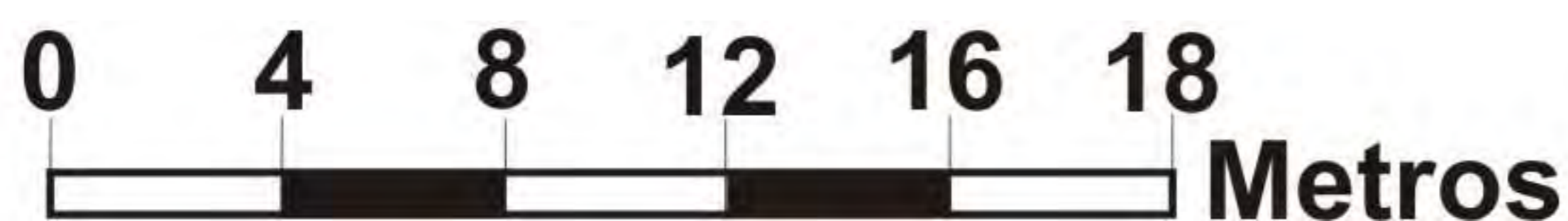
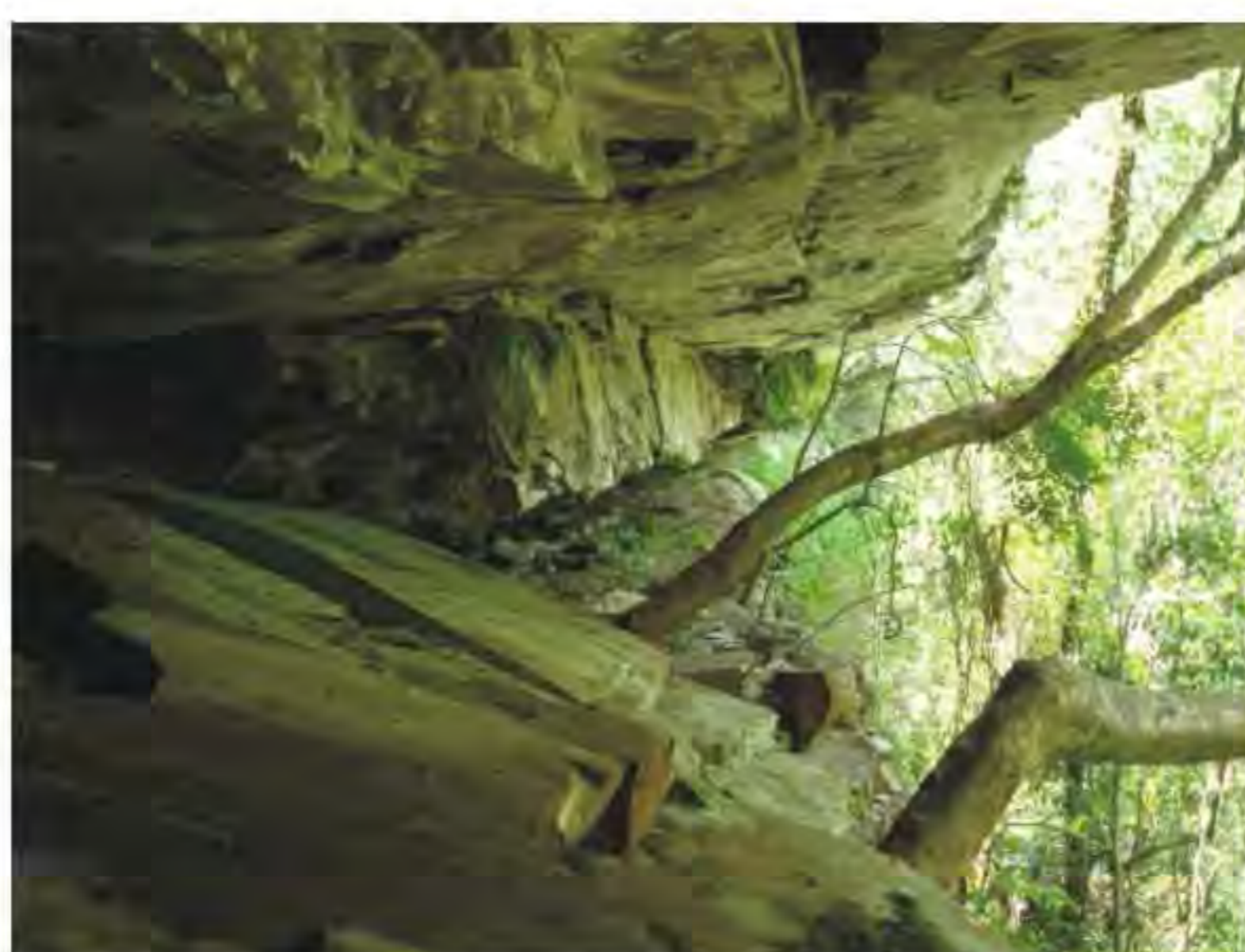
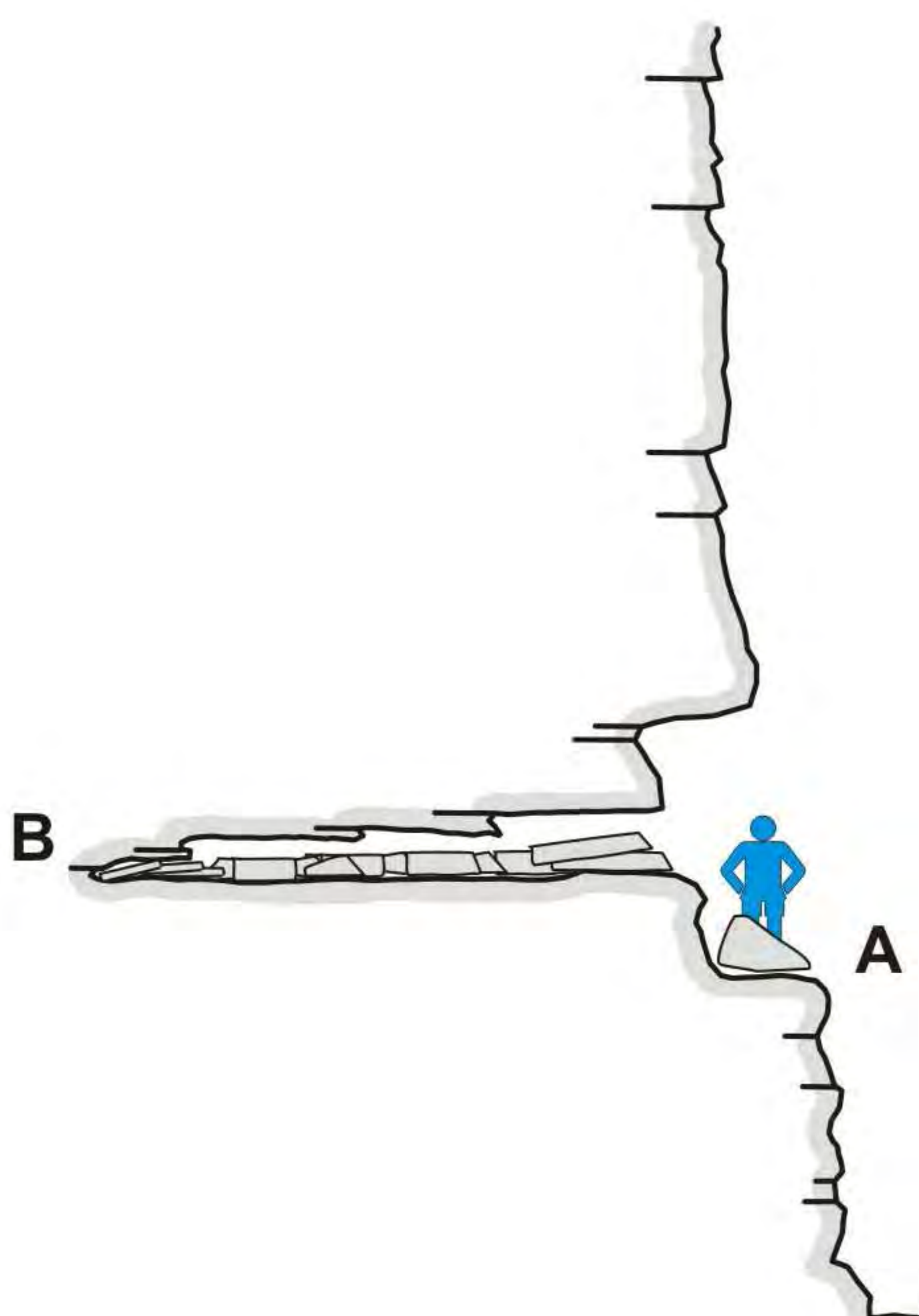
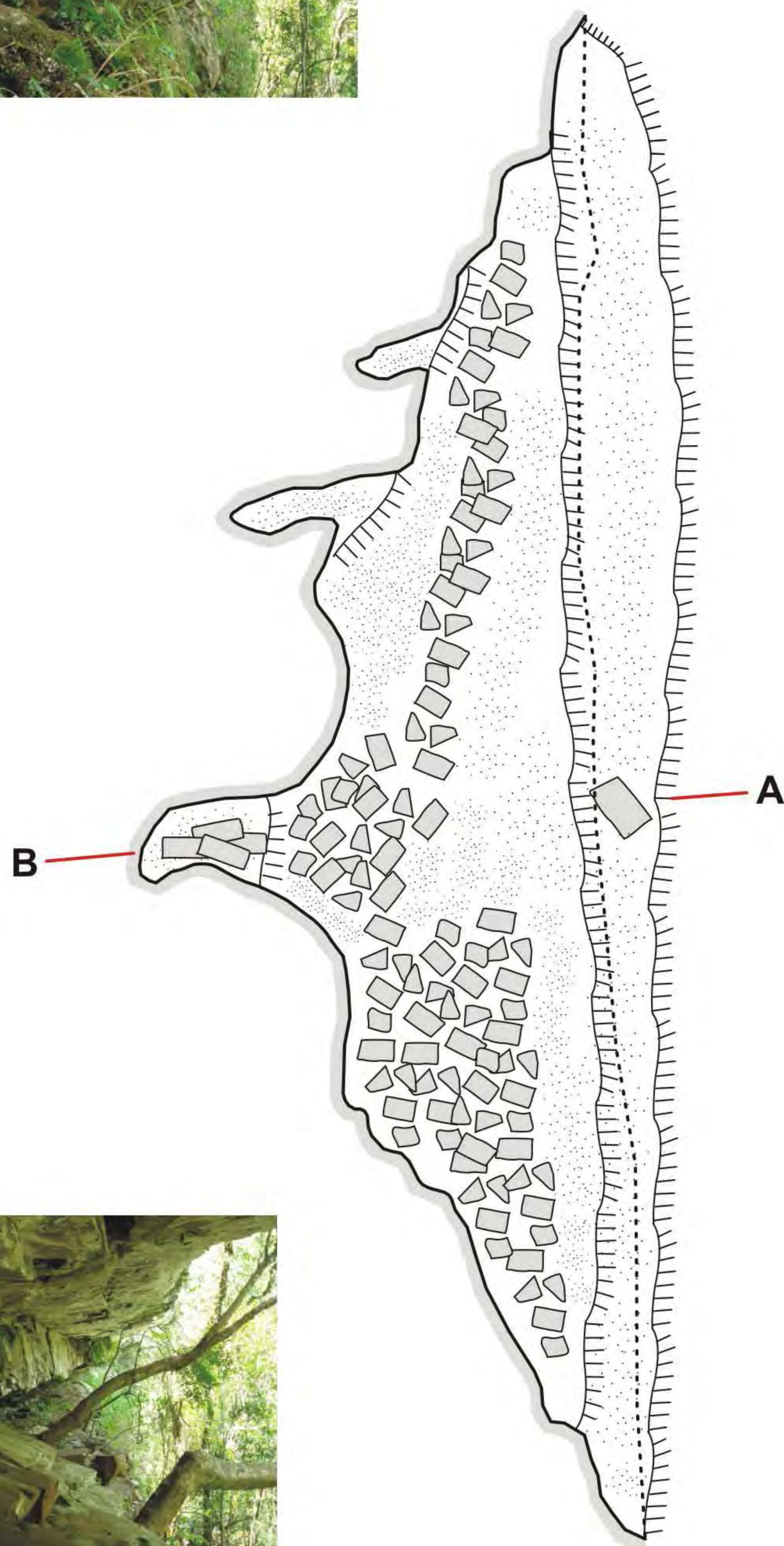
 Limite do teto

 Blocos

 Areia



NG





# GRUTA DO PERAU BRANCO SBE RS-15

Coordenadas: 28°27'32,64173"S / 50°20'46,04384"W

UTM (22J): 564017,286 / 564017,286

Altitude: 948 metros

Elipsóide: SAD/69

Erro do GPS: 3 metros em tela

Projeção Horizontal (estimada): 5 metros

Desnível: 0 metros

Litologia: Basalto

Grau BCRA: 2C

Mapa: Carlos Eduardo Martins

## Trabalho de Campo:


Carlos Eduardo Martins

Daisy Cirino de Oliveira

Ericson Cernawsky Igual

Sandro Secutti

## Convenções:

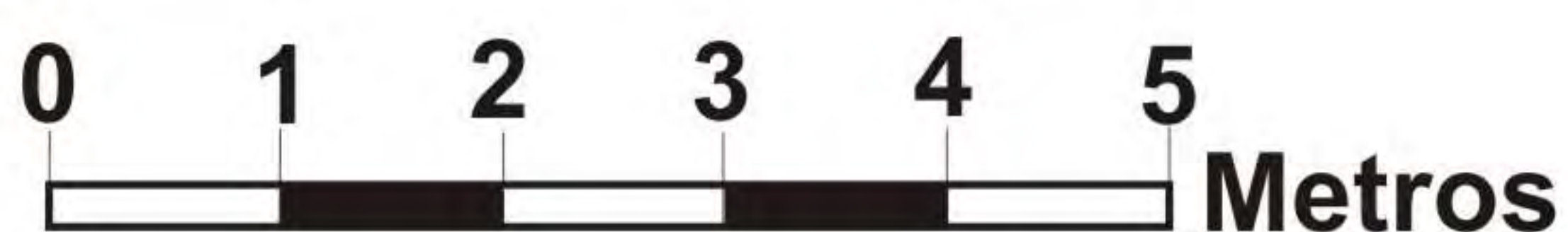
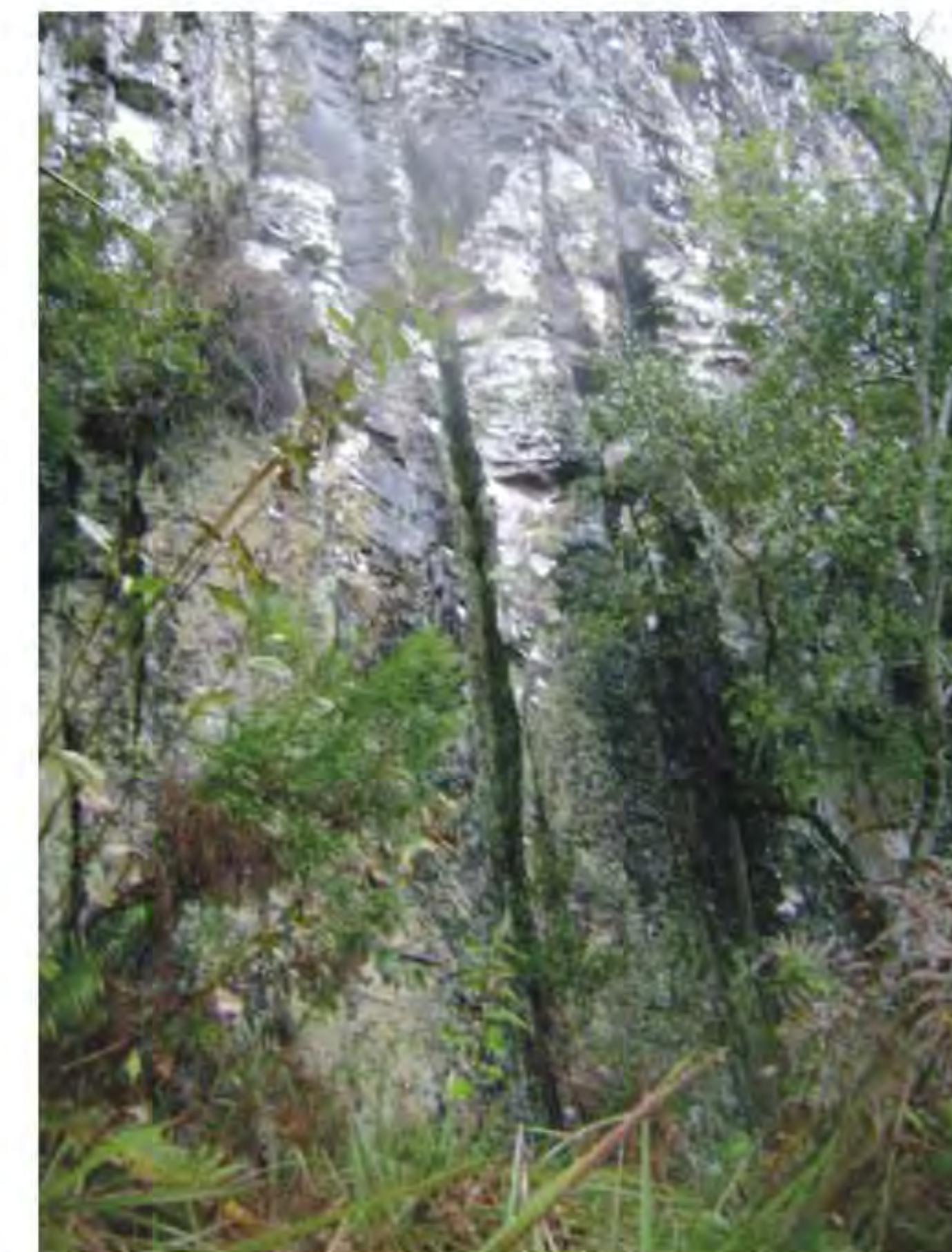
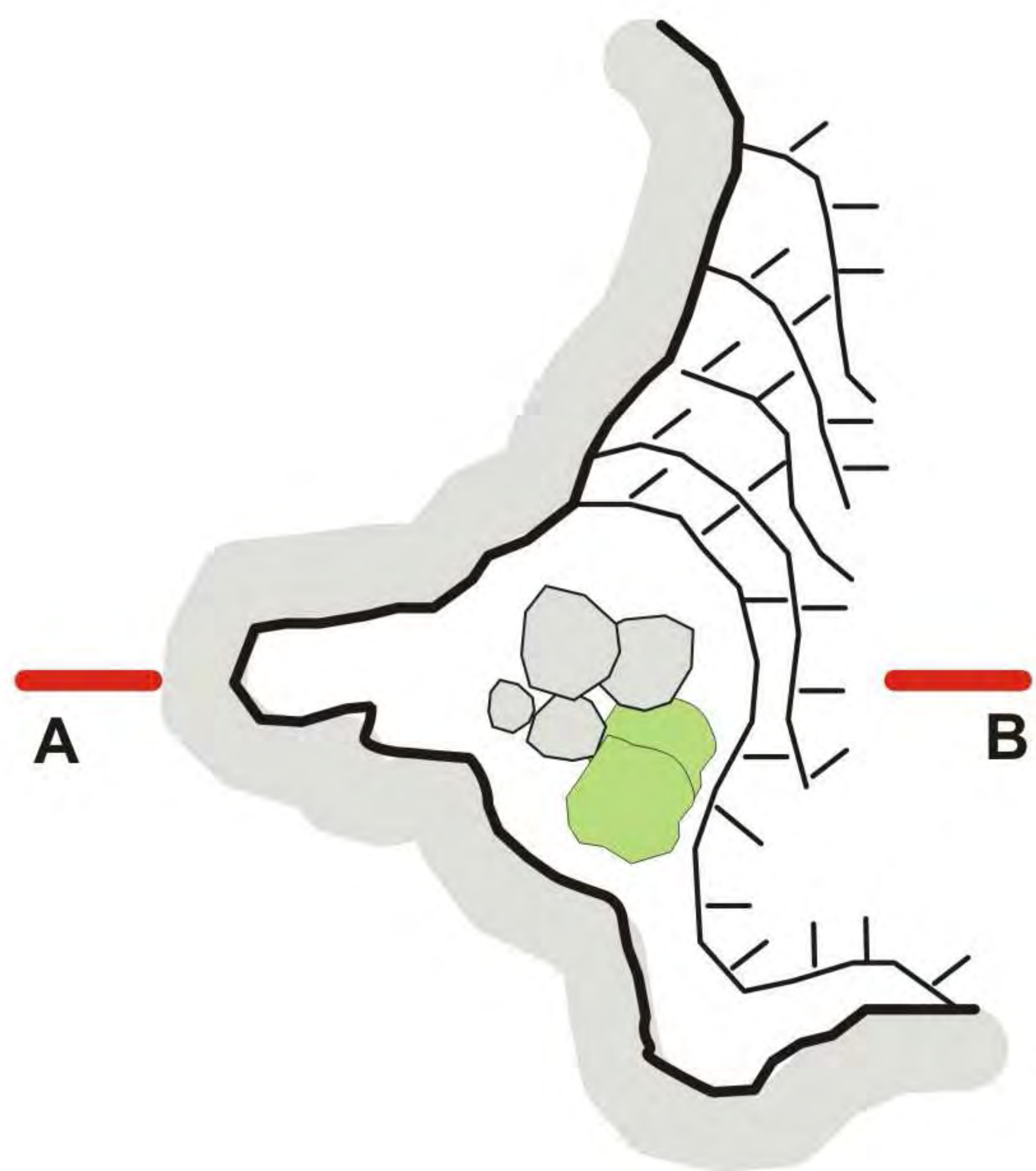
 Contorno de galeria

 Desnível

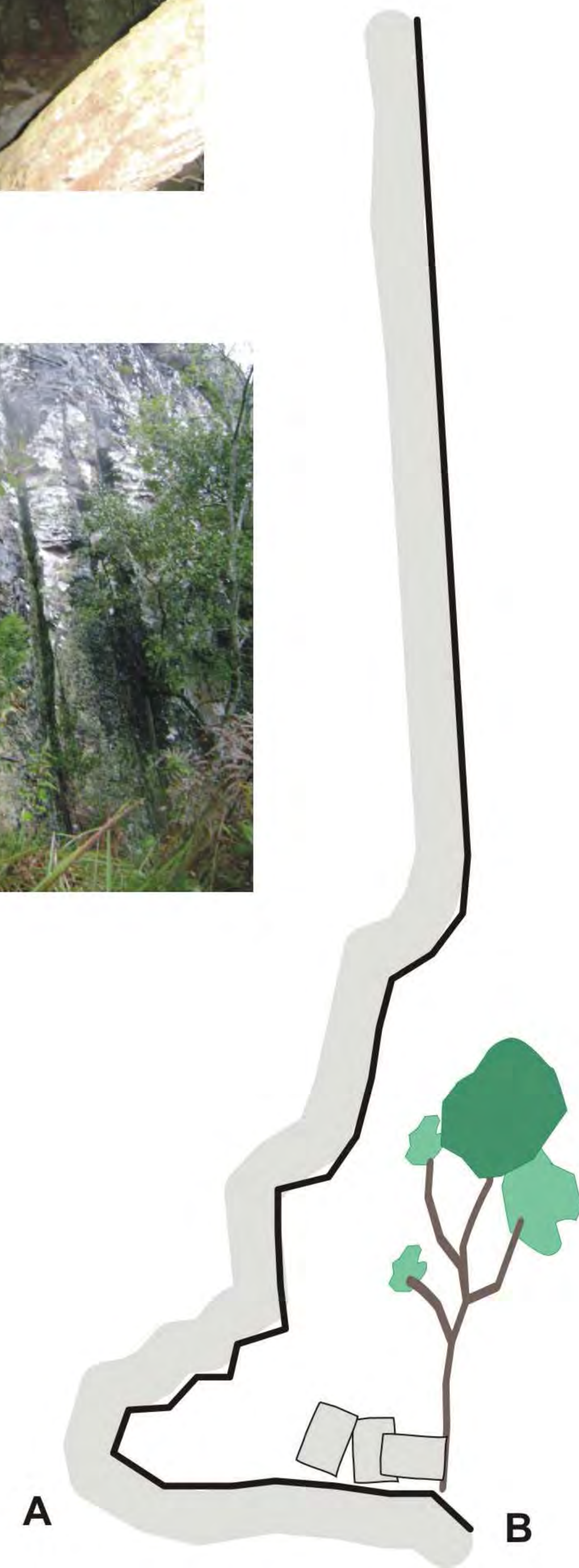
 Contorno do teto

 Blocos

 Sedimentos



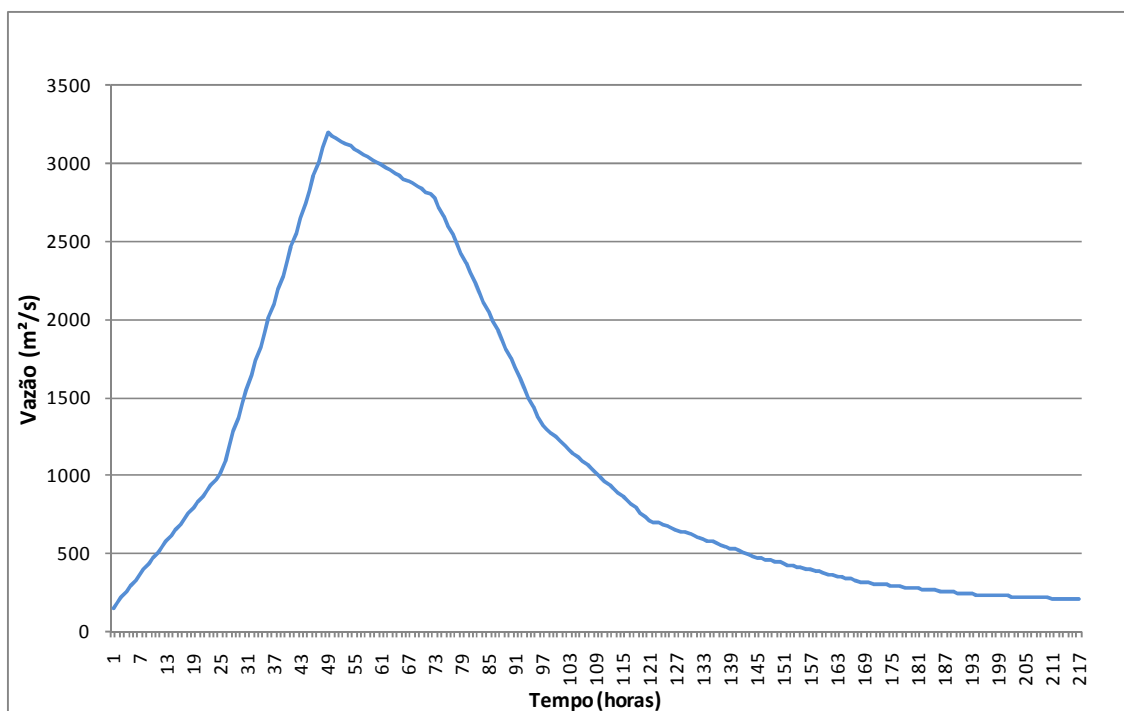
NG





## APÊNDICE E – HIDROGRAMA HORÁRIO DE EVENTOS EXTREMOS

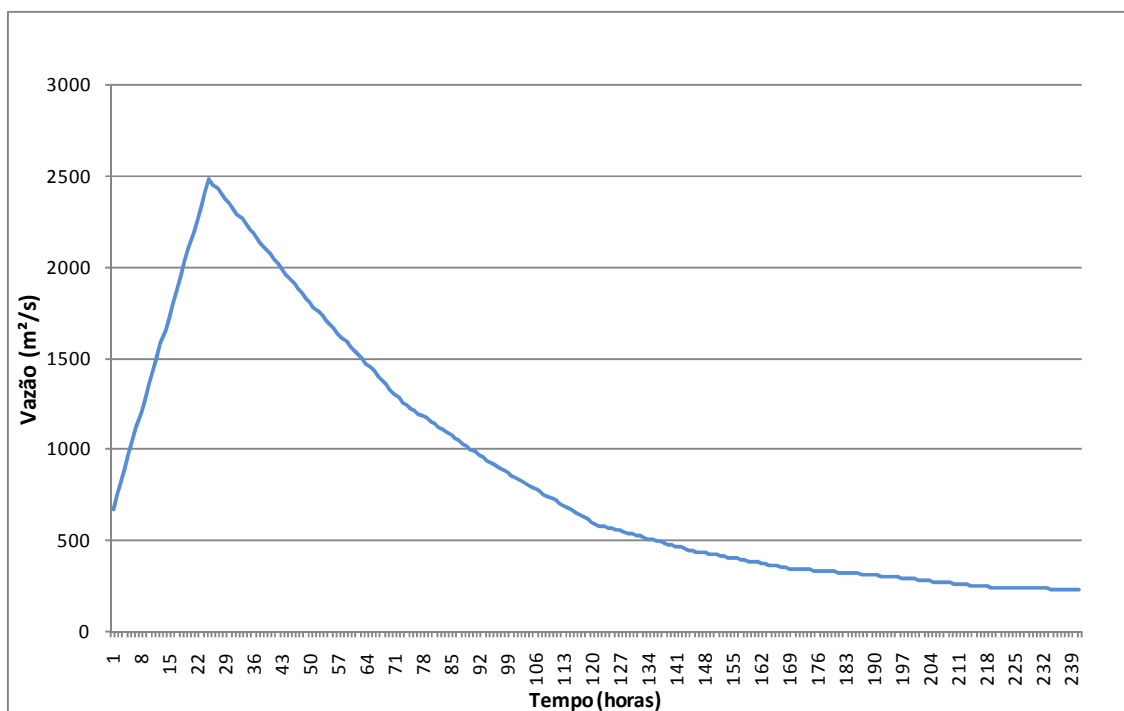




Vazões horárias. De 15 a 23 de agosto de 1977.

HORA	Vazões Horárias (Dias)								
	15/ago	16/ago	17/ago	18/ago	19/ago	20/ago	21/ago	22/ago	23/ago
	Descarga Horária								
1.00	151.70	1005.10	3196.21	2785.49	1320.42	712.11	475.55	313.96	237.80
2.00	187.25	1096.40	3179.10	2724.45	1295.07	702.25	468.82	310.78	236.40
3.00	222.81	1187.70	3161.99	2663.40	1269.72	692.39	462.08	307.61	235.00
4.00	258.37	1278.99	3144.87	2602.36	1244.38	682.54	455.35	304.44	233.61
5.00	293.93	1370.29	3127.76	2541.31	1219.03	672.68	448.62	301.26	232.21
6.00	329.49	1461.58	3110.64	2480.27	1193.69	662.82	441.88	298.09	230.81
7.00	365.05	1552.88	3093.53	2419.22	1168.34	652.97	435.15	294.92	229.41
8.00	400.61	1644.18	3076.42	2358.18	1142.99	643.11	428.42	291.74	228.02
9.00	436.17	1735.47	3059.30	2297.13	1117.65	633.25	421.68	288.57	226.62
10.00	471.72	1826.77	3042.19	2236.09	1092.30	623.40	414.95	285.40	225.22
11.00	507.28	1918.07	3025.08	2175.04	1066.95	613.54	408.22	282.22	223.82
12.00	542.84	2009.36	3007.96	2114.00	1041.61	603.68	401.49	279.05	222.42
13.00	578.40	2100.66	2990.85	2052.95	1016.26	593.83	394.75	275.88	221.03
14.00	613.96	2191.95	2973.74	1991.91	990.92	583.97	388.02	272.70	219.63
15.00	649.52	2283.25	2956.62	1930.86	965.57	574.11	381.29	269.53	218.23
16.00	685.08	2374.55	2939.51	1869.82	940.22	564.26	374.55	266.36	216.83
17.00	720.63	2465.84	2922.40	1808.77	914.88	554.40	367.82	263.19	215.43
18.00	756.19	2557.14	2905.28	1747.73	889.53	544.54	361.09	260.01	214.04
19.00	791.75	2648.43	2888.17	1686.69	864.18	534.69	354.35	256.84	212.64
20.00	827.31	2739.73	2871.06	1625.64	838.84	524.83	347.62	253.67	211.24
21.00	862.87	2831.03	2853.94	1564.60	813.49	514.97	340.89	250.49	209.84
22.00	898.43	2922.32	2836.83	1503.55	788.14	505.12	334.16	247.32	208.45
23.00	933.99	3013.62	2819.72	1442.51	762.80	495.26	327.42	244.15	207.05
24.00	969.54	3104.92	2802.60	1381.46	737.45	485.40	320.69	240.97	205.65

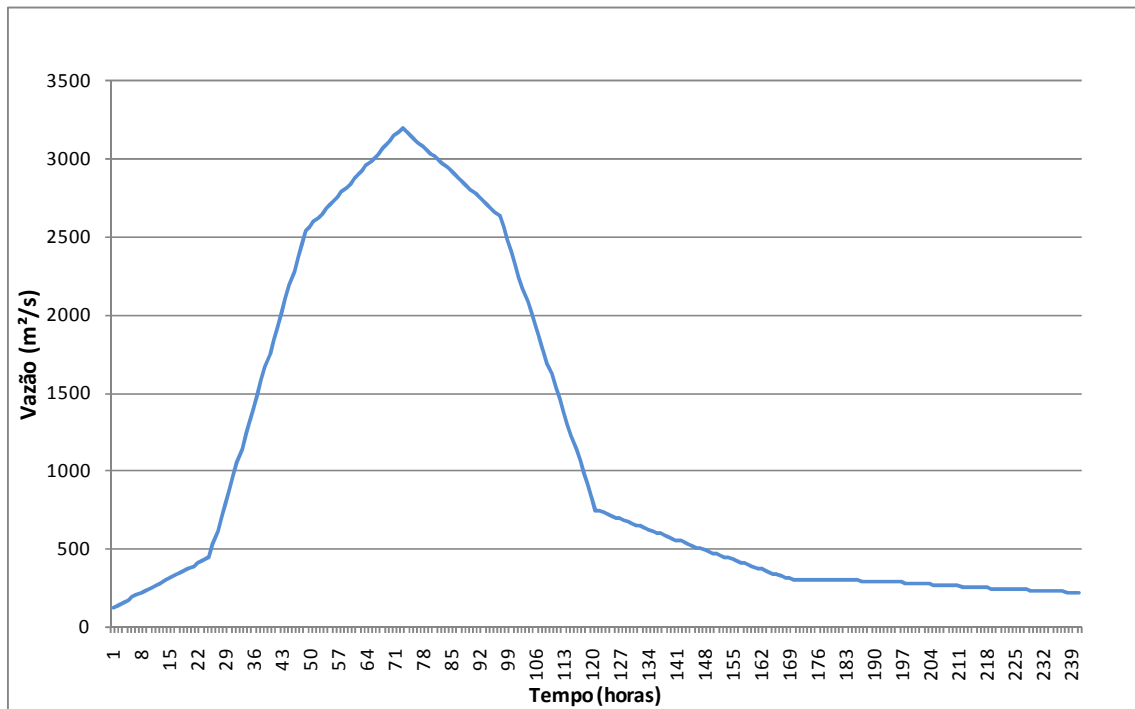




**Vazões horárias. De 30 de julho a 8 de agosto de 1983.**

HORA	Vazões Horárias (Dias)									
	30/jul	31/jul	1/ago	2/ago	3/ago	4/ago	5/ago	6/ago	7/ago	8/ago
	Descarga Horária									
1	673.694	2485.936	1829.14	1258.703	896.512	589.009	443.223	346.669	304.309	246.07
2	749.2041	2458.57	1805.372	1243.612	883.6994	582.9346	439.1999	344.904	301.8824	245.3648
3	824.7142	2431.203	1781.604	1228.52	870.8868	576.8602	435.1768	343.139	299.4558	244.6597
4	900.2243	2403.837	1757.835	1213.429	858.0741	570.7858	431.1538	341.374	297.0291	243.9545
5	975.7343	2376.47	1734.067	1198.338	845.2615	564.7113	427.1307	339.609	294.6025	243.2493
6	1051.244	2349.104	1710.299	1183.247	832.4489	558.6369	423.1076	337.844	292.1759	242.5442
7	1126.755	2321.737	1686.531	1168.155	819.6363	552.5625	419.0845	336.079	289.7493	241.839
8	1202.265	2294.371	1662.763	1153.064	806.8236	546.4881	415.0614	334.314	287.3226	241.1338
9	1277.775	2267.004	1638.994	1137.973	794.011	540.4137	411.0383	332.549	284.896	240.4287
10	1353.285	2239.638	1615.226	1122.881	781.1984	534.3393	407.0153	330.784	282.4694	239.7235
11	1428.795	2212.271	1591.458	1107.79	768.3858	528.2648	402.9922	329.019	280.0428	239.0183
12	1504.305	2184.905	1567.69	1092.699	755.5731	522.1904	398.9691	327.254	277.6161	238.3132
13	1579.815	2157.538	1543.922	1077.608	742.7605	516.116	394.946	325.489	275.1895	237.608
14	1655.325	2130.172	1520.153	1062.516	729.9479	510.0416	390.9229	323.724	272.7629	236.9028
15	1730.835	2102.805	1496.385	1047.425	717.1353	503.9672	386.8998	321.959	270.3363	236.1977
16	1806.345	2075.439	1472.617	1032.334	704.3226	497.8928	382.8768	320.194	267.9096	235.4925
17	1881.855	2048.072	1448.849	1017.242	691.51	491.8183	378.8537	318.429	265.483	234.7873
18	1957.365	2020.706	1425.08	1002.151	678.6974	485.7439	374.8306	316.664	263.0564	234.0822
19	2032.876	1993.339	1401.312	987.0598	665.8848	479.6695	370.8075	314.899	260.6298	233.377
20	2108.386	1965.973	1377.544	971.9685	653.0721	473.5951	366.7844	313.134	258.2031	232.6718
21	2183.896	1938.606	1353.776	956.8772	640.2595	467.5207	362.7613	311.369	255.7765	231.9667
22	2259.406	1911.24	1330.008	941.7859	627.4469	461.4463	358.7383	309.604	253.3499	231.2615
23	2334.916	1883.873	1306.239	926.6946	614.6343	455.3718	354.7152	307.839	250.9233	230.5563
24	2410.426	1856.507	1282.471	911.6033	601.8216	449.2974	350.6921	306.074	248.4966	229.8512

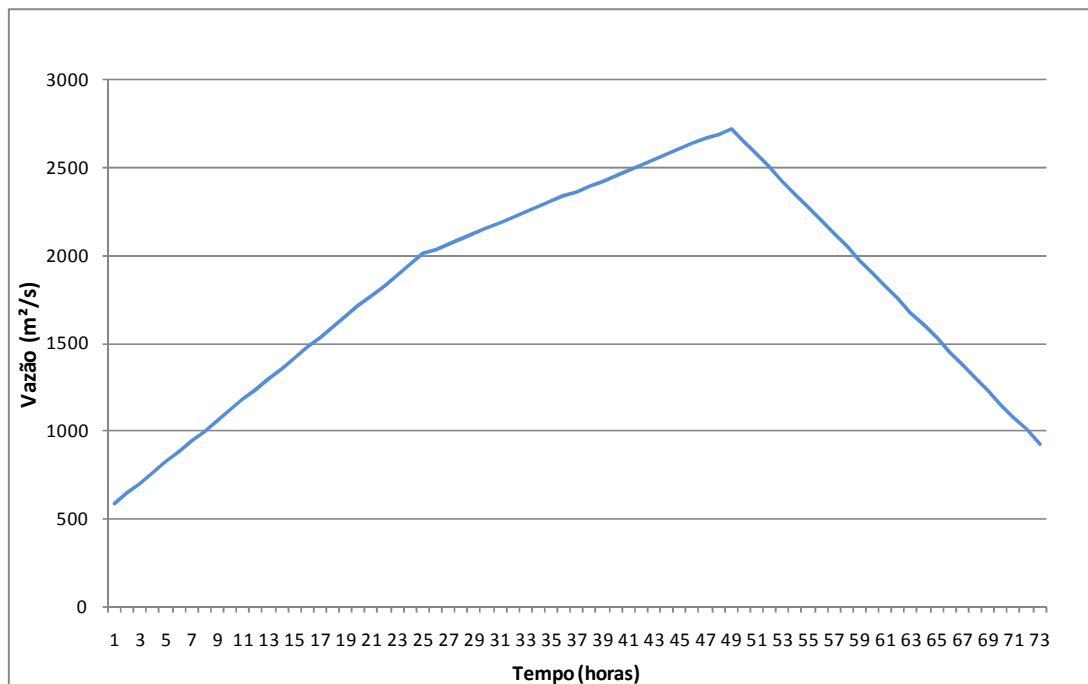




**Vazões horárias. De 14 de agosto a 23 de agosto de 1983.**

HORA	Vazões Horárias (Dias)									
	14/ago	15/ago	16/ago	17/ago	18/ago	19/ago	20/ago	21/ago	22/ago	23/ago
	Descarga Horária									
1	123.82	445.43	2542.82	3201.00	2640.80	751.23	520.46	309.42	292.87	251.77
2	137.22	532.82	2570.24	3177.66	2562.07	741.61	511.66	308.73	291.15	250.50
3	150.62	620.21	2597.67	3154.32	2483.34	732.00	502.87	308.04	289.44	249.23
4	164.02	707.60	2625.09	3130.98	2404.60	722.38	494.08	307.35	287.73	247.96
5	177.42	794.99	2652.52	3107.64	2325.87	712.77	485.28	306.66	286.02	246.70
6	190.82	882.38	2679.94	3084.29	2247.14	703.15	476.49	305.97	284.30	245.43
7	204.22	969.77	2707.36	3060.95	2168.41	693.53	467.70	305.28	282.59	244.16
8	217.62	1057.17	2734.79	3037.61	2089.68	683.92	458.90	304.59	280.88	242.89
9	231.02	1144.56	2762.21	3014.27	2010.94	674.30	450.11	303.90	279.17	241.62
10	244.42	1231.95	2789.64	2990.93	1932.21	664.69	441.32	303.21	277.45	240.35
11	257.82	1319.34	2817.06	2967.58	1853.48	655.07	432.53	302.52	275.74	239.08
12	271.22	1406.73	2844.49	2944.24	1774.75	645.46	423.73	301.83	274.03	237.82
13	284.62	1494.12	2871.91	2920.90	1696.01	635.84	414.94	301.14	272.32	236.55
14	298.02	1581.51	2899.33	2897.56	1617.28	626.23	406.15	300.45	270.61	235.28
15	311.42	1668.91	2926.76	2874.22	1538.55	616.61	397.35	299.76	268.89	234.01
16	324.82	1756.30	2954.18	2850.88	1459.82	606.99	388.56	299.07	267.18	232.74
17	338.22	1843.69	2981.61	2827.53	1381.09	597.38	379.77	298.39	265.47	231.47
18	351.62	1931.08	3009.03	2804.19	1302.35	587.76	370.97	297.70	263.76	230.21
19	365.02	2018.47	3036.46	2780.85	1223.62	578.15	362.18	297.01	262.04	228.94
20	378.42	2105.86	3063.88	2757.51	1144.89	568.53	353.39	296.32	260.33	227.67
21	391.83	2193.25	3091.30	2734.17	1066.16	558.92	344.60	295.63	258.62	226.40
22	405.23	2280.64	3118.73	2710.83	987.42	549.30	335.80	294.94	256.91	225.13
23	418.63	2368.04	3146.15	2687.48	908.69	539.69	327.01	294.25	255.19	223.86
24	432.03	2455.43	3173.58	2664.14	829.96	530.07	318.22	293.56	253.48	222.59

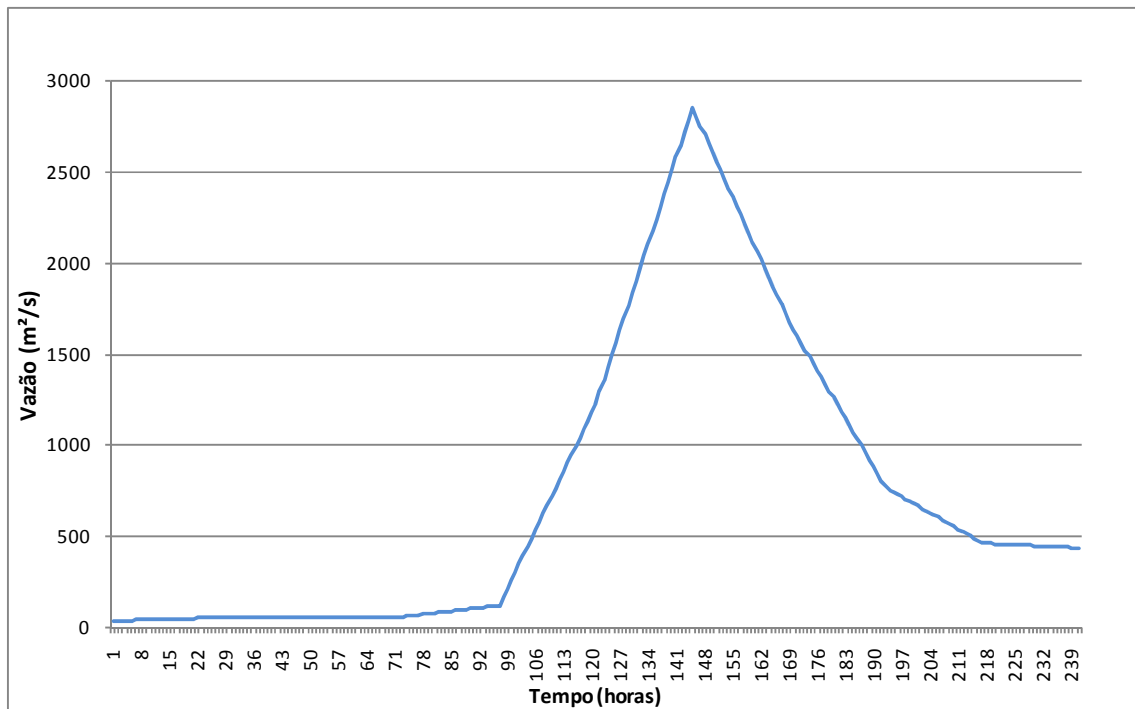




Vazões horárias. De 10 de setembro a 13 de setembro de 1989.

HORA	Vazões Horárias (Dias)			
	10/set	11/set	12/set	13/set
	Descarga Horária			
1	586.66	2009.89	2725.86	930.32
2	645.97	2039.72	2651.04	0.00
3	705.27	2069.55	2576.23	0.00
4	764.57	2099.38	2501.41	0.00
5	823.87	2129.21	2426.60	0.00
6	883.17	2159.05	2351.79	0.00
7	942.47	2188.88	2276.97	0.00
8	1001.77	2218.71	2202.16	0.00
9	1061.07	2248.54	2127.34	0.00
10	1120.37	2278.37	2052.53	0.00
11	1179.67	2308.21	1977.72	0.00
12	1238.97	2338.04	1902.90	0.00
13	1298.27	2367.87	1828.09	0.00
14	1357.58	2397.70	1753.27	0.00
15	1416.88	2427.54	1678.46	0.00
16	1476.18	2457.37	1603.65	0.00
17	1535.48	2487.20	1528.83	0.00
18	1594.78	2517.03	1454.02	0.00
19	1654.08	2546.86	1379.20	0.00
20	1713.38	2576.70	1304.39	0.00
21	1772.68	2606.53	1229.57	0.00
22	1831.98	2636.36	1154.76	0.00
23	1891.28	2666.19	1079.95	0.00
24	1950.58	2696.02	1005.13	0.00

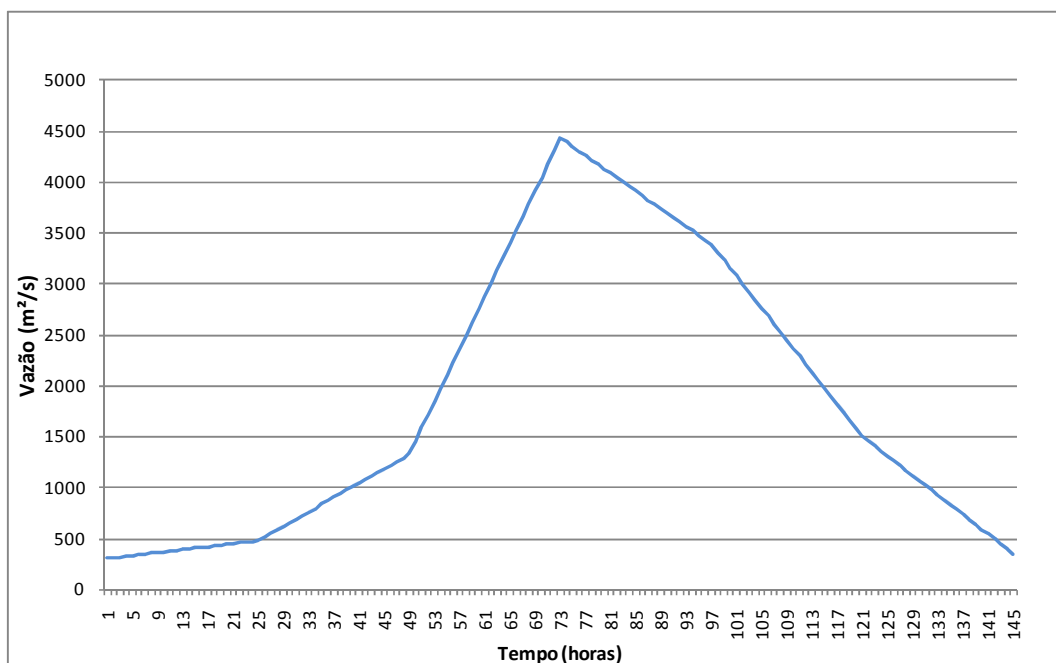




**Vazões horárias. De 27 de maio a 3 de junho de 1990.**

HORA	Vazões Horárias (Dias)									
	25/mai	26/mai	27/mai	28/mai	29/mai	30/mai	31/mai	1/jun	2/jun	3/jun
	Descarga Horária									
1	35.75	51.84	56.04	57.87	121.54	1225.50	2855.50	1677.33	769.99	463.12
2	36.42	52.01	56.12	60.52	167.54	1293.42	2806.41	1639.52	757.20	462.04
3	37.09	52.19	56.19	63.18	213.54	1361.34	2757.32	1601.72	744.42	460.96
4	37.76	52.36	56.27	65.83	259.54	1429.25	2708.23	1563.91	731.63	459.87
5	38.43	52.54	56.35	68.48	305.54	1497.17	2659.14	1526.10	718.84	458.79
6	39.10	52.71	56.42	71.14	351.54	1565.09	2610.04	1488.30	706.06	457.70
7	39.77	52.89	56.50	73.79	397.53	1633.00	2560.95	1450.49	693.27	456.62
8	40.44	53.06	56.58	76.44	443.53	1700.92	2511.86	1412.69	680.49	455.53
9	41.11	53.24	56.65	79.09	489.53	1768.83	2462.77	1374.88	667.70	454.45
10	41.78	53.41	56.73	81.75	535.53	1836.75	2413.68	1337.08	654.91	453.37
11	42.45	53.59	56.80	84.40	581.53	1904.67	2364.59	1299.27	642.13	452.28
12	43.12	53.76	56.88	87.05	627.53	1972.58	2315.50	1261.46	629.34	451.20
13	43.79	53.94	56.96	89.71	673.52	2040.50	2266.41	1223.66	616.56	450.11
14	44.46	54.11	57.03	92.36	719.52	2108.42	2217.32	1185.85	603.77	449.03
15	45.13	54.29	57.11	95.01	765.52	2176.33	2168.23	1148.05	590.98	447.94
16	45.80	54.46	57.18	97.67	811.52	2244.25	2119.14	1110.24	578.20	446.86
17	46.47	54.64	57.26	100.32	857.52	2312.17	2070.05	1072.44	565.41	445.78
18	47.14	54.82	57.34	102.97	903.52	2380.08	2020.96	1034.63	552.63	444.69
19	47.81	54.99	57.41	105.63	949.51	2448.00	1971.87	996.82	539.84	443.61
20	48.48	55.17	57.49	108.28	995.51	2515.91	1922.78	959.02	527.05	442.52
21	49.15	55.34	57.56	110.93	1041.51	2583.83	1873.69	921.21	514.27	441.44
22	49.82	55.52	57.64	113.59	1087.51	2651.75	1824.60	883.41	501.48	440.35
23	50.49	55.69	57.72	116.24	1133.51	2719.66	1775.51	845.60	488.70	439.27
24	51.16	55.87	57.79	118.89	1179.50	2787.58	1726.42	807.79	475.91	438.19

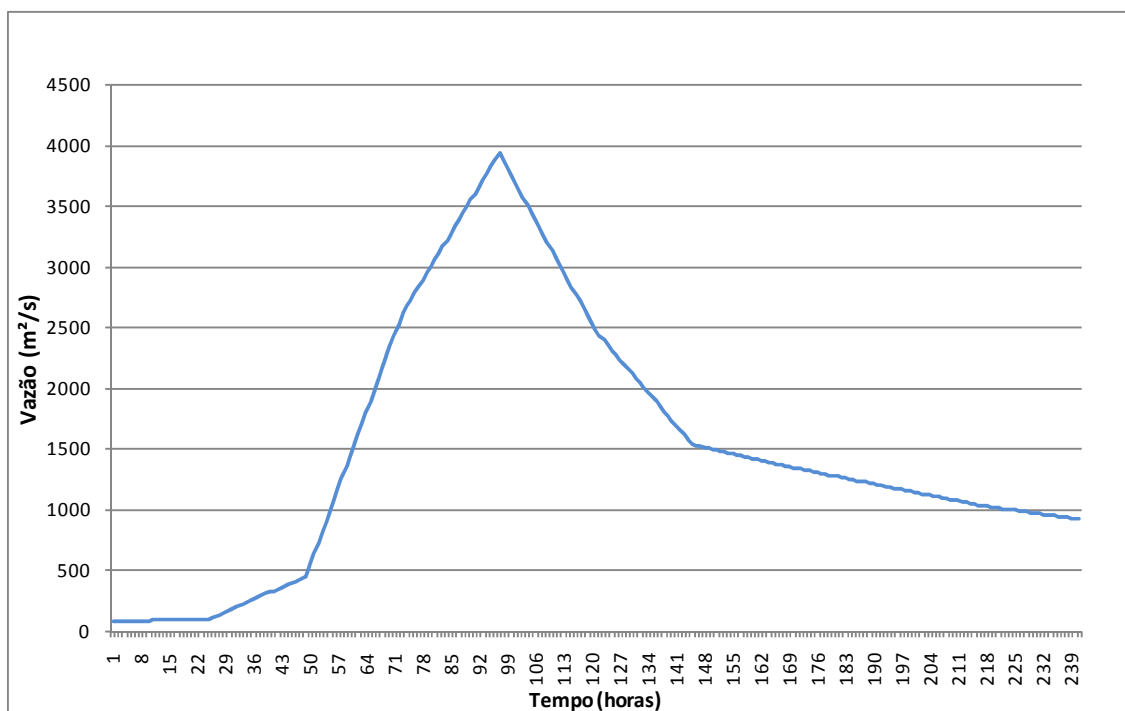




**Vazões horárias. De 27 de maio a 3 de junho de 1990.**

HORA	Vazões Horárias (Dias)					
	25/jun	26/jun	27/jun	28/jun	29/jun	30/jun
	Descarga Horária					
1	305.53	481.47	1331.38	4436.39	3390.07	1505.29
2	312.86	516.88	1460.76	4392.80	3311.53	1457.26
3	320.19	552.29	1590.13	4349.20	3233.00	1409.23
4	327.52	587.71	1719.51	4305.60	3154.47	1361.21
5	334.85	623.12	1848.88	4262.01	3075.94	1313.18
6	342.18	658.53	1978.26	4218.41	2997.40	1265.15
7	349.51	693.95	2107.63	4174.81	2918.87	1217.12
8	356.84	729.36	2237.01	4131.21	2840.34	1169.09
9	364.17	764.77	2366.38	4087.62	2761.81	1121.07
10	371.50	800.18	2495.76	4044.02	2683.27	1073.04
11	378.83	835.60	2625.14	4000.42	2604.74	1025.01
12	386.17	871.01	2754.51	3956.83	2526.21	976.98
13	393.50	906.42	2883.89	3913.23	2447.68	928.96
14	400.83	941.84	3013.26	3869.63	2369.14	880.93
15	408.16	977.25	3142.64	3826.04	2290.61	832.90
16	415.49	1012.66	3272.01	3782.44	2212.08	784.87
17	422.82	1048.08	3401.39	3738.84	2133.55	736.84
18	430.15	1083.49	3530.76	3695.24	2055.02	688.82
19	437.48	1118.90	3660.14	3651.65	1976.48	640.79
20	444.81	1154.31	3789.52	3608.05	1897.95	592.76
21	452.14	1189.73	3918.89	3564.45	1819.42	544.73
22	459.47	1225.14	4048.27	3520.86	1740.89	496.71
23	466.81	1260.55	4177.64	3477.26	1662.35	448.68
24	474.14	1295.97	4307.02	3433.66	1583.82	400.65

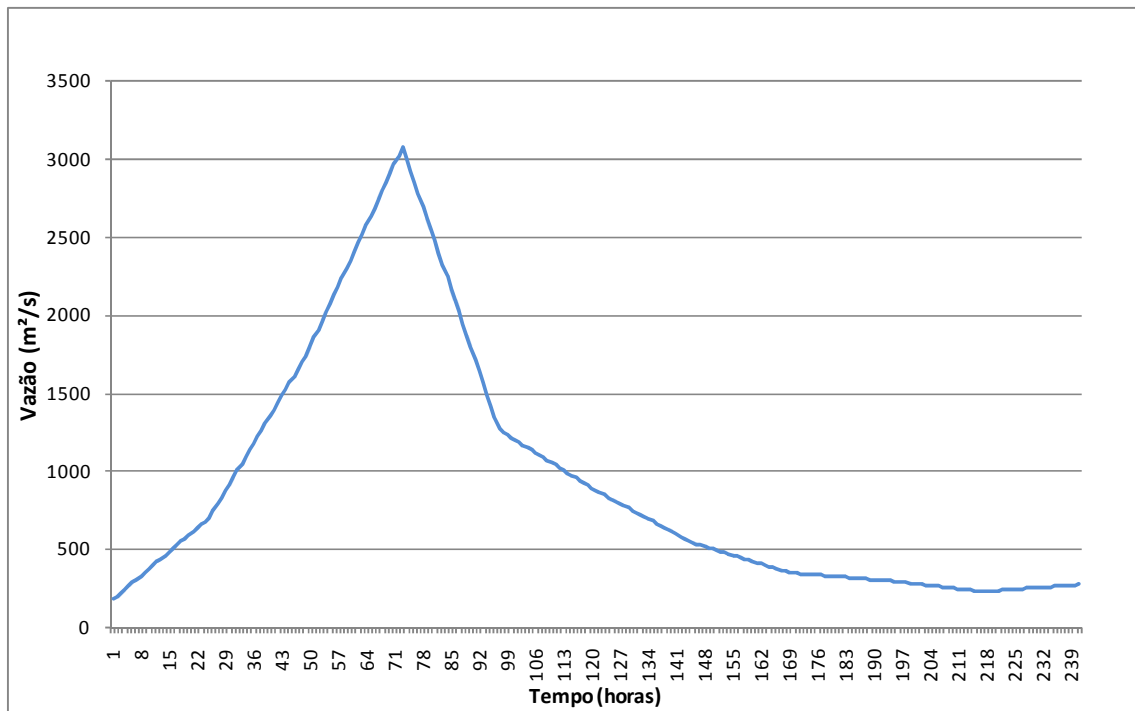




**Vazões horárias. De 29 de junho a 8 de julho de 1993.**

HORA	Vazões Horárias (Dias)									
	29/jun	30/jun	1/jul	2/jul	3/jul	4/jul	5/jul	6/jul	7/jul	8/jul
	Descarga Horária									
1	82.64	102.11	452.30	2624.52	3940.69	2477.45	1538.46	1356.85	1195.22	1034.95
2	83.45	116.70	542.81	2679.36	3879.72	2438.32	1530.89	1350.12	1188.54	1030.35
3	84.26	131.29	633.31	2734.20	3818.75	2399.20	1523.32	1343.39	1181.87	1025.74
4	85.07	145.88	723.82	2789.04	3757.78	2360.07	1515.76	1336.65	1175.19	1021.14
5	85.88	160.47	814.33	2843.88	3696.81	2320.95	1508.19	1329.92	1168.51	1016.54
6	86.69	175.07	904.84	2898.72	3635.85	2281.82	1500.62	1323.18	1161.83	1011.93
7	87.50	189.66	995.35	2953.56	3574.88	2242.70	1493.06	1316.45	1155.15	1007.33
8	88.32	204.25	1085.86	3008.40	3513.91	2203.57	1485.49	1309.71	1148.48	1002.73
9	89.13	218.84	1176.37	3063.24	3452.94	2164.45	1477.92	1302.98	1141.80	998.12
10	89.94	233.43	1266.88	3118.08	3391.97	2125.33	1470.36	1296.24	1135.12	993.52
11	90.75	248.02	1357.39	3172.92	3331.00	2086.20	1462.79	1289.51	1128.44	988.92
12	91.56	262.61	1447.90	3227.76	3270.03	2047.08	1455.22	1282.77	1121.76	984.31
13	92.37	277.20	1538.41	3282.60	3209.07	2007.95	1447.66	1276.04	1115.09	979.71
14	93.18	291.79	1628.92	3337.44	3148.10	1968.83	1440.09	1269.30	1108.41	975.11
15	94.00	306.39	1719.43	3392.28	3087.13	1929.70	1432.52	1262.57	1101.73	970.51
16	94.81	320.98	1809.93	3447.12	3026.16	1890.58	1424.96	1255.83	1095.05	965.90
17	95.62	335.57	1900.44	3501.96	2965.19	1851.45	1417.39	1249.10	1088.37	961.30
18	96.43	350.16	1990.95	3556.80	2904.22	1812.33	1409.82	1242.36	1081.69	956.70
19	97.24	364.75	2081.46	3611.64	2843.26	1773.21	1402.26	1235.63	1075.02	952.09
20	98.05	379.34	2171.97	3666.49	2782.29	1734.08	1394.69	1228.90	1068.34	947.49
21	98.86	393.93	2262.48	3721.33	2721.32	1694.96	1387.12	1222.16	1061.66	942.89
22	99.68	408.52	2352.99	3776.17	2660.35	1655.83	1379.55	1215.43	1054.98	938.28
23	100.49	423.11	2443.50	3831.01	2599.38	1616.71	1371.99	1208.69	1048.30	933.68
24	101.30	437.70	2534.01	3885.85	2538.41	1577.58	1364.42	1201.96	1041.63	929.08

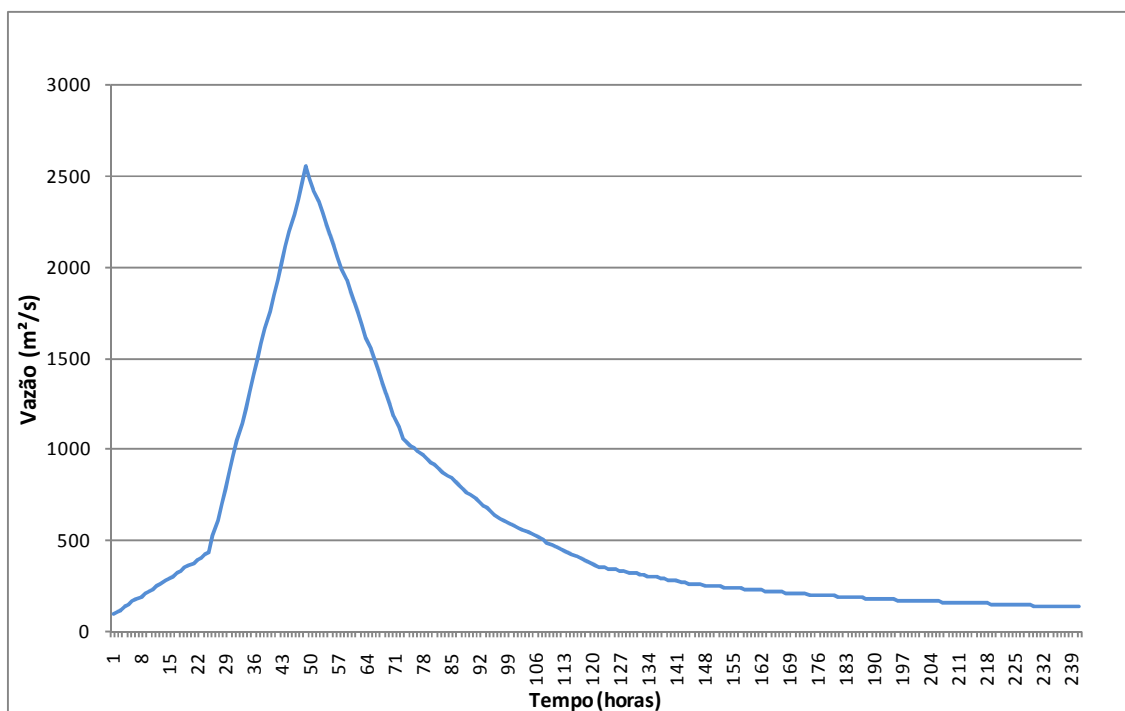




**Vazões horárias. De 30 de janeiro a 8 de fevereiro de 1997.**

HORA	Vazões Horárias (Dias)									
	30/jan	31/jan	1/fev	2/fev	3/fev	4/fev	5/fev	6/fev	7/fev	8/fev
	Descarga Horária									
1	178.37	701.98	1742.27	3080.11	1267.05	877.65	542.68	349.79	301.22	229.58
2	200.19	745.33	1798.01	3004.57	1250.82	863.69	534.64	347.77	298.24	231.43
3	222.01	788.68	1853.76	2929.02	1234.60	849.73	526.60	345.74	295.25	233.28
4	243.83	832.02	1909.50	2853.48	1218.37	835.78	518.57	343.72	292.27	235.13
5	265.64	875.37	1965.24	2777.94	1202.15	821.82	510.53	341.70	289.28	236.97
6	287.46	918.71	2020.99	2702.39	1185.92	807.86	502.49	339.67	286.30	238.82
7	309.28	962.06	2076.73	2626.85	1169.70	793.91	494.46	337.65	283.31	240.67
8	331.09	1005.40	2132.47	2551.30	1153.47	779.95	486.42	335.63	280.33	242.52
9	352.91	1048.75	2188.22	2475.76	1137.25	765.99	478.38	333.60	277.34	244.36
10	374.73	1092.09	2243.96	2400.21	1121.02	752.03	470.34	331.58	274.36	246.21
11	396.55	1135.44	2299.70	2324.67	1104.80	738.08	462.31	329.55	271.37	248.06
12	418.36	1178.78	2355.45	2249.13	1088.57	724.12	454.27	327.53	268.39	249.91
13	440.18	1222.13	2411.19	2173.58	1072.35	710.16	446.23	325.51	265.40	251.76
14	462.00	1265.47	2466.93	2098.04	1056.12	696.21	438.20	323.48	262.42	253.60
15	483.81	1308.82	2522.68	2022.49	1039.90	682.25	430.16	321.46	259.43	255.45
16	505.63	1352.16	2578.42	1946.95	1023.67	668.29	422.12	319.44	256.45	257.30
17	527.45	1395.51	2634.17	1871.40	1007.45	654.33	414.09	317.41	253.46	259.15
18	549.26	1438.85	2689.91	1795.86	991.22	640.38	406.05	315.39	250.48	260.99
19	571.08	1482.20	2745.65	1720.32	975.00	626.42	398.01	313.37	247.49	262.84
20	592.90	1525.54	2801.40	1644.77	958.77	612.46	389.97	311.34	244.51	264.69
21	614.72	1568.89	2857.14	1569.23	942.55	598.51	381.94	309.32	241.52	266.54
22	636.53	1612.23	2912.88	1493.68	926.32	584.55	373.90	307.30	238.54	268.38
23	658.35	1655.58	2968.63	1418.14	910.10	570.59	365.86	305.27	235.55	270.23
24	680.17	1698.92	3024.37	1342.59	893.87	556.63	357.83	303.25	232.57	272.08

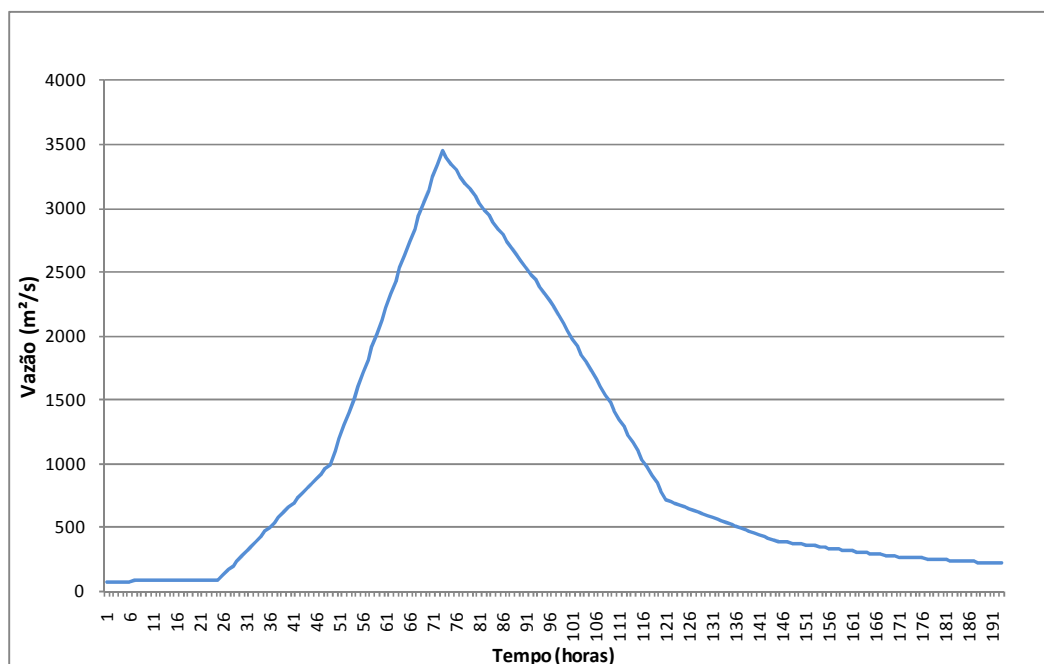




**Vazões horárias. De 2 de maio a 11 de maio de 2001.**

HORA	Vazões Horárias (Dias)									
	2/mai	3/mai	4/mai	5/mai	6/mai	7/mai	8/mai	9/mai	10/mai	11/mai
	Descarga Horária									
1	91.86	433.77	2553.14	1058.67	622.32	358.02	261.15	210.69	175.47	153.45
2	106.11	522.08	2490.87	1040.49	611.31	353.98	259.05	209.22	174.55	152.56
3	120.36	610.38	2428.60	1022.31	600.30	349.95	256.95	207.75	173.64	151.67
4	134.60	698.69	2366.33	1004.13	589.29	345.91	254.84	206.28	172.72	150.79
5	148.85	787.00	2304.06	985.95	578.27	341.87	252.74	204.82	171.80	149.90
6	163.09	875.30	2241.79	967.77	567.26	337.84	250.64	203.35	170.88	149.01
7	177.34	963.61	2179.52	949.59	556.25	333.80	248.53	201.88	169.97	148.13
8	191.59	1051.92	2117.25	931.41	545.23	329.77	246.43	200.41	169.05	147.24
9	205.83	1140.23	2054.98	913.22	534.22	325.73	244.33	198.95	168.13	146.35
10	220.08	1228.53	1992.71	895.04	523.21	321.69	242.23	197.48	167.21	145.47
11	234.32	1316.84	1930.45	876.86	512.20	317.66	240.12	196.01	166.29	144.58
12	248.57	1405.15	1868.18	858.68	501.18	313.62	238.02	194.55	165.38	143.69
13	262.82	1493.45	1805.91	840.50	490.17	309.58	235.92	193.08	164.46	142.81
14	277.06	1581.76	1743.64	822.32	479.16	305.55	233.82	191.61	163.54	141.92
15	291.31	1670.07	1681.37	804.14	468.15	301.51	231.71	190.14	162.62	141.03
16	305.55	1758.38	1619.10	785.96	457.13	297.48	229.61	188.68	161.71	140.15
17	319.80	1846.68	1556.83	767.77	446.12	293.44	227.51	187.21	160.79	139.26
18	334.05	1934.99	1494.56	749.59	435.11	289.40	225.40	185.74	159.87	138.37
19	348.29	2023.30	1432.29	731.41	424.09	285.37	223.30	184.27	158.95	137.49
20	362.54	2111.60	1370.02	713.23	413.08	281.33	221.20	182.81	158.04	136.60
21	376.79	2199.91	1307.75	695.05	402.07	277.30	219.10	181.34	157.12	135.71
22	391.03	2288.22	1245.48	676.87	391.06	273.26	216.99	179.87	156.20	134.83
23	405.28	2376.52	1183.21	658.69	380.04	269.22	214.89	178.41	155.28	133.94
24	419.52	2464.83	1120.94	640.50	369.03	265.19	212.79	176.94	154.37	133.05

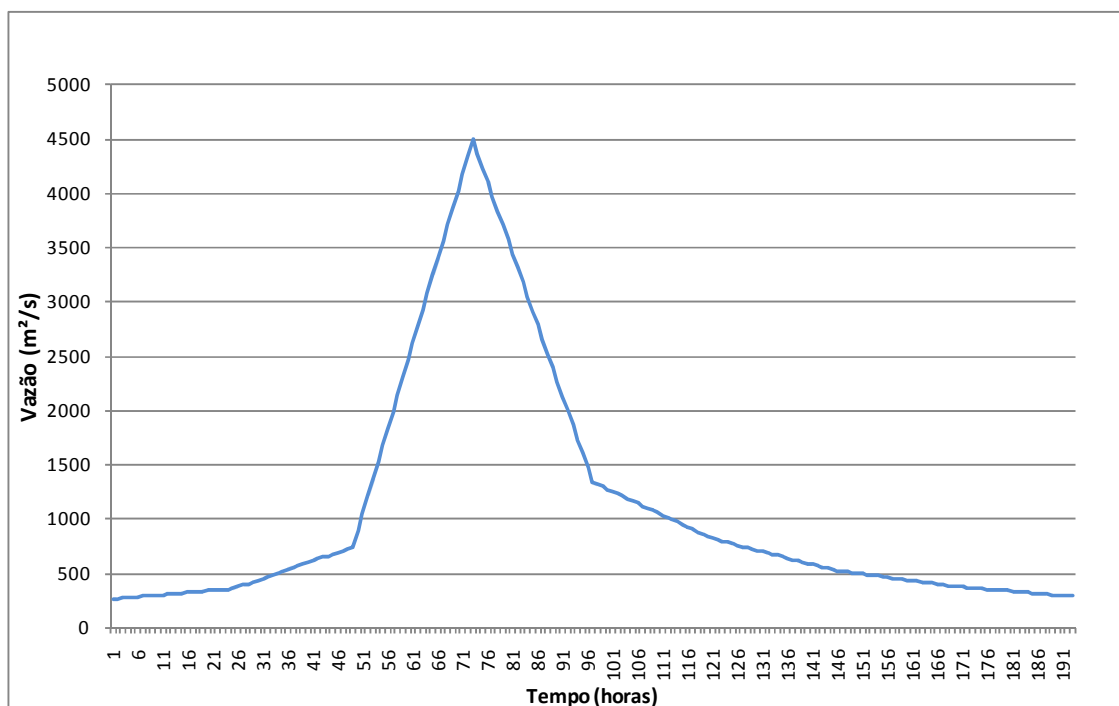




**Vazões horárias. De 19 de julho a 25 de julho de 2001.**

HORA	Vazões Horárias (Dias)							
	17/jul	18/jul	19/jul	20/jul	21/jul	22/jul	23/jul	24/jul
	Descarga Horária							
1	77.70	87.63	995.74	3450.14	2229.56	722.26	394.16	275.81
2	78.12	125.47	1098.00	3399.28	2166.75	708.59	389.23	273.36
3	78.53	163.31	1200.27	3348.42	2103.95	694.92	384.29	270.92
4	78.94	201.15	1302.54	3297.57	2041.14	681.25	379.36	268.47
5	79.36	238.98	1404.80	3246.71	1978.34	667.58	374.43	266.02
6	79.77	276.82	1507.07	3195.85	1915.54	653.91	369.50	263.58
7	80.19	314.66	1609.34	3144.99	1852.73	640.24	364.57	261.13
8	80.60	352.50	1711.60	3094.14	1789.93	626.56	359.64	258.68
9	81.01	390.33	1813.87	3043.28	1727.12	612.89	354.71	256.24
10	81.43	428.17	1916.14	2992.42	1664.32	599.22	349.78	253.79
11	81.84	466.01	2018.40	2941.56	1601.52	585.55	344.85	251.35
12	82.25	503.85	2120.67	2890.71	1538.71	571.88	339.91	248.90
13	82.67	541.68	2222.94	2839.85	1475.91	558.21	334.98	246.45
14	83.08	579.52	2325.20	2788.99	1413.11	544.54	330.05	244.01
15	83.50	617.36	2427.47	2738.13	1350.30	530.87	325.12	241.56
16	83.91	655.20	2529.74	2687.28	1287.50	517.20	320.19	239.11
17	84.32	693.04	2632.01	2636.42	1224.69	503.53	315.26	236.67
18	84.74	730.87	2734.27	2585.56	1161.89	489.85	310.33	234.22
19	85.15	768.71	2836.54	2534.70	1099.09	476.18	305.40	231.77
20	85.56	806.55	2938.81	2483.84	1036.28	462.51	300.47	229.33
21	85.98	844.39	3041.07	2432.99	973.48	448.84	295.53	226.88
22	86.39	882.22	3143.34	2382.13	910.67	435.17	290.60	224.43
23	86.81	920.06	3245.61	2331.27	847.87	421.50	285.67	221.99
24	87.22	957.90	3347.87	2280.41	785.07	407.83	280.74	219.54

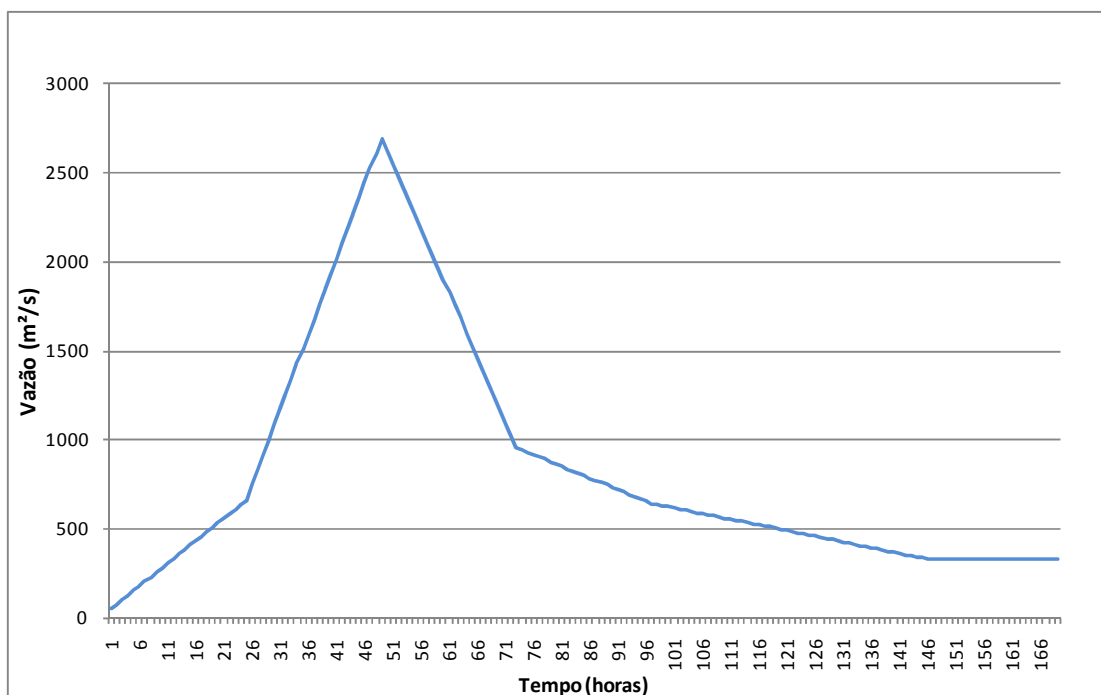




Vazões horárias. De 28 de setembro a 6 de outubro de 2001.

HORA	Vazões Horárias (Dias)								
	28/set	29/set	30/set	1/out	2/out	3/out	4/out	5/out	6/out
	Descarga Horária								
1	264.82	359.83	742.94	4497.26	1344.03	820.20	533.15	383.20	288.92
2	268.78	375.79	899.37	4365.88	1322.20	808.24	526.91	379.27	286.37
3	272.74	391.75	1055.80	4234.49	1300.38	796.28	520.66	375.34	283.81
4	276.70	407.72	1212.23	4103.11	1278.55	784.32	514.41	371.41	281.26
5	280.66	423.68	1368.66	3971.72	1256.73	772.36	508.16	367.48	278.71
6	284.62	439.64	1525.09	3840.34	1234.90	760.40	501.91	363.55	276.16
7	288.58	455.61	1681.52	3708.95	1213.07	748.44	495.66	359.63	273.60
8	292.53	471.57	1837.95	3577.57	1191.25	736.48	489.42	355.70	271.05
9	296.49	487.53	1994.38	3446.18	1169.42	724.52	483.17	351.77	268.50
10	300.45	503.49	2150.81	3314.80	1147.59	712.56	476.92	347.84	265.94
11	304.41	519.46	2307.24	3183.42	1125.77	700.60	470.67	343.91	263.39
12	308.37	535.42	2463.67	3052.03	1103.94	688.64	464.42	339.99	260.84
13	312.33	551.38	2620.10	2920.65	1082.12	676.68	458.17	336.06	258.29
14	316.28	567.35	2776.53	2789.26	1060.29	664.72	451.93	332.13	255.73
15	320.24	583.31	2932.96	2657.88	1038.46	652.76	445.68	328.20	253.18
16	324.20	599.27	3089.39	2526.49	1016.64	640.80	439.43	324.27	250.63
17	328.16	615.23	3245.82	2395.11	994.81	628.84	433.18	320.34	248.07
18	332.12	631.20	3402.25	2263.72	972.99	616.88	426.93	316.42	245.52
19	336.08	647.16	3558.68	2132.34	951.16	604.92	420.68	312.49	242.97
20	340.04	663.12	3715.11	2000.95	929.33	592.96	414.44	308.56	240.42
21	343.99	679.09	3871.54	1869.57	907.51	581.00	408.19	304.63	237.86
22	347.95	695.05	4027.97	1738.18	885.68	569.04	401.94	300.70	235.31
23	351.91	711.01	4184.40	1606.80	863.85	557.08	395.69	296.78	232.76
24	355.87	726.97	4340.83	1475.41	842.03	545.11	389.44	292.85	230.20





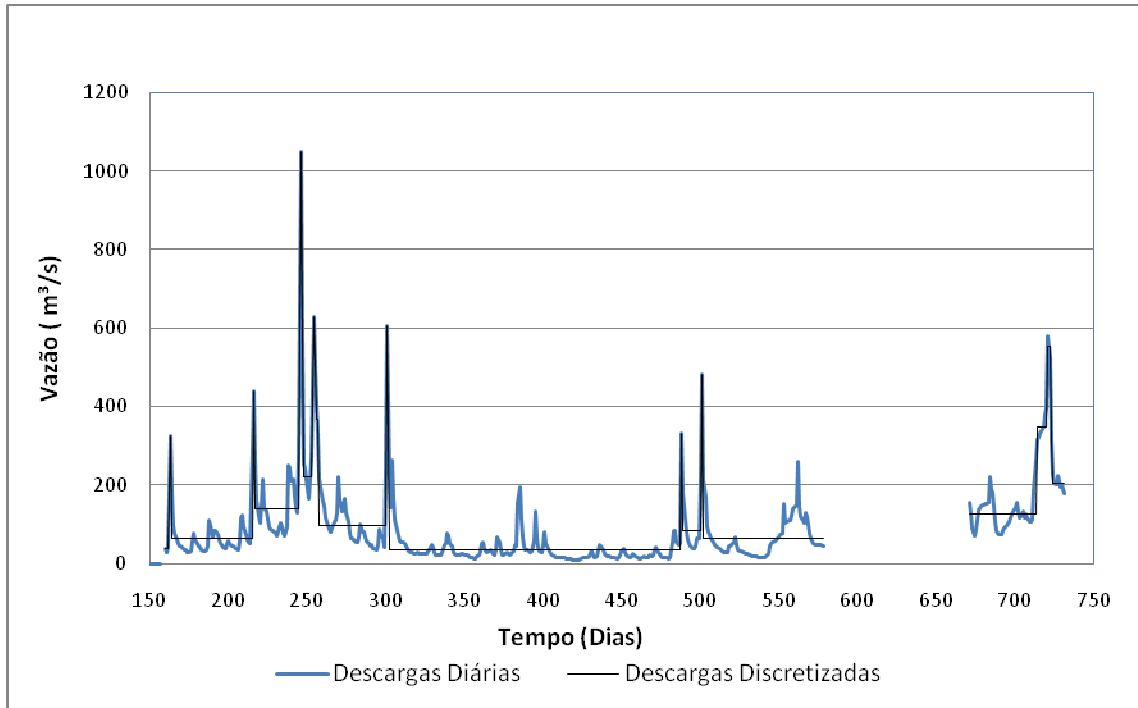
**Vazões horárias. De 17 de maio a 23 de maio de 2005.**

HORA	Vazões Horárias (Dias)						
	17/mai	18/mai	19/mai	20/mai	21/mai	22/mai	23/mai
	Descarga Horária						
1	51.94	664.13	2695.27	956.68	643.64	492.95	337.42
2	77.45	748.76	2622.83	943.63	637.36	486.47	337.00
3	102.96	833.39	2550.39	930.59	631.08	479.99	336.59
4	128.47	918.02	2477.95	917.55	624.81	473.51	336.17
5	153.97	1002.65	2405.51	904.50	618.53	467.03	335.76
6	179.48	1087.28	2333.07	891.46	612.25	460.55	335.34
7	204.99	1171.91	2260.62	878.42	605.97	454.06	334.92
8	230.50	1256.55	2188.18	865.37	599.69	447.58	334.51
9	256.01	1341.18	2115.74	852.33	593.41	441.10	334.09
10	281.51	1425.81	2043.30	839.29	587.13	434.62	333.67
11	307.02	1510.44	1970.86	826.25	580.85	428.14	333.26
12	332.53	1595.07	1898.42	813.20	574.57	421.66	332.84
13	358.04	1679.70	1825.97	800.16	568.29	415.18	332.43
14	383.54	1764.33	1753.53	787.12	562.02	408.70	332.01
15	409.05	1848.96	1681.09	774.07	555.74	402.22	331.59
16	434.56	1933.59	1608.65	761.03	549.46	395.74	331.18
17	460.07	2018.22	1536.21	747.99	543.18	389.26	330.76
18	485.57	2102.86	1463.77	734.94	536.90	382.78	330.35
19	511.08	2187.49	1391.33	721.90	530.62	376.30	329.93
20	536.59	2272.12	1318.88	708.86	524.34	369.82	329.51
21	562.10	2356.75	1246.44	695.81	518.06	363.34	329.10
22	587.60	2441.38	1174.00	682.77	511.78	356.86	328.68
23	613.11	2526.01	1101.56	669.73	505.50	350.38	328.26
24	638.62	2610.64	1029.12	656.69	499.23	343.90	327.85

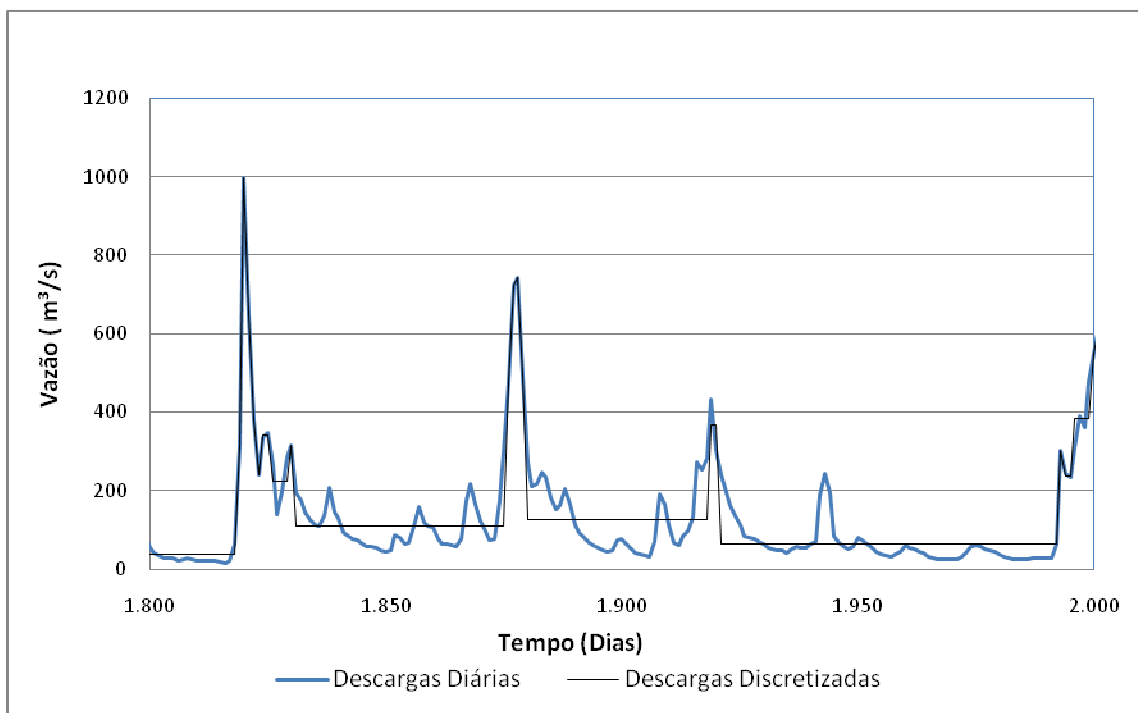


## APÊNDICE F – DISCRETIZAÇÃO DA SÉRIE HISTÓRICA DE VAZÕES DIÁRIAS GERADAS PARA O ESTUDO



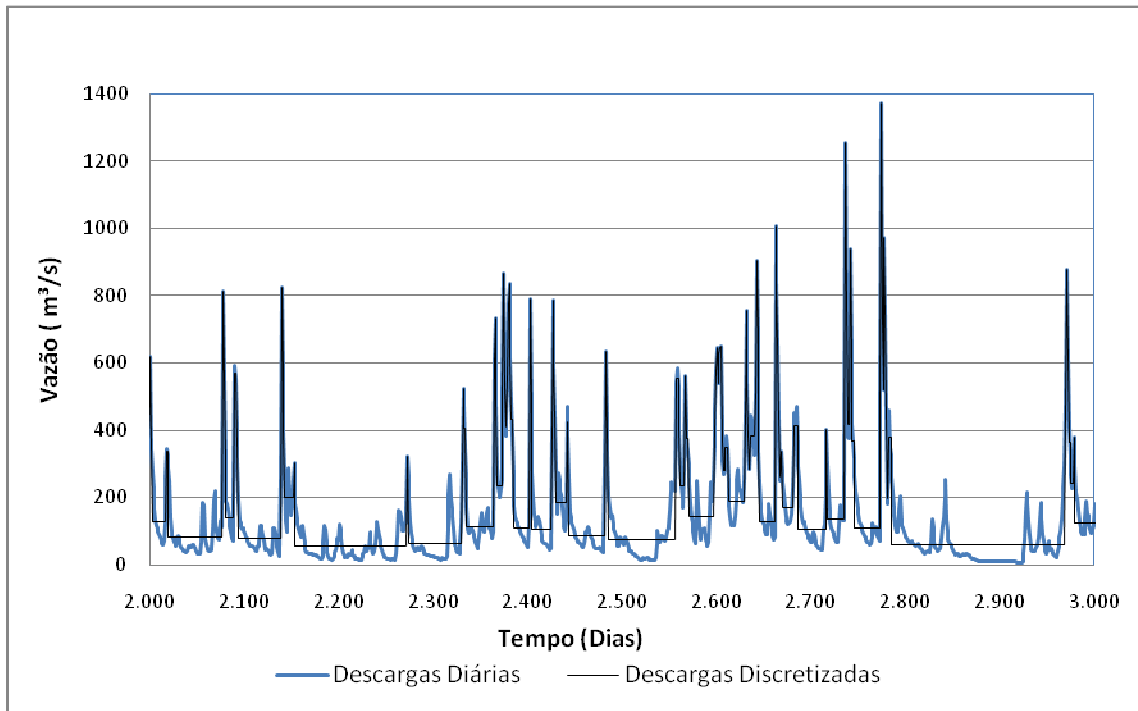


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.

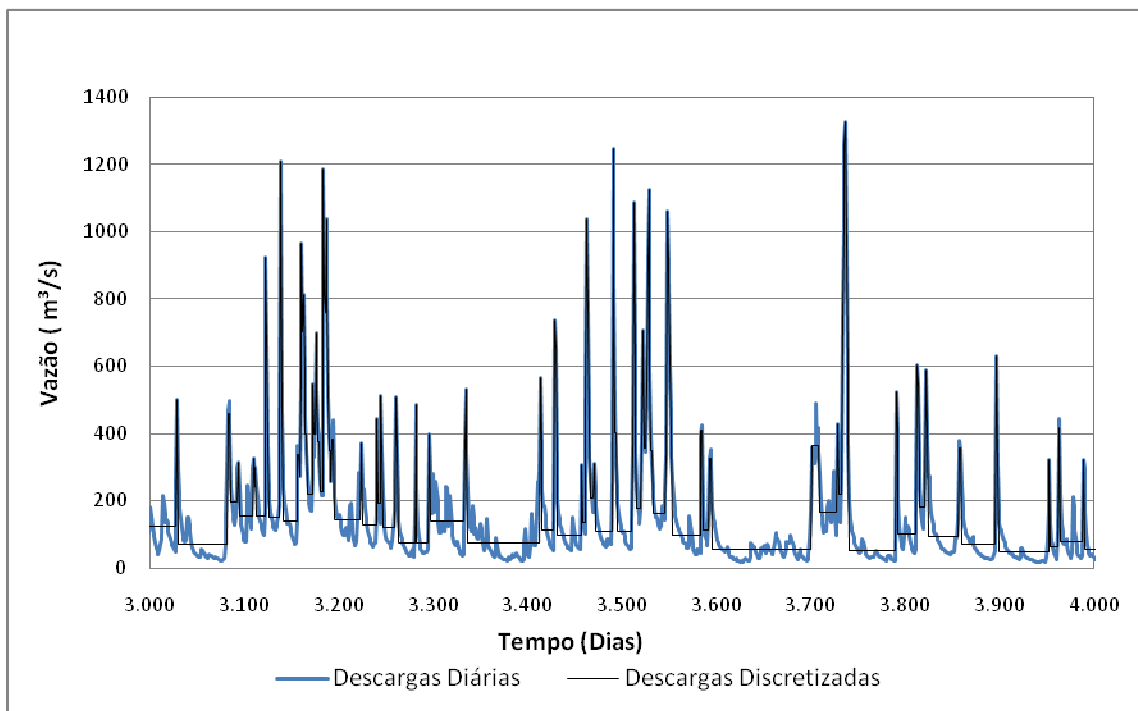


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



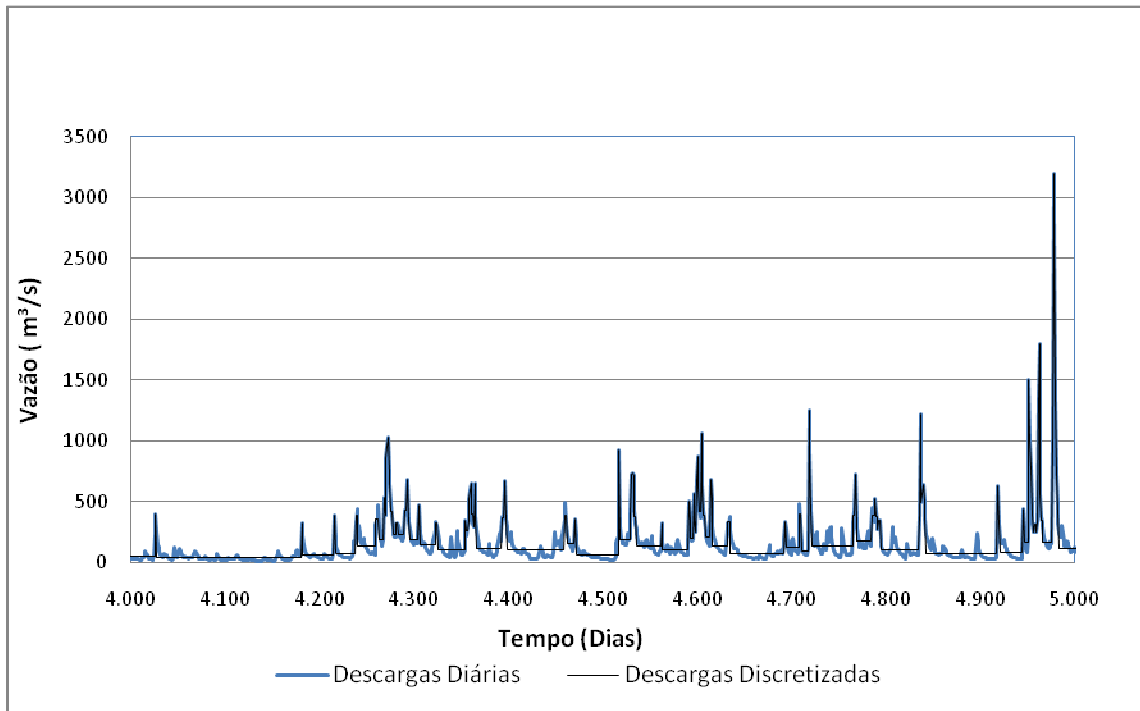


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.

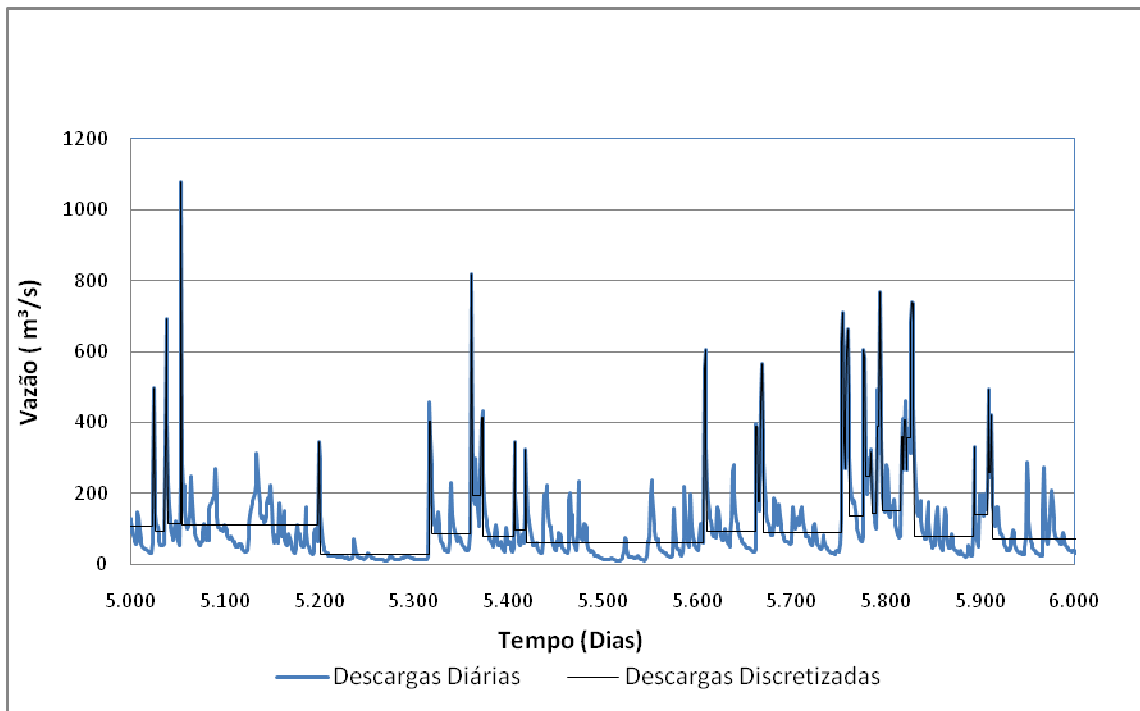


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



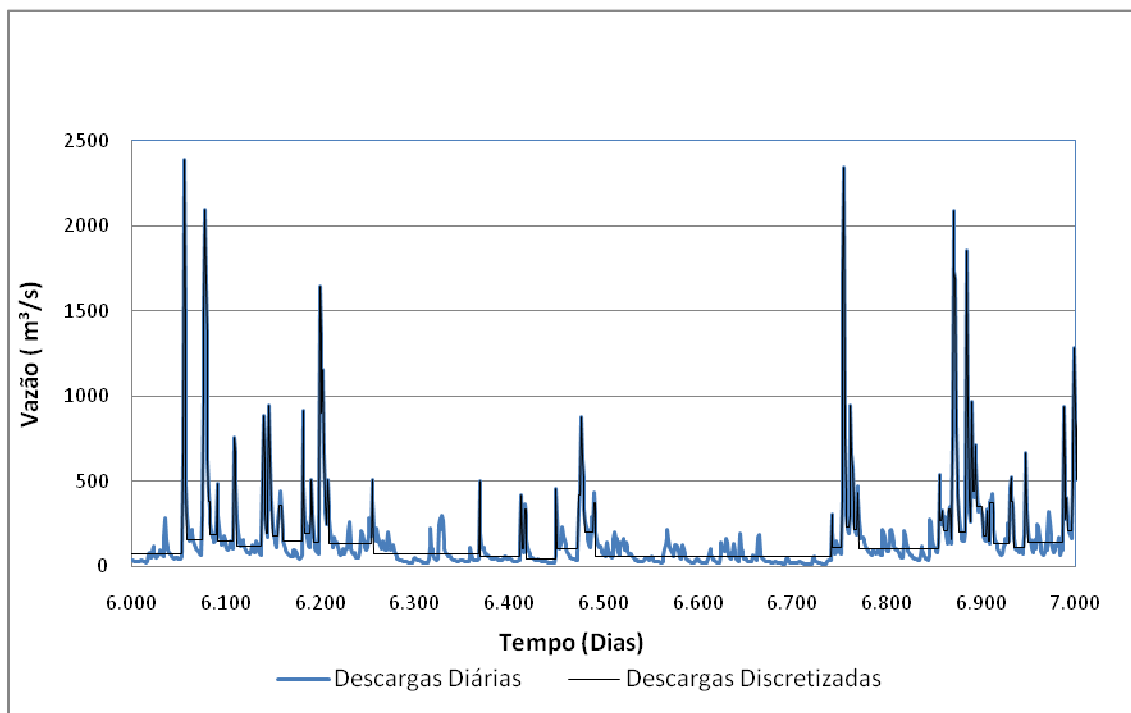


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.

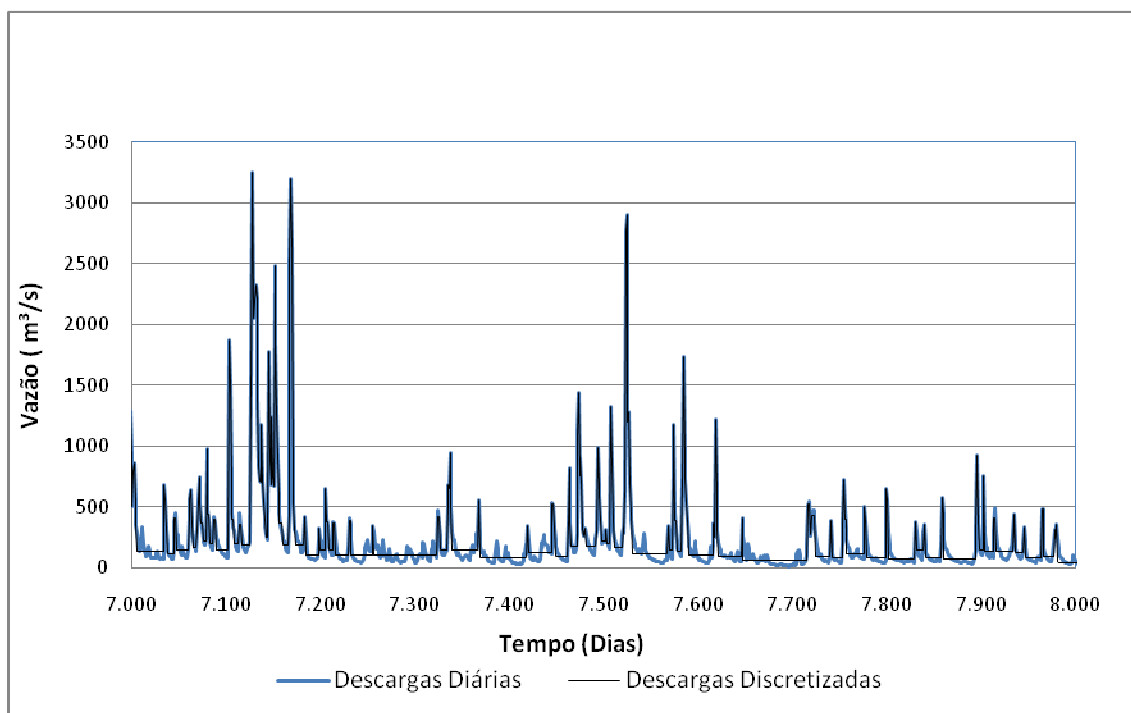


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



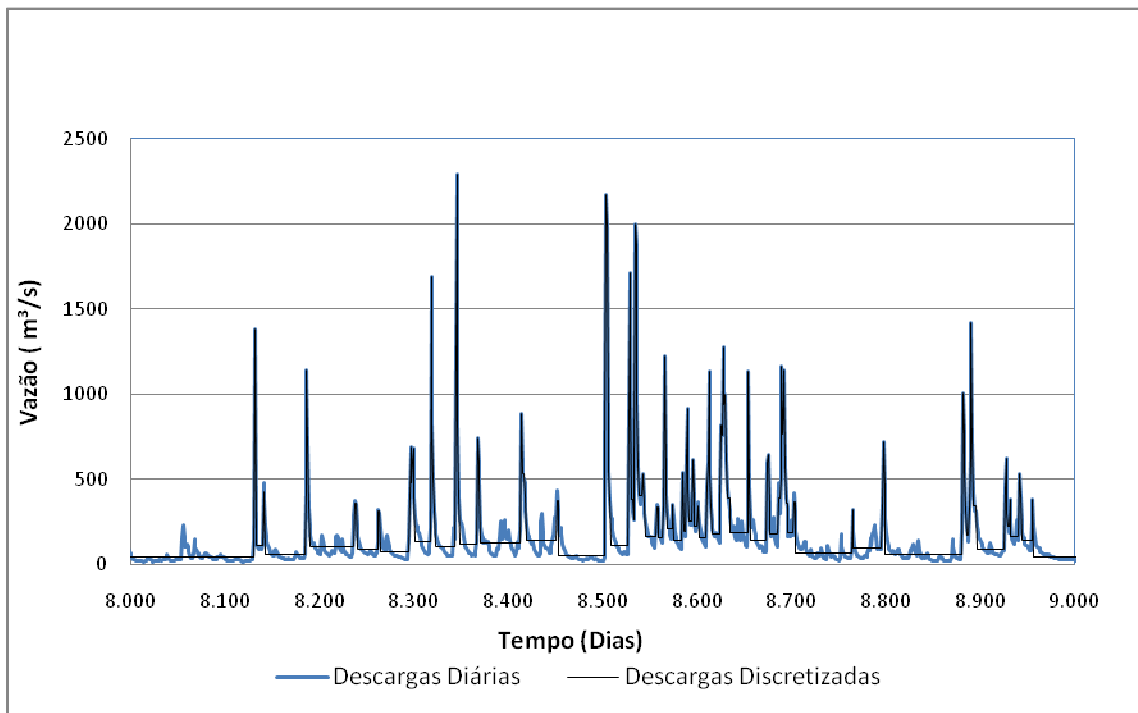


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.

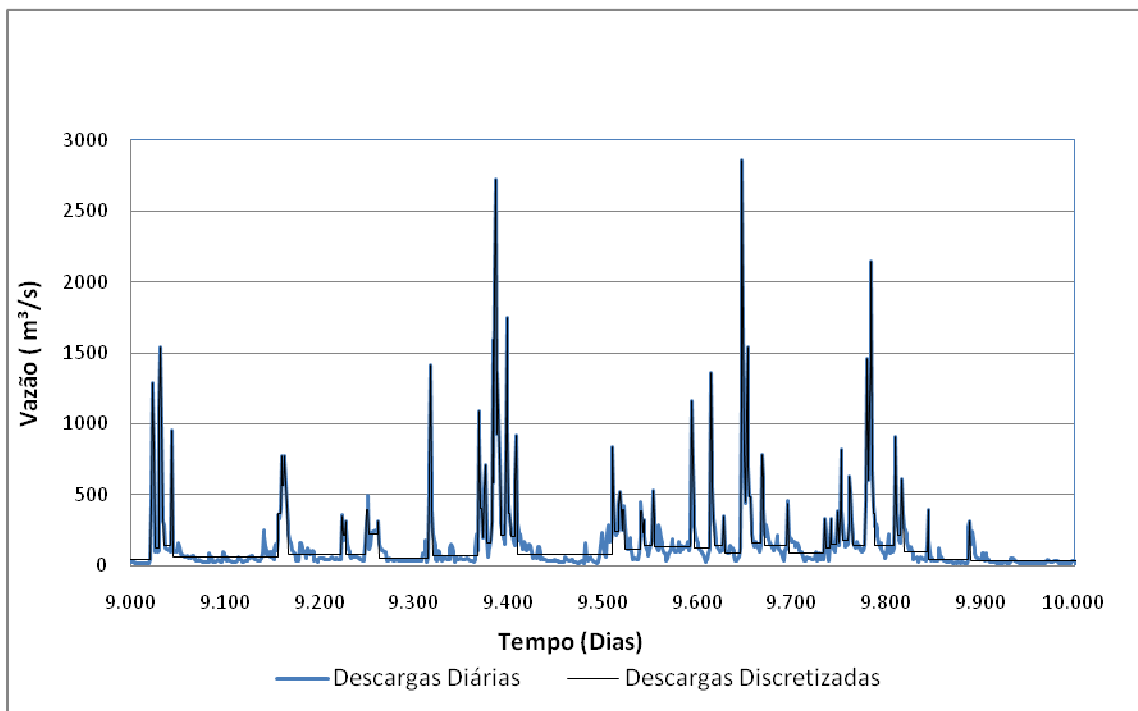


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



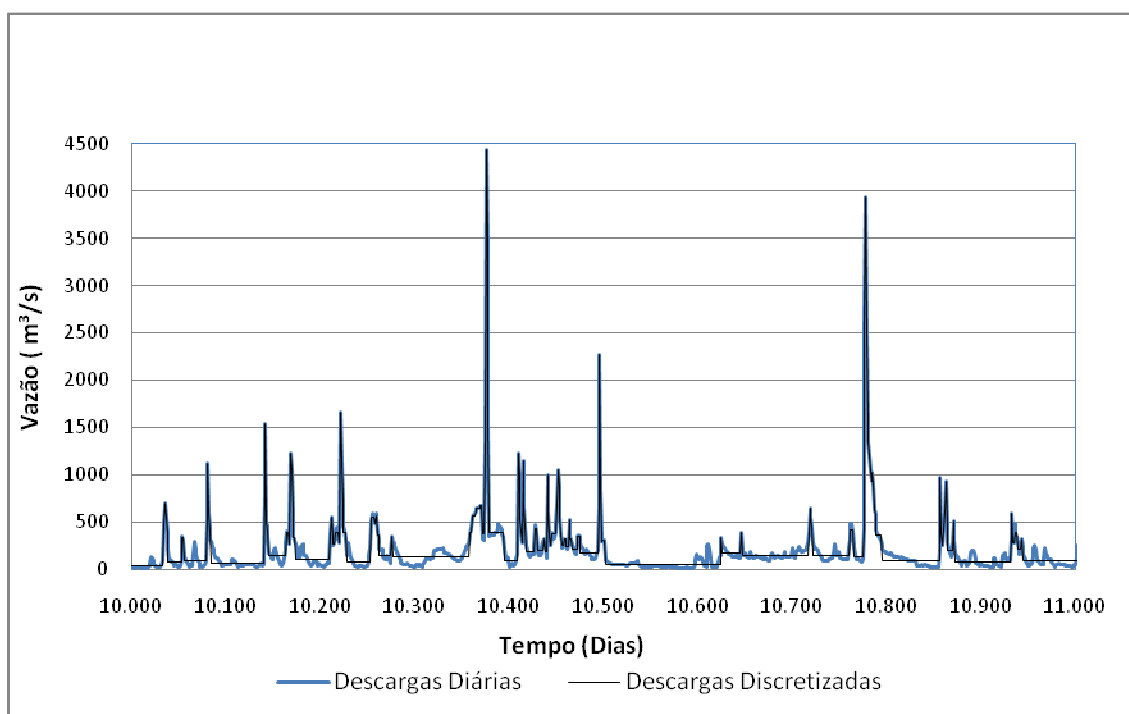


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.

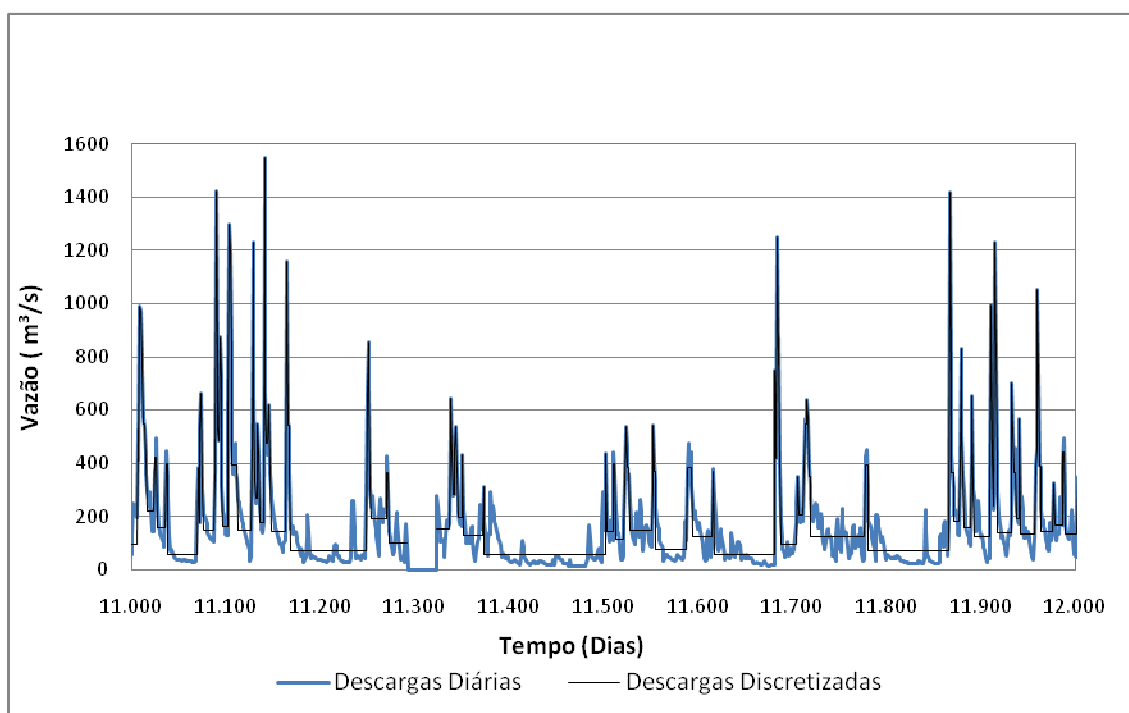


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



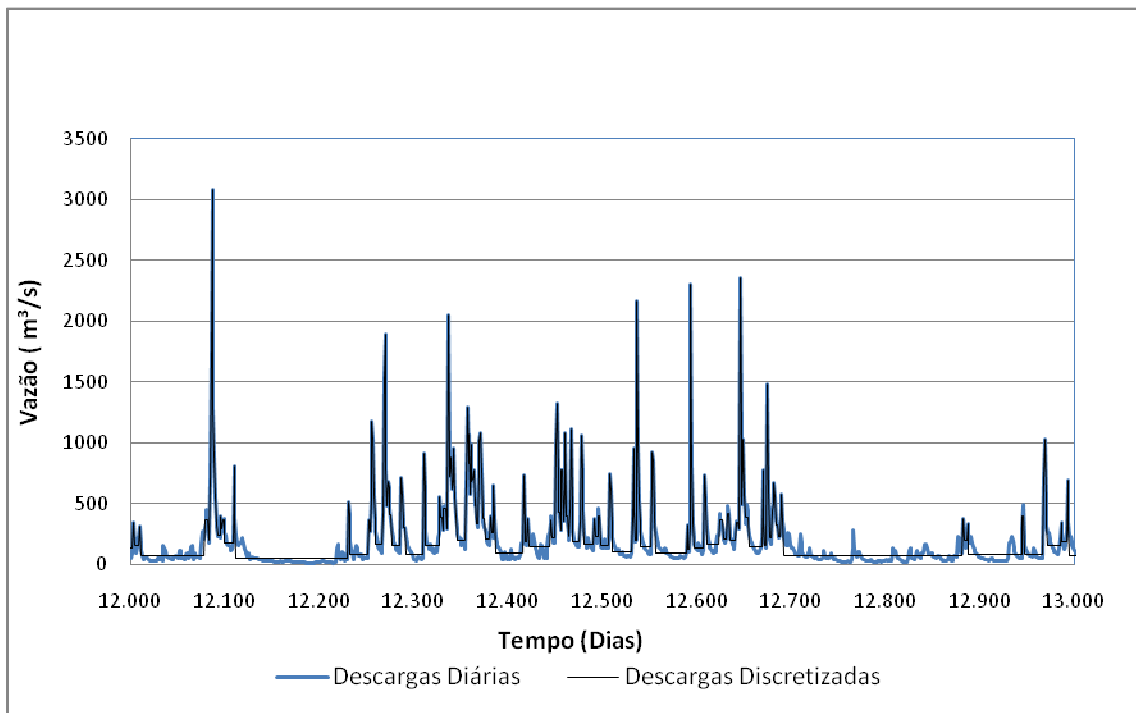


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.

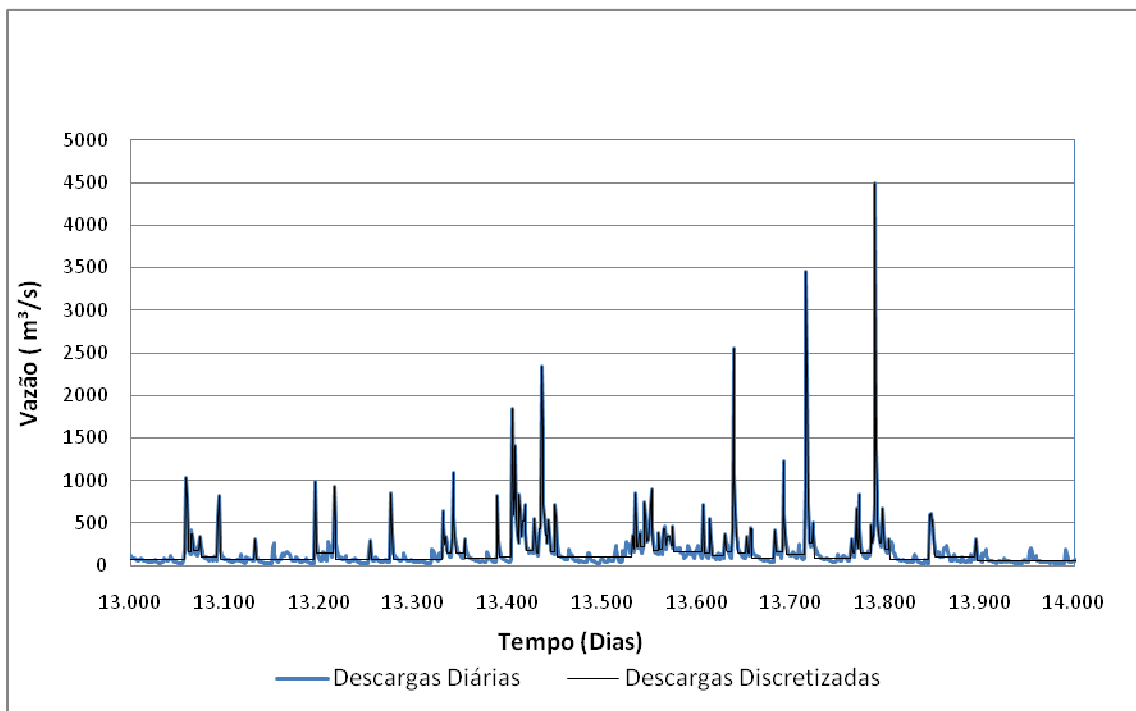


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



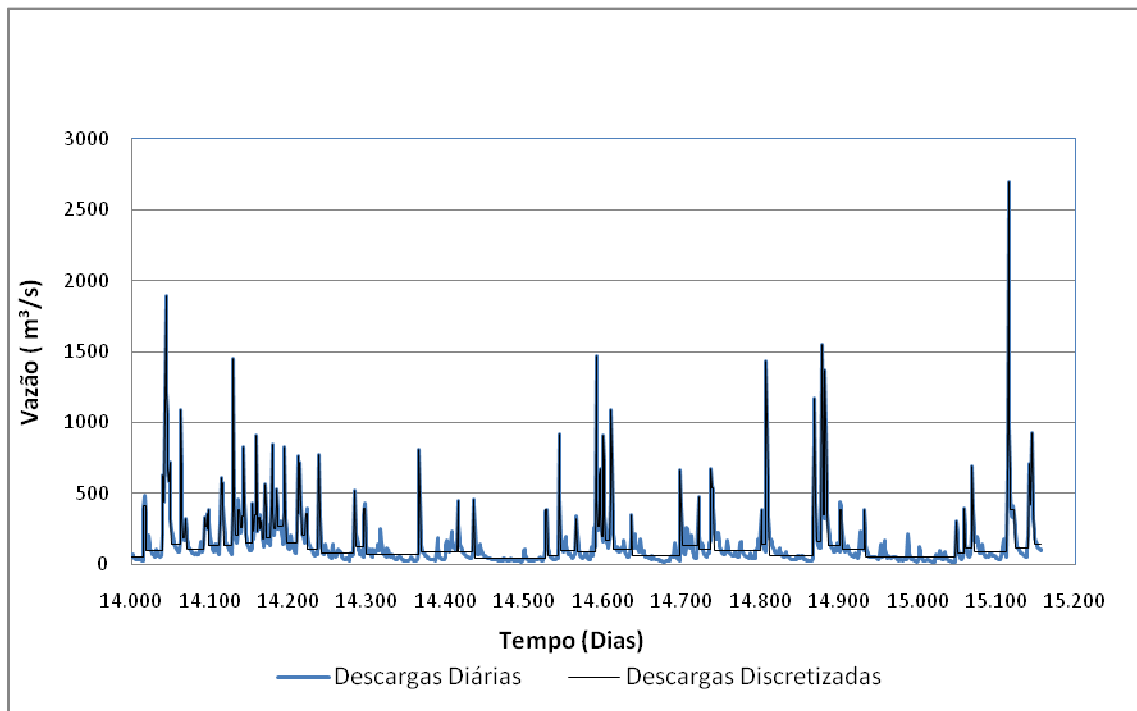


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



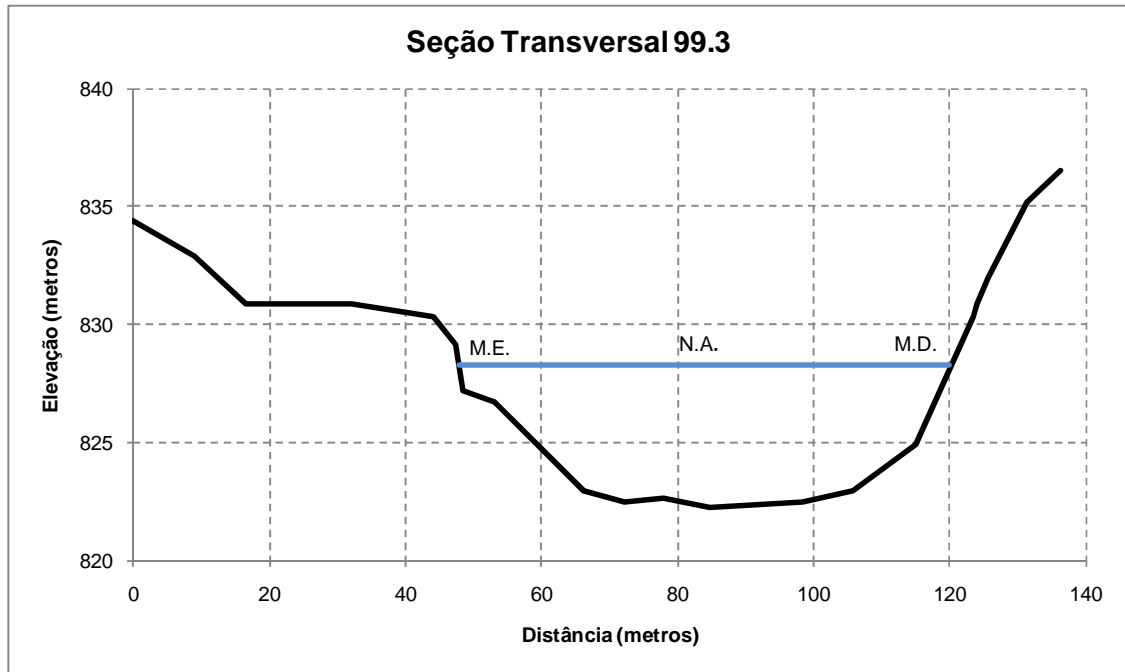


Hidrogramas discretizados para a seção transversal no eixo da barragem. Período indicado no gráfico.



## APÊNDICE G – REPRESENTAÇÃO DOS PERFIS TRANSVERSAIS





**Seção Transversal 99.3.**

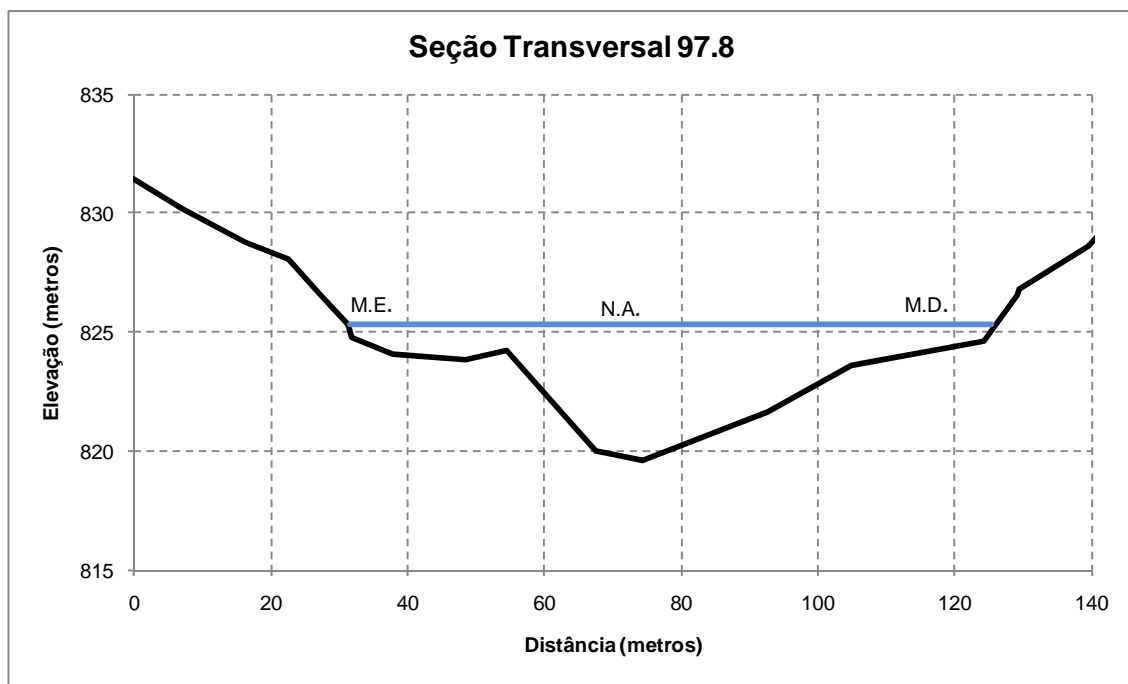


**Vista das margens da seção transversal.**





Vista das margens da seção transversal.



Seção Transversal 97.8.



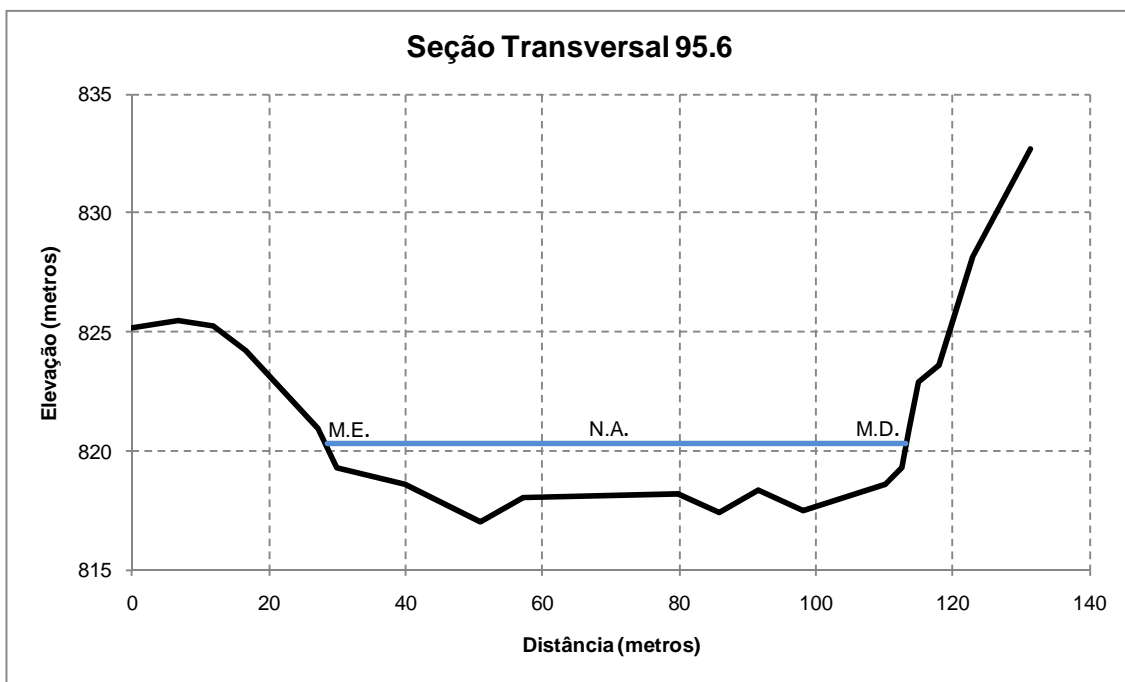


Vista das margens da seção transversal.

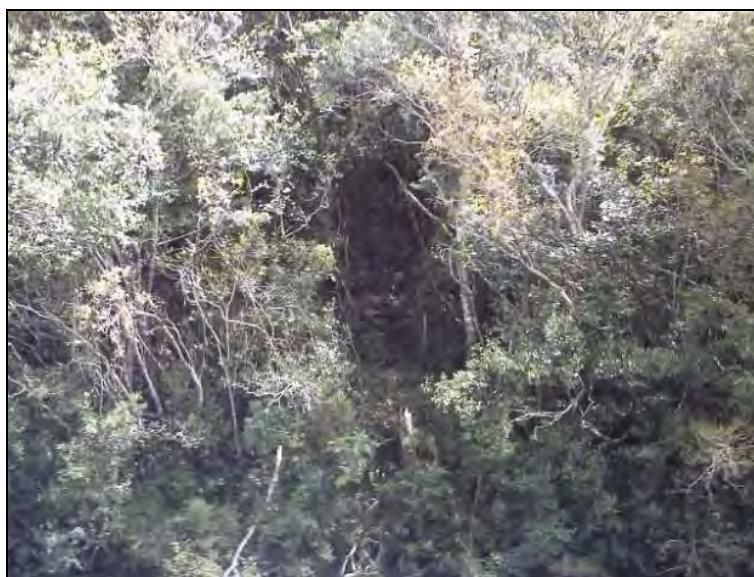


Vista das margens da seção transversal.





**Seção Transversal 95.6.**

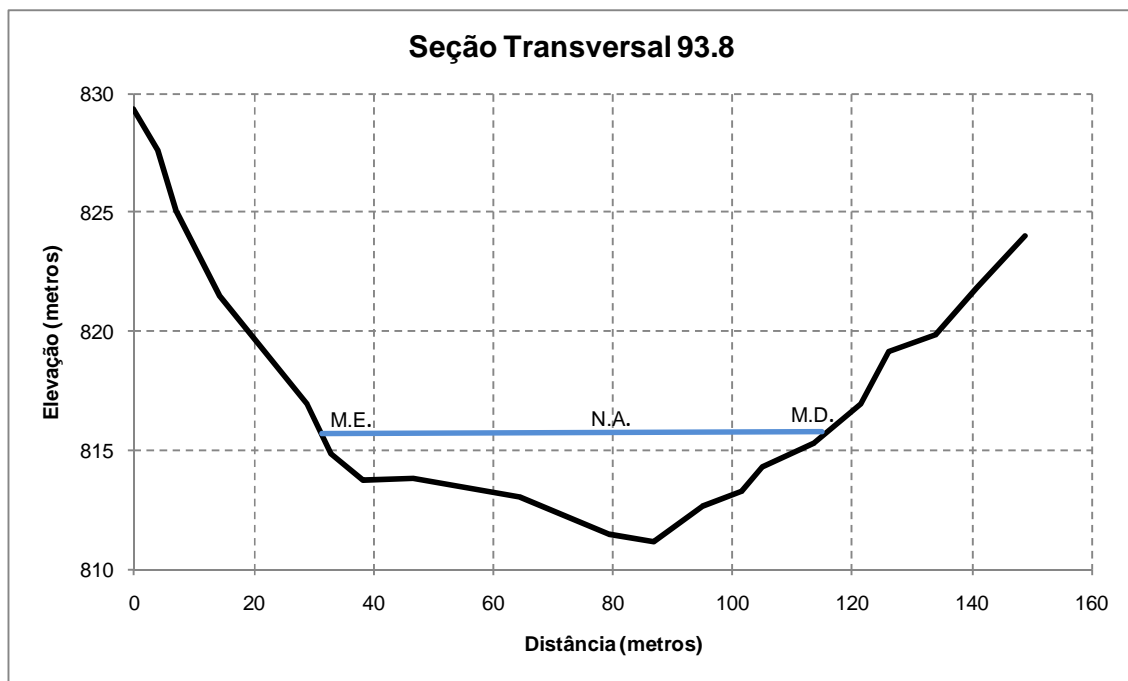


**Vista das margens da seção transversal.**





Vista das margens da seção transversal.



Seção Transversal 93.8.



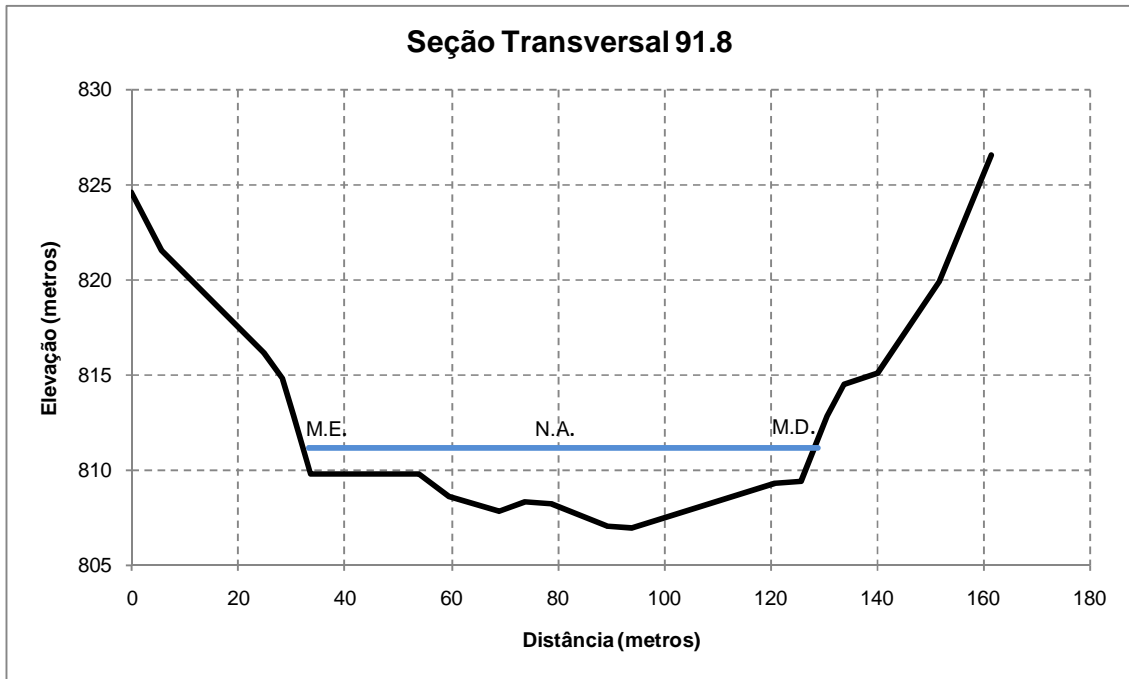


Vista das margens da seção transversal.



Vista das margens da seção transversal.





**Seção Transversal 91.8.**

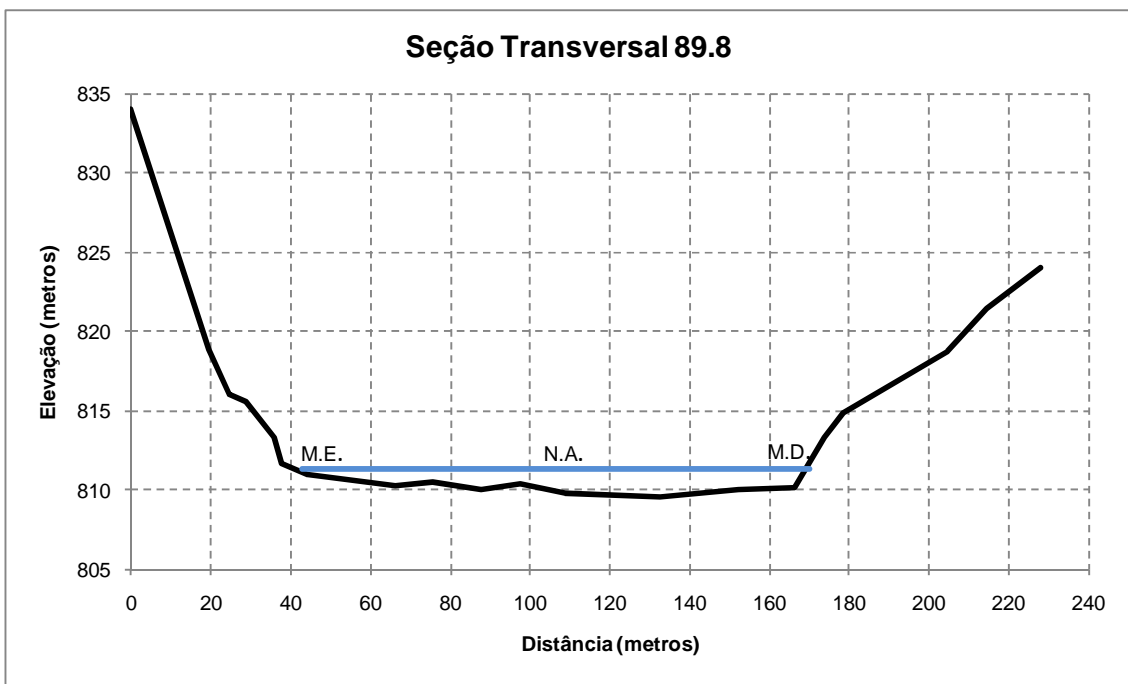


**Vista das margens da seção transversal.**





Vista das margens da seção transversal.



Seção Transversal 89.8.



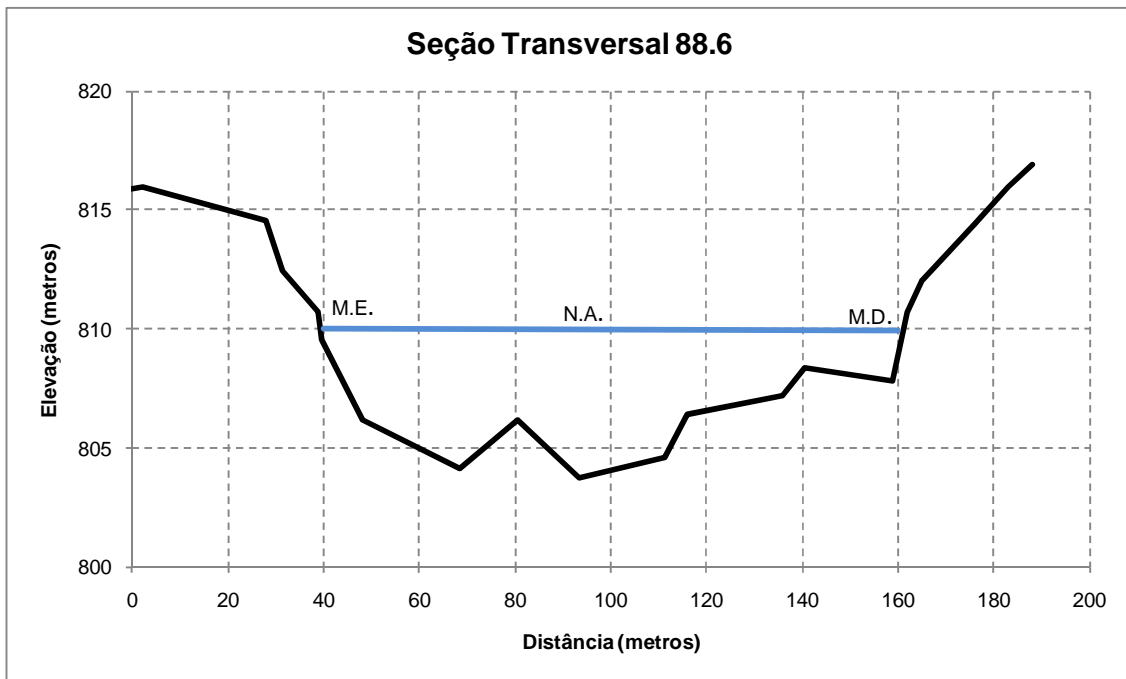


Vista das margens da seção transversal.



Vista das margens da seção transversal.





**Seção Transversal 88.6.**

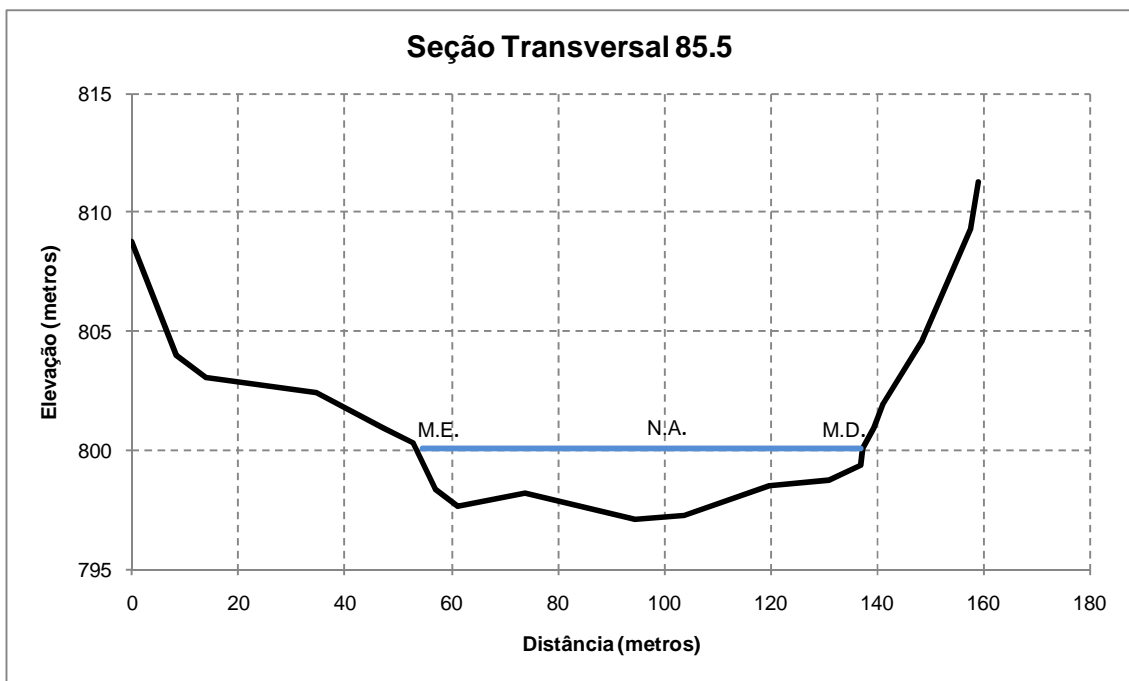


**Vista das margens da seção transversal.**





Vista das margens da seção transversal.



Seção Transversal 85.5.



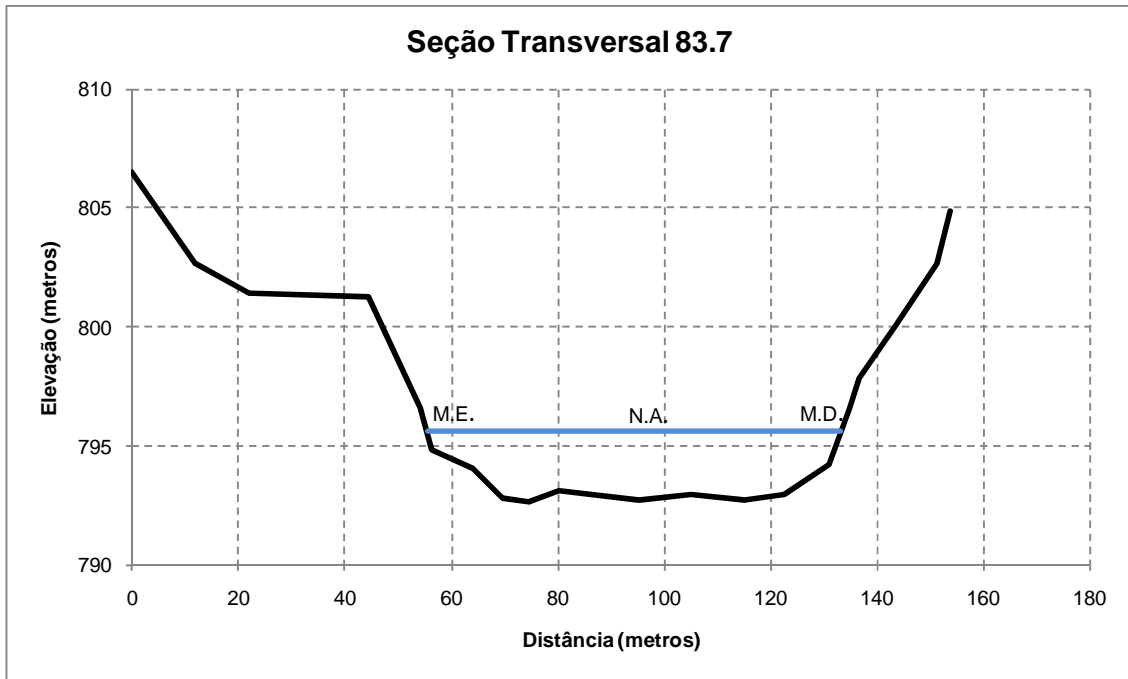


Vista das margens da seção transversal.



Vista das margens da seção transversal.





**Seção Transversal 83.7.**

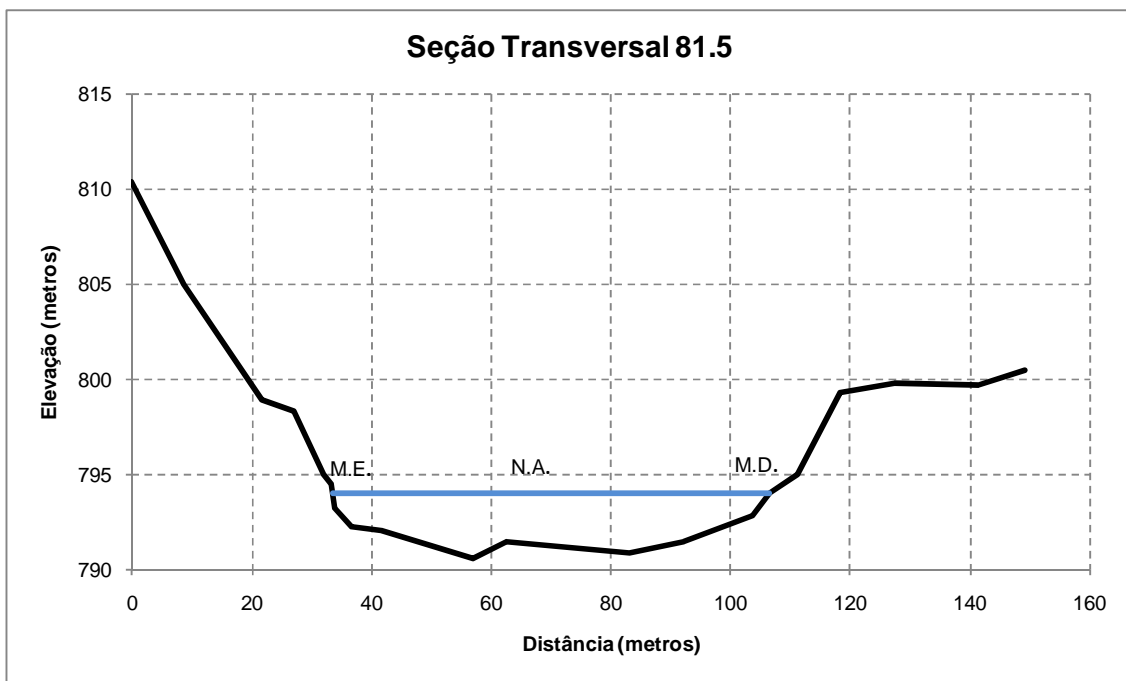


**Vista das margens da seção transversal.**





Vista das margens da seção transversal.



Seção Transversal 81.5.



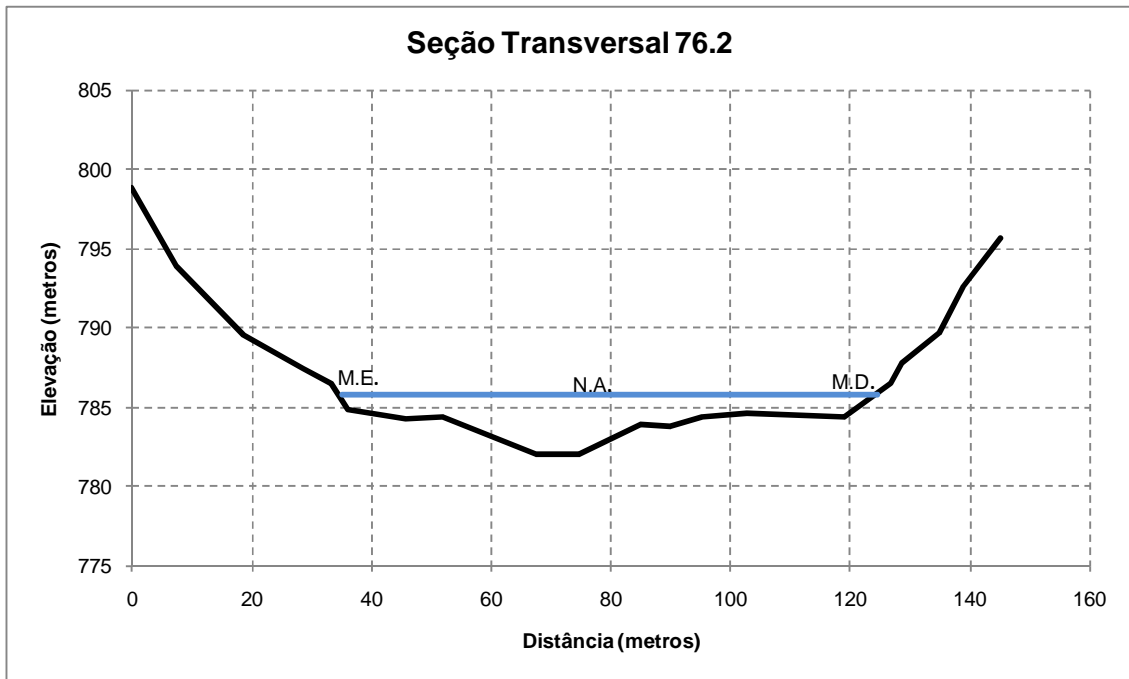


Vista das margens da seção transversal.



Vista das margens da seção transversal.





Seção Transversal 76.2.

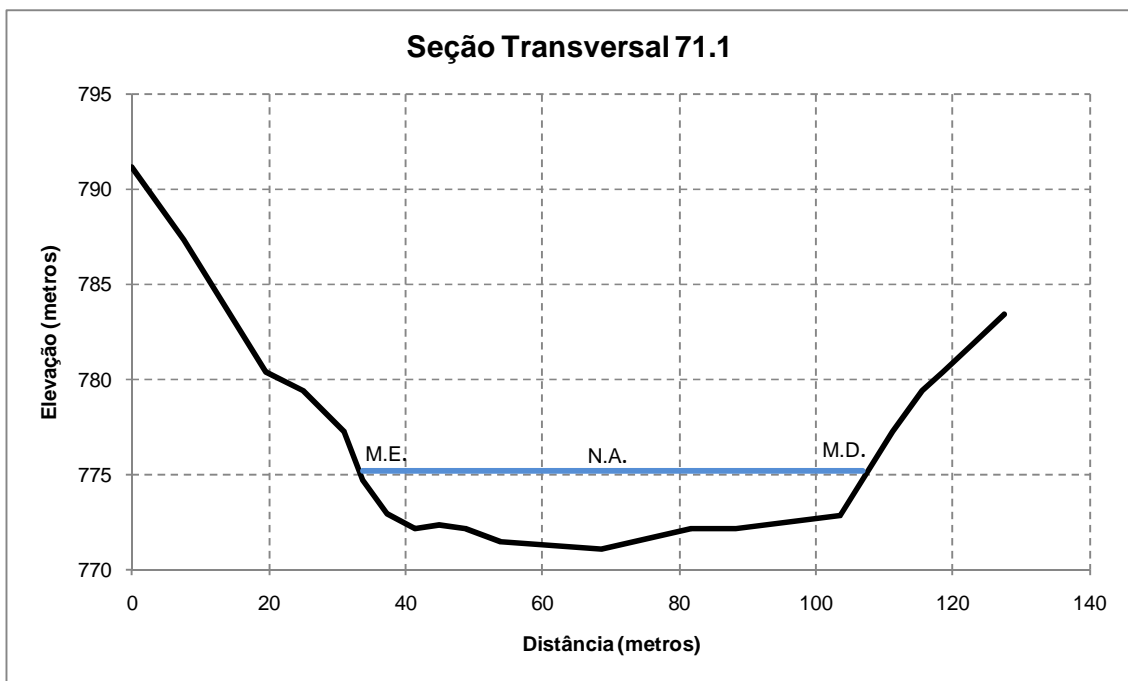


Vista das margens da seção transversal.





Vista das margens da seção transversal.



Seção Transversal 71.1.



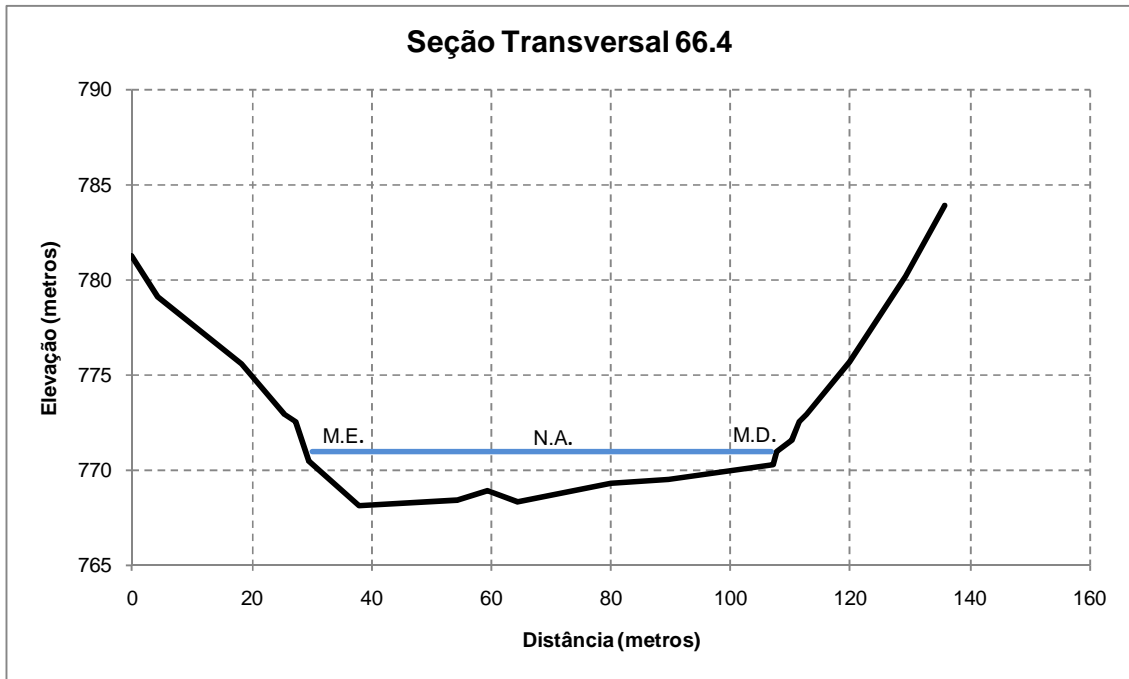


Vista das margens da seção transversal.



Vista das margens da seção transversal.





**Seção Transversal 66.4.**

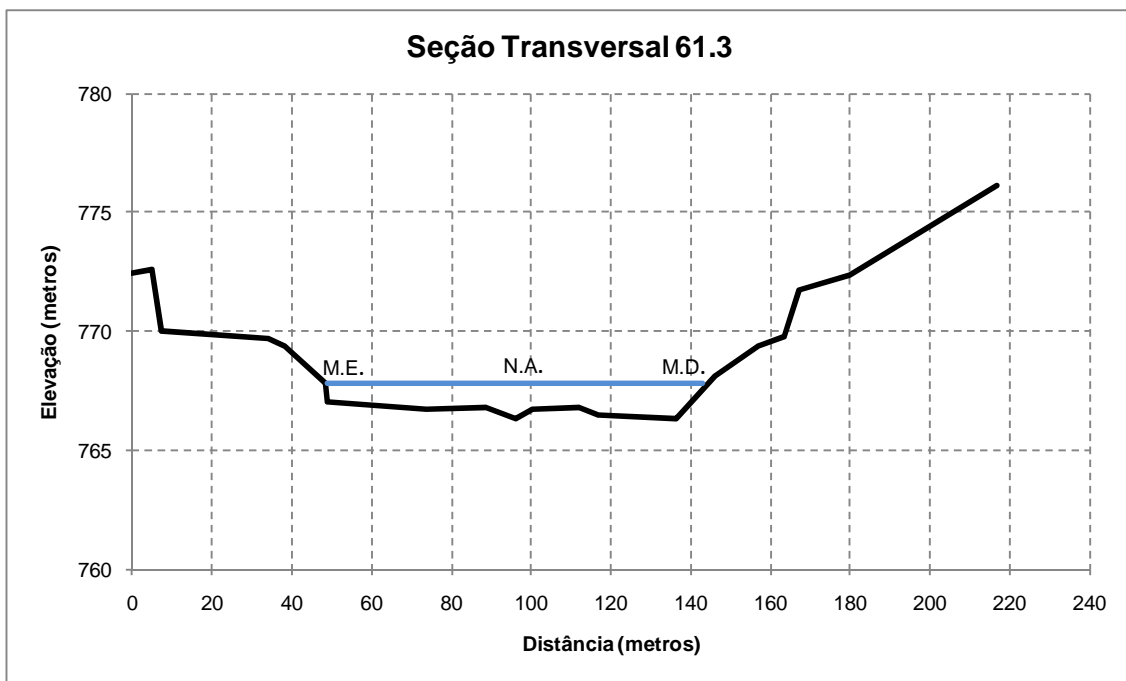


**Vista das margens da seção transversal.**





Vista das margens da seção transversal.



Seção Transversal 61.3.



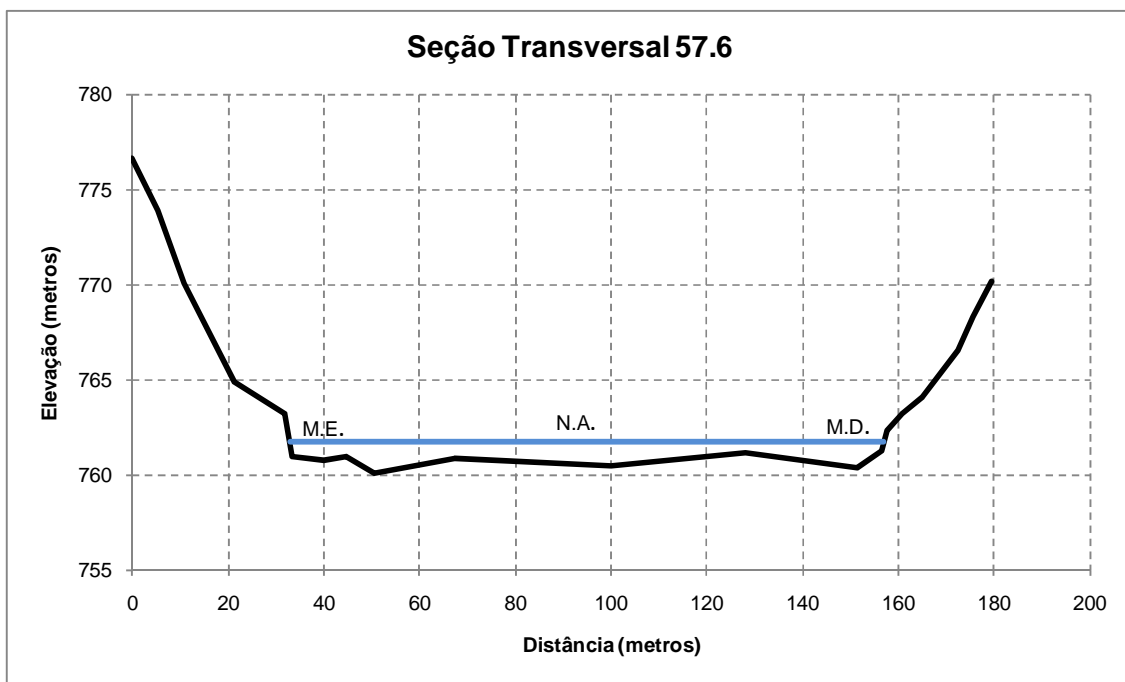


Vista das margens da seção transversal.



Vista do rio a jusante da seção transversal.





**Seção Transversal 57.6.**

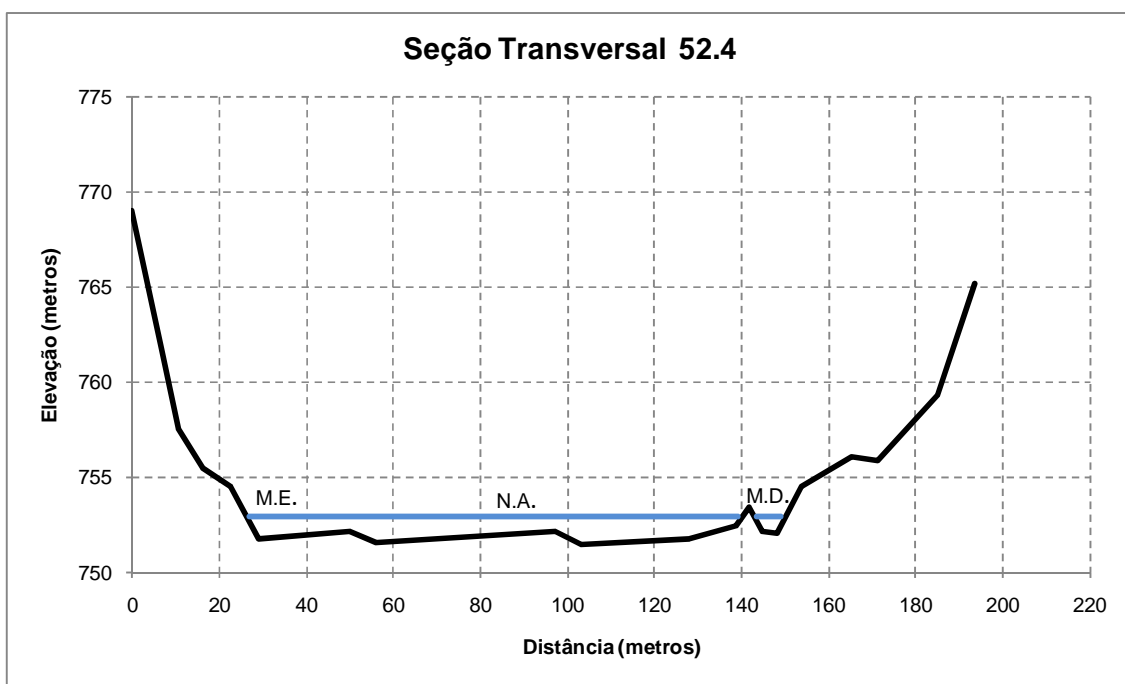


**Vista das margens da seção transversal.**



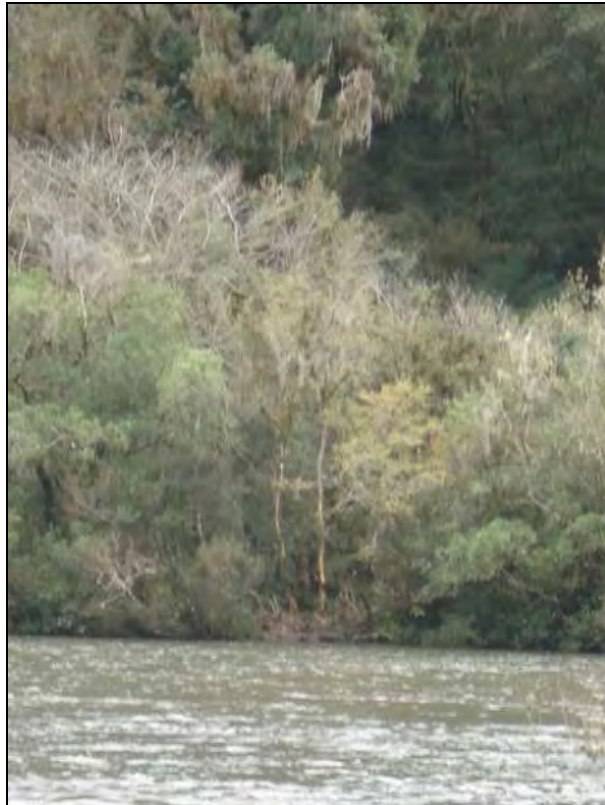


Vista das margens da seção transversal.



Seção Transversal 52.4.



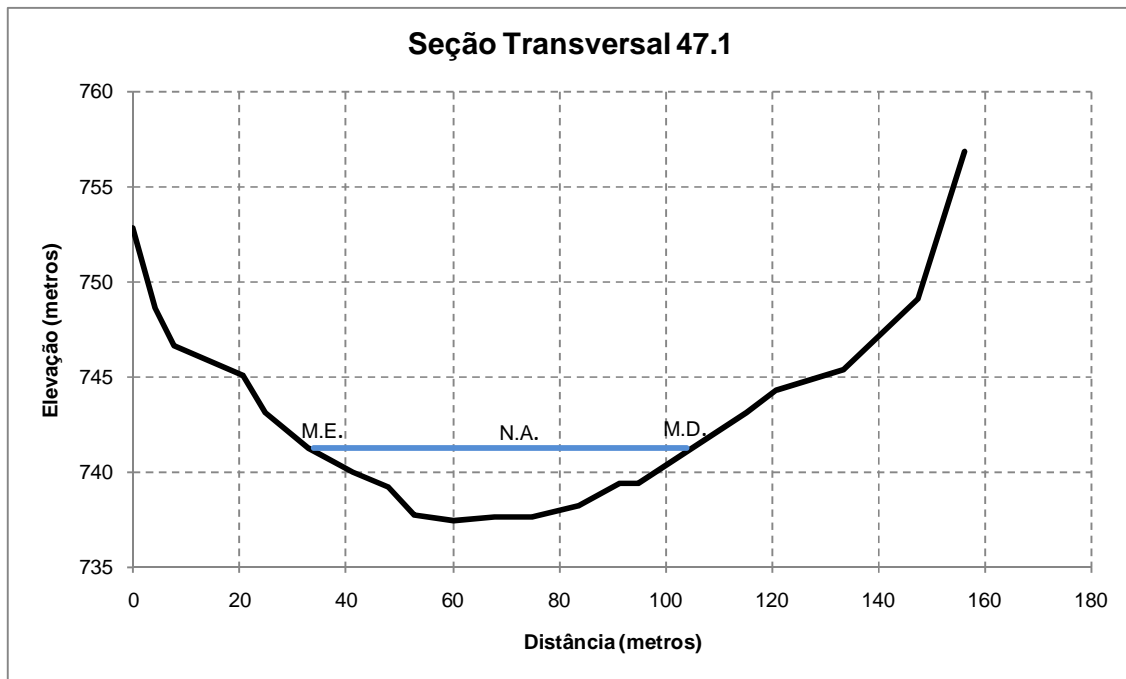


Vista das margens da seção transversal.



Vista das margens da seção transversal.





Seção Transversal 47.1.

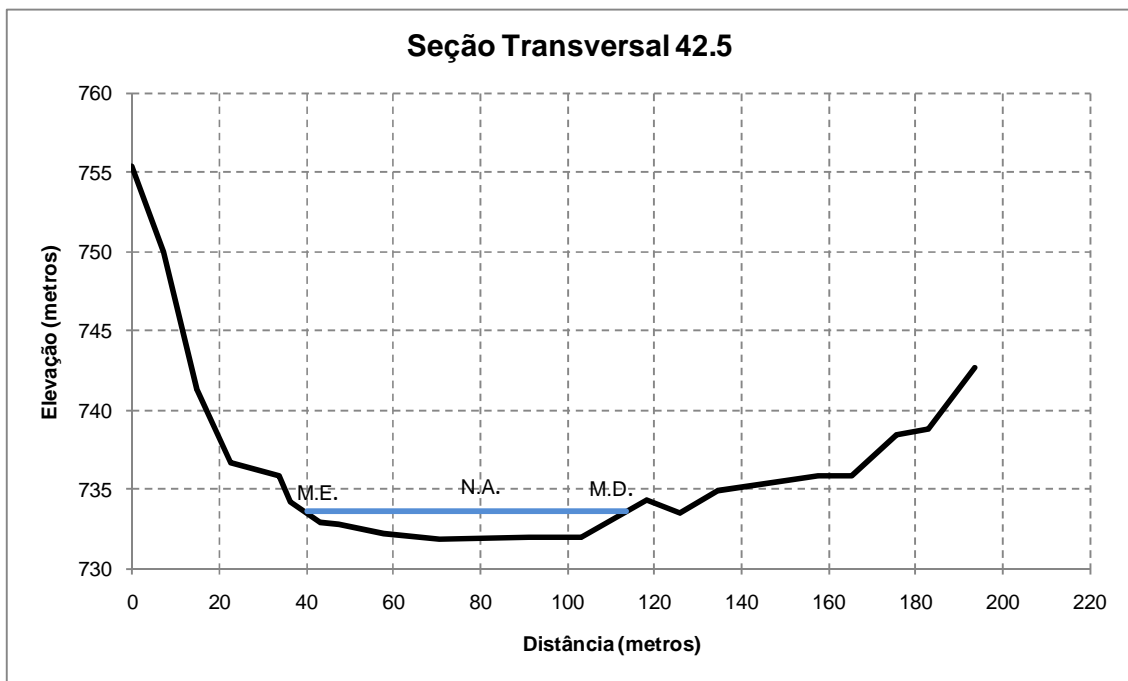


Vista das margens da seção transversal.





Vista das margens da seção transversal.



Seção Transversal 42.5.



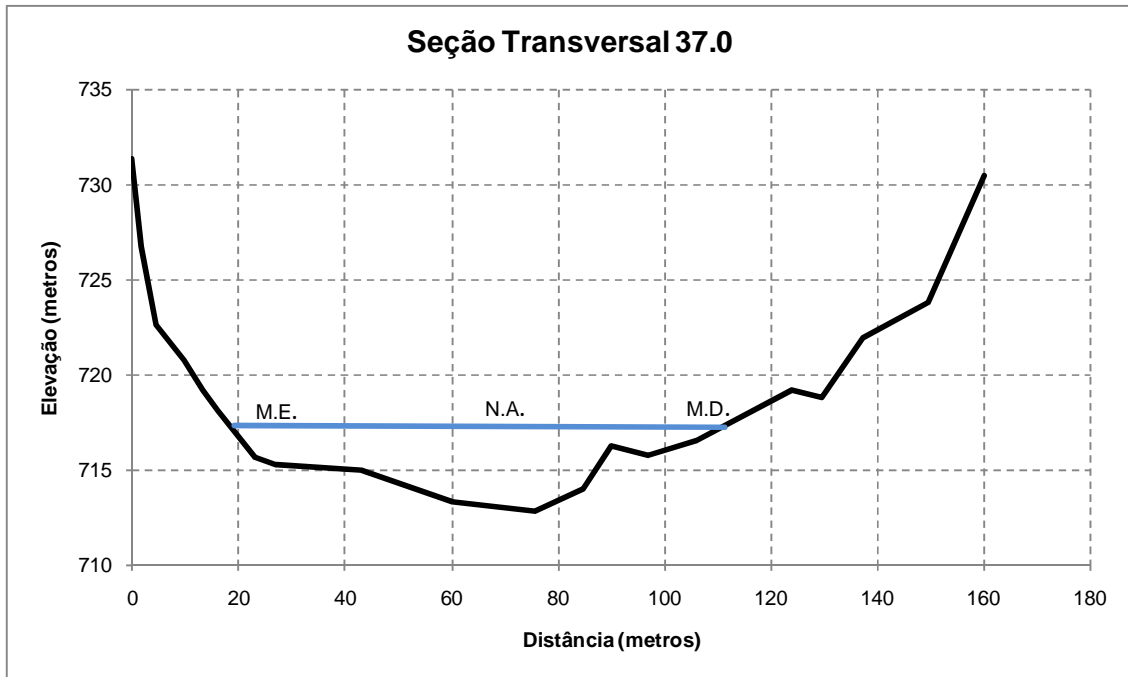


Vista das margens da seção transversal.



Vista das margens da seção transversal.





**Seção Transversal 37.0.**

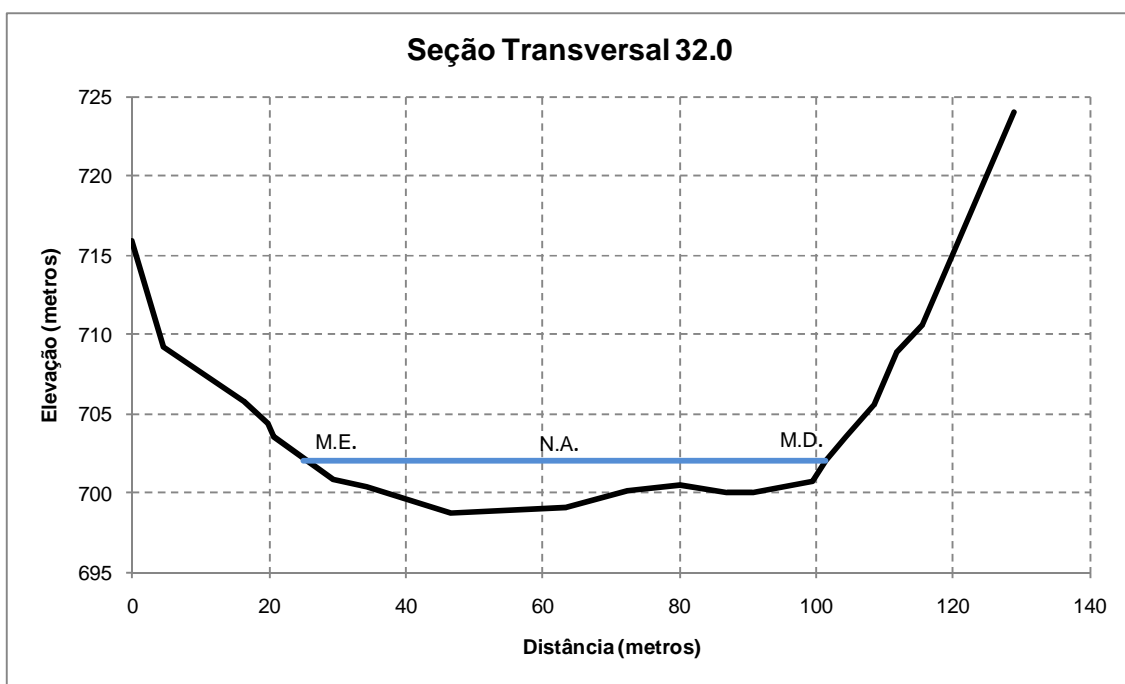


**Vista do local da seção transversal.**





Vista do local da seção transversal.



Seção Transversal 32.0.



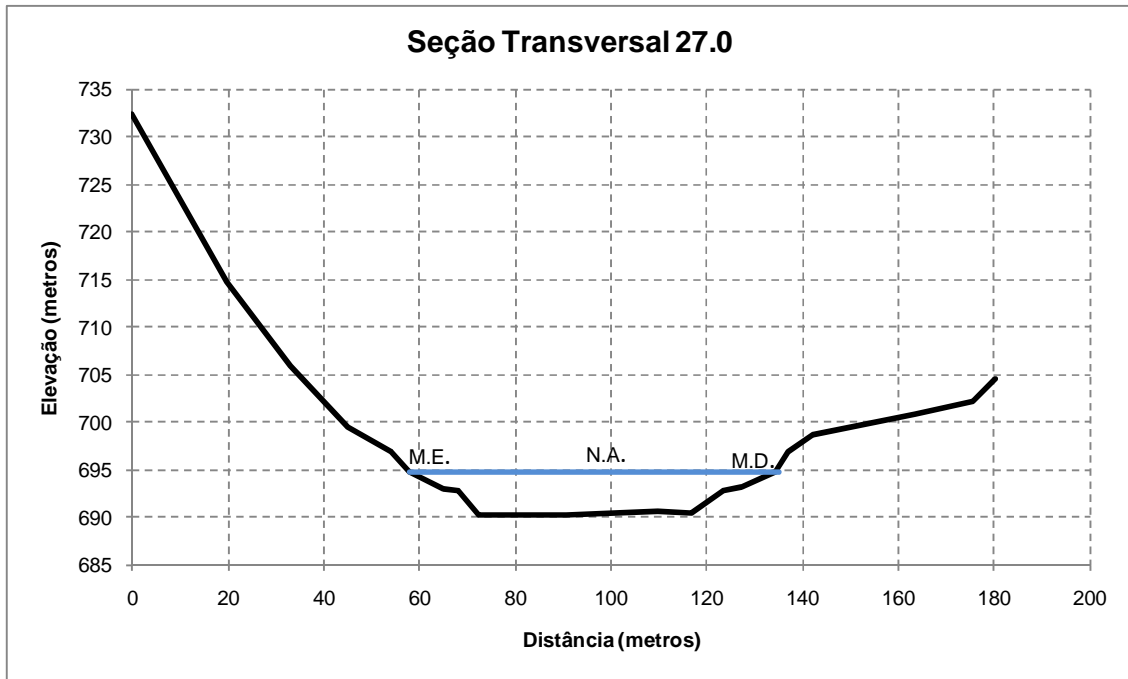


Vista das margens da seção transversal.



Vista das margens da seção transversal.





Seção Transversal 27.0.

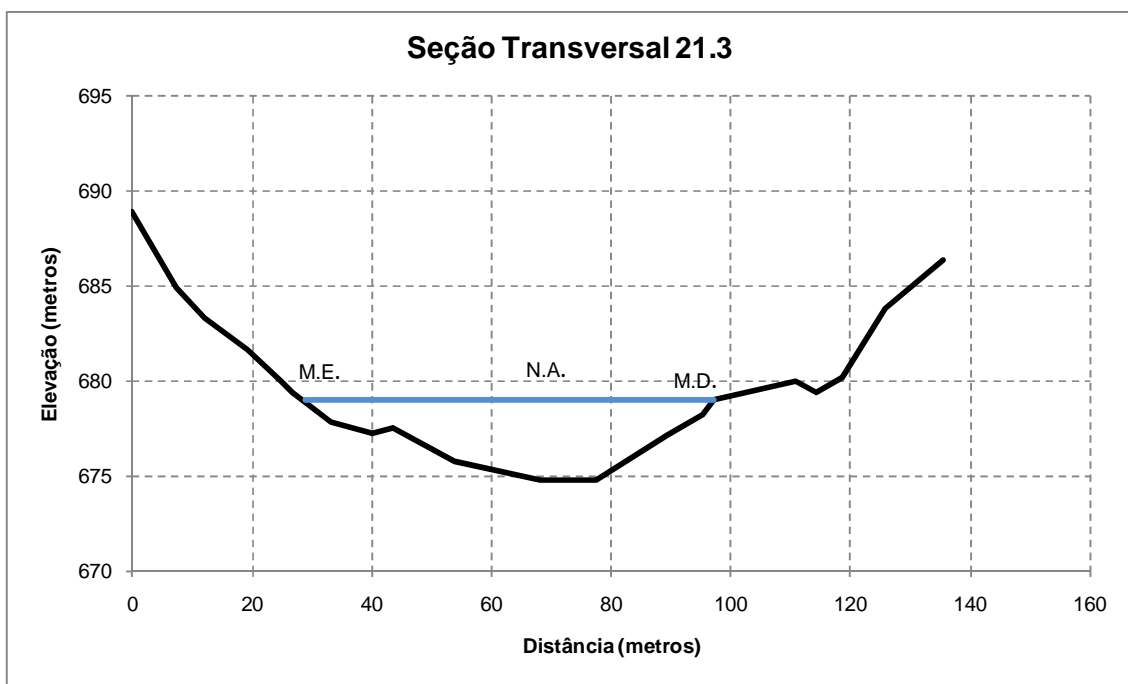


Vista das margens da seção transversal.





Vista das margens da seção transversal.

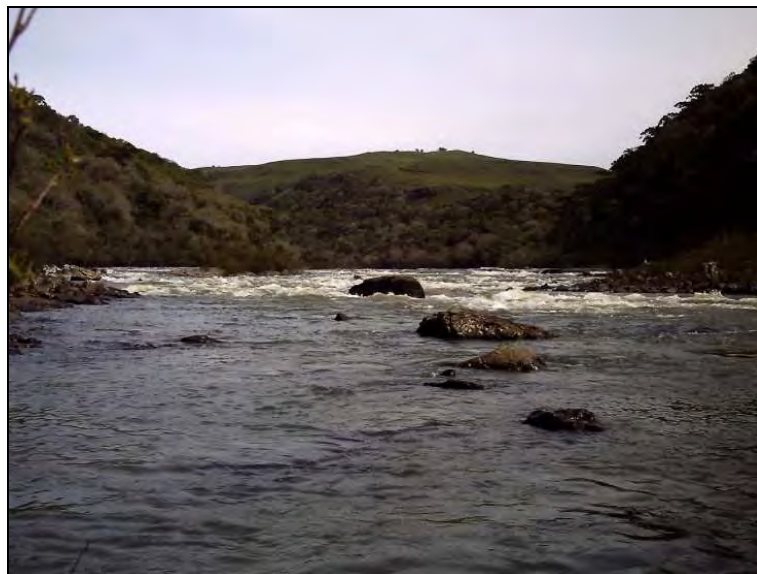


Seção Transversal 21.3.



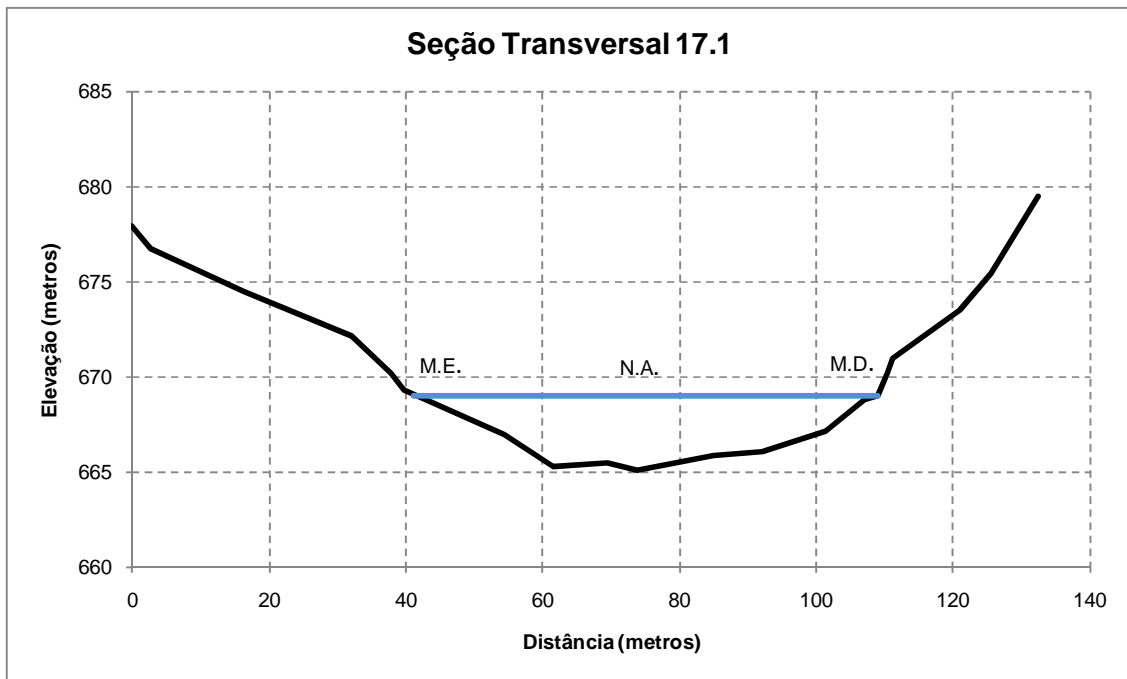


Vista das margens da seção transversal.



Vista a jusante da seção transversal.



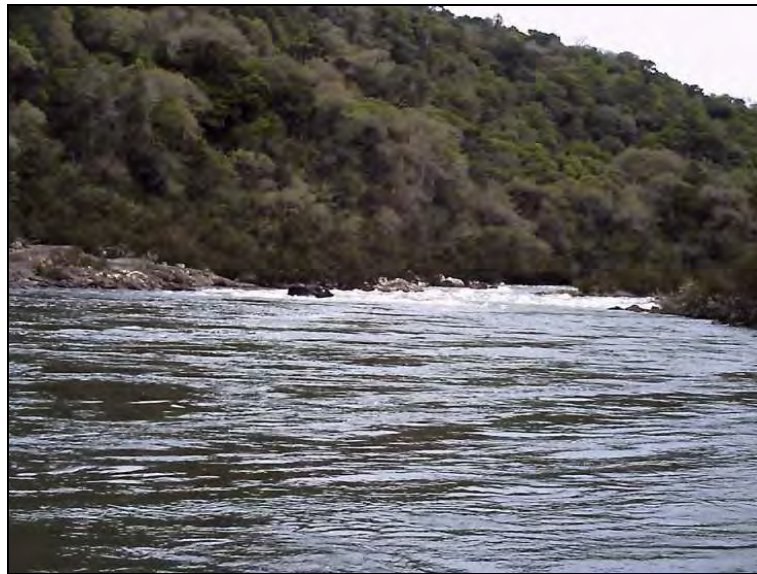


**Seção Transversal 17.1.**

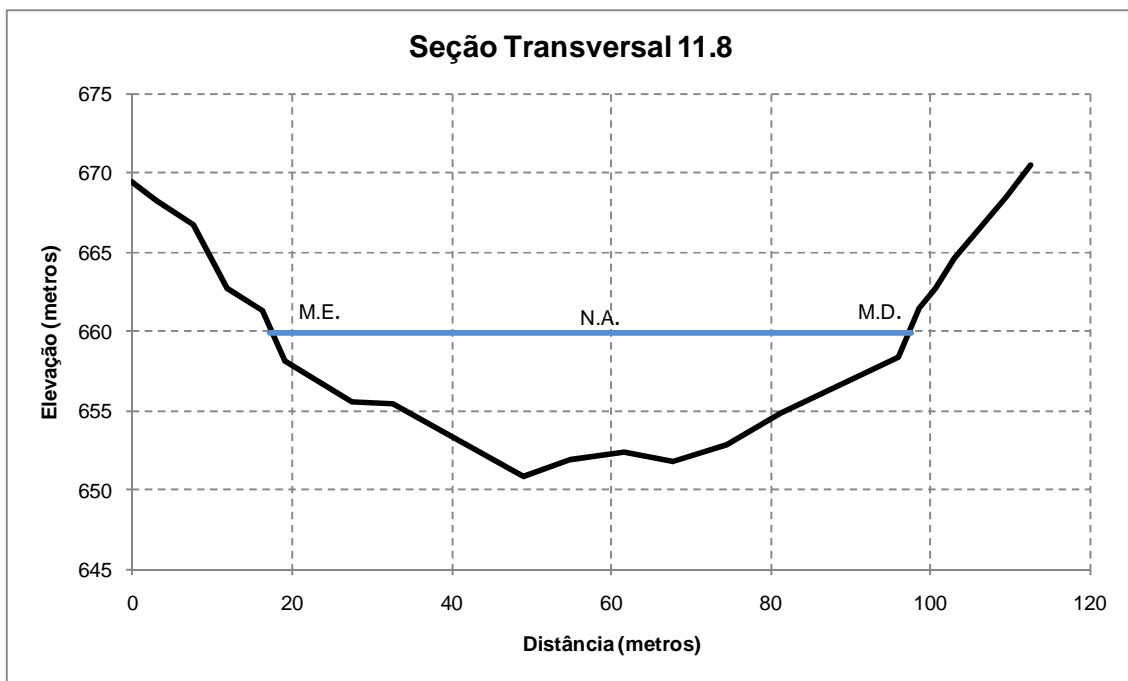


**Vista das margens da seção transversal.**



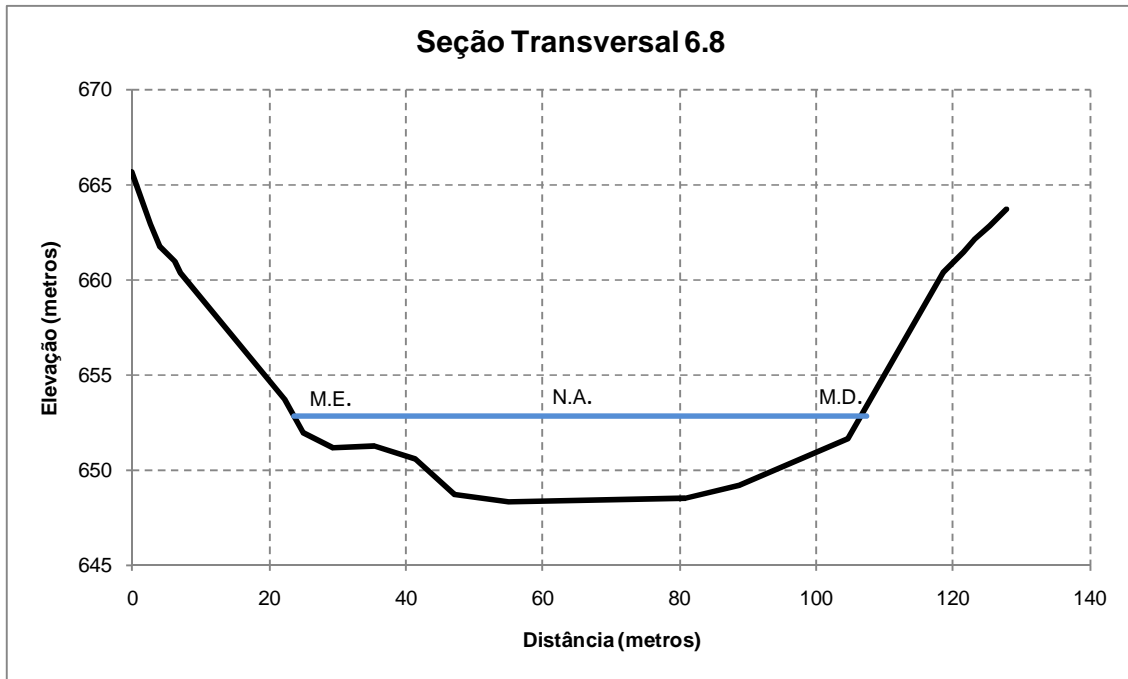


Vista a montante da seção transversal.

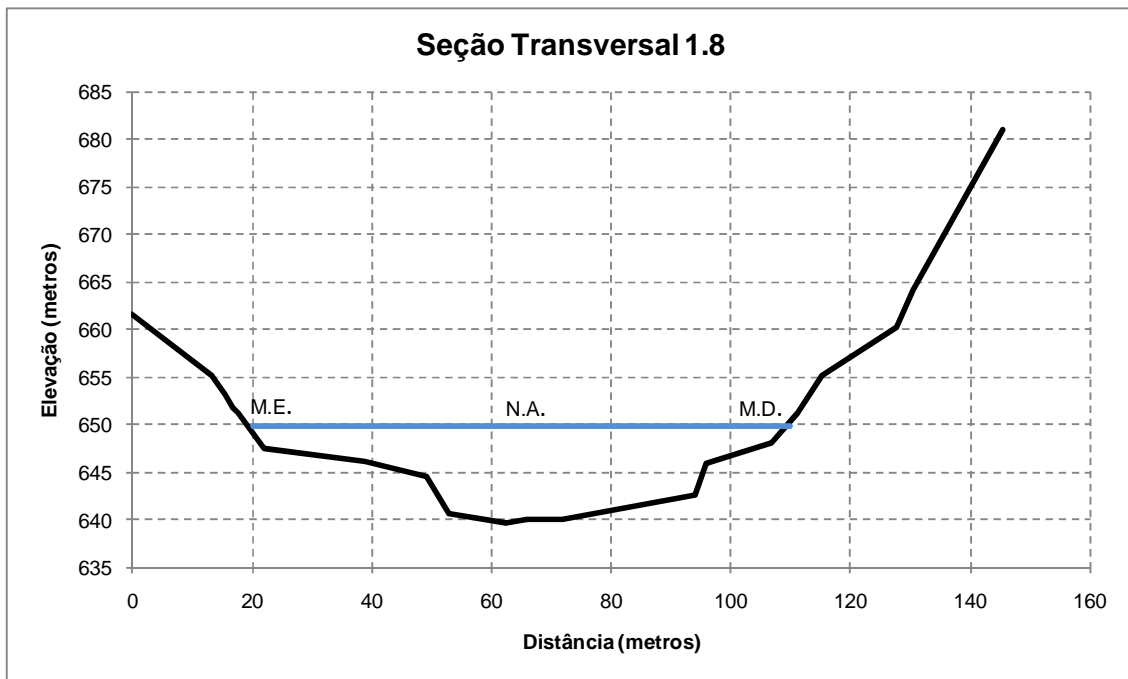


Seção Transversal 11.8.



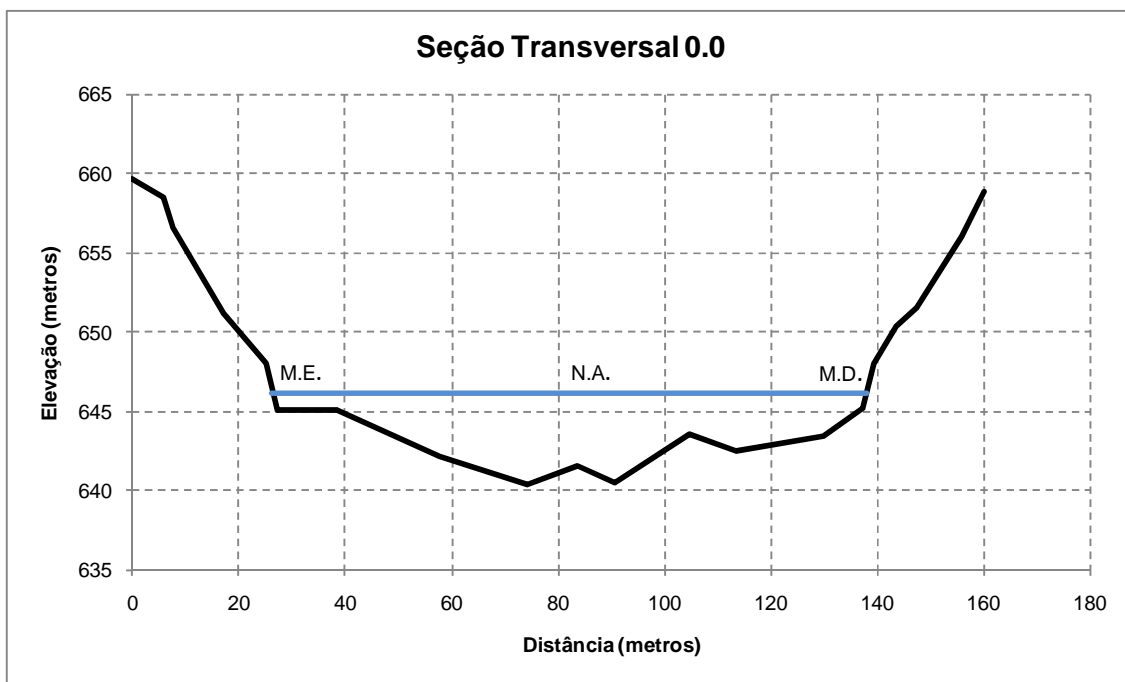


Seção Transversal 6.8.



Seção Transversal 1.8.





Seção Transversal 0.0.

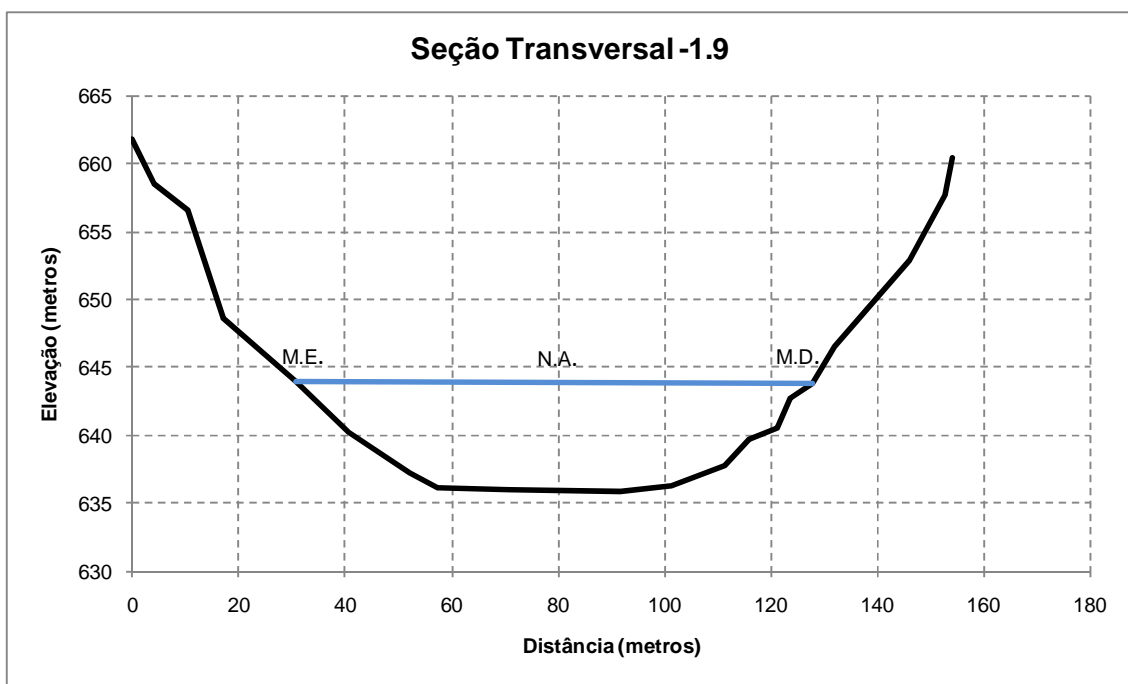


Vista das margens da seção transversal.





Vista das margens da seção transversal.



Seção Transversal -1.9.



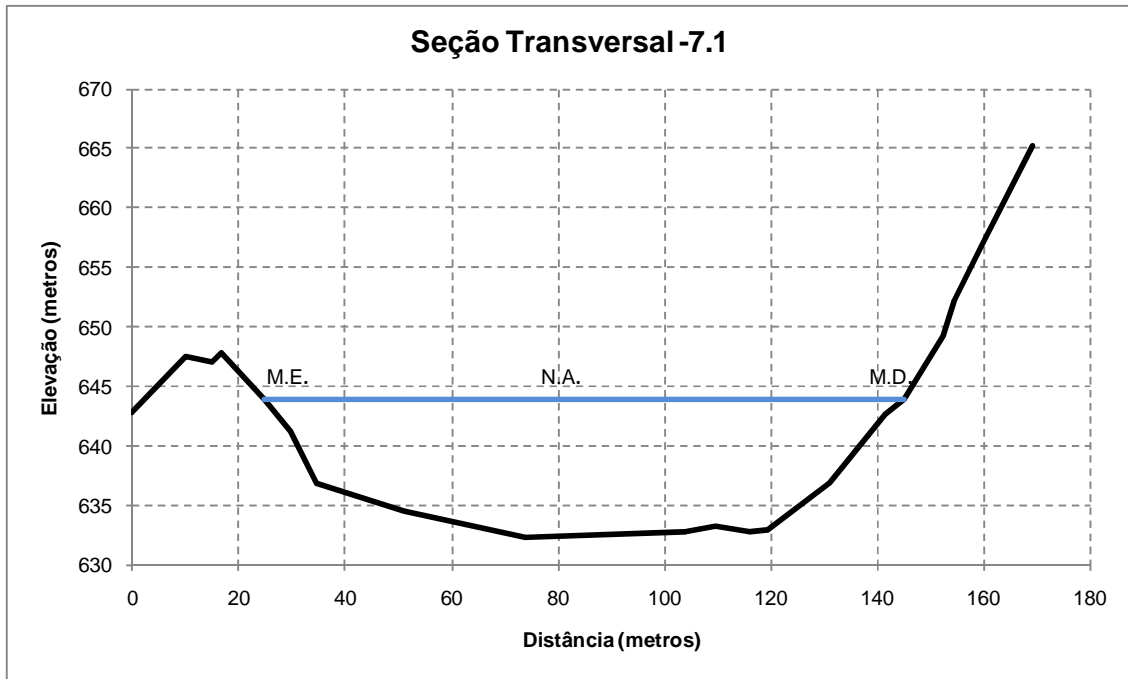


**Vista das margens da seção transversal.**



**Vista das margens da seção transversal.**





Seção Transversal -7.1.

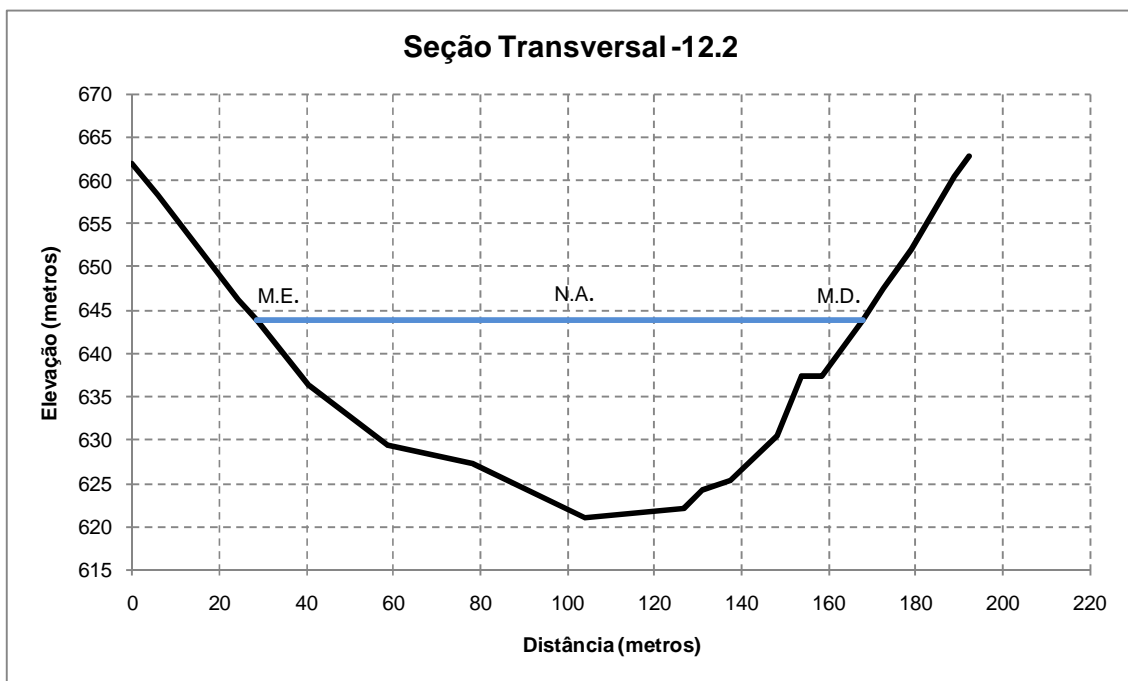


Vista das margens da seção transversal.





Vista das margens da seção transversal.



Seção Transversal -12.2.



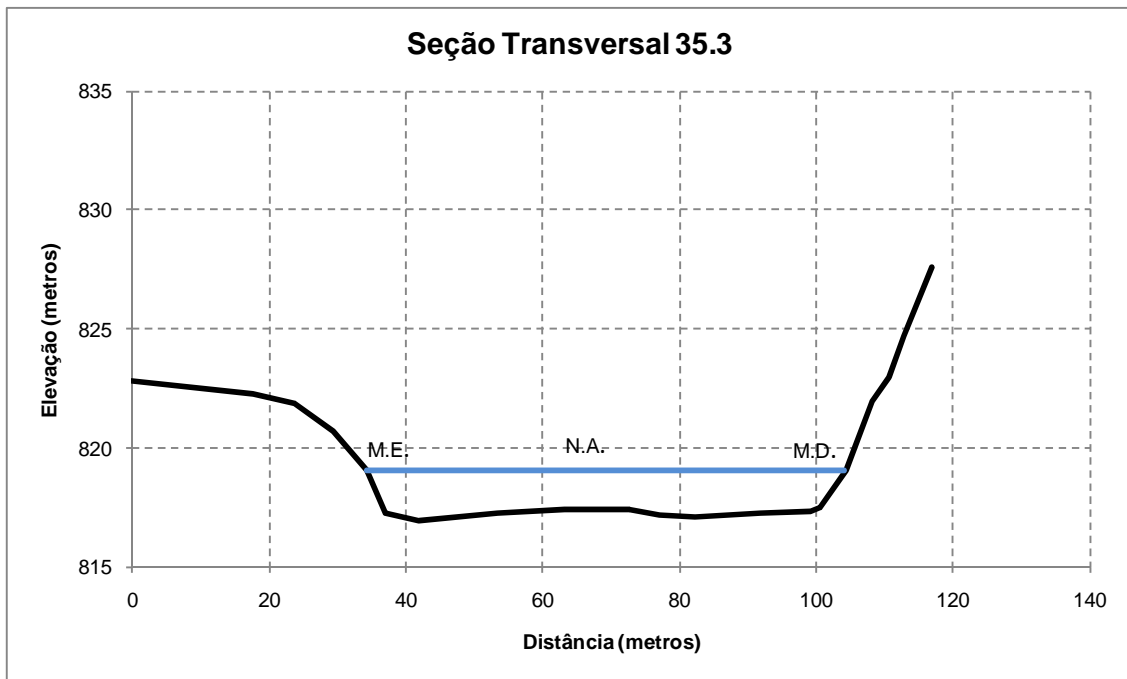


Vista das margens da seção transversal.



Vista das margens da seção transversal.





Seção Transversal 35.3.

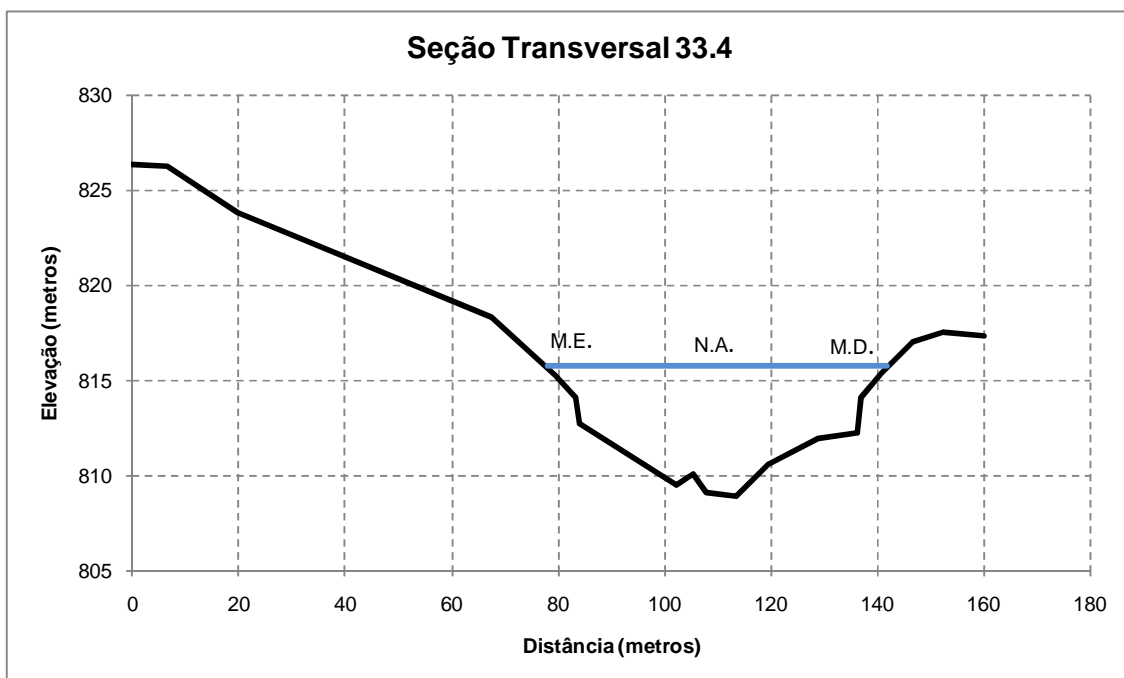


Vista das margens da seção transversal.





Vista das margens da seção transversal.



Seção Transversal 33.4.



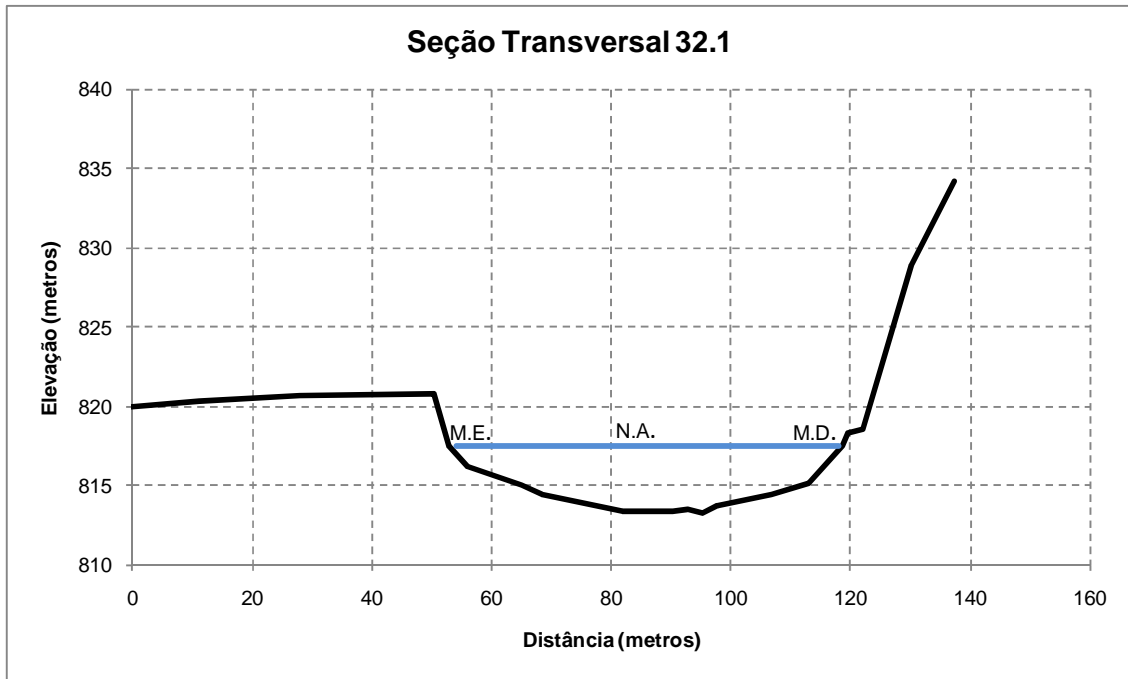


Vista das margens da seção transversal.



Vista das margens da seção transversal.





**Seção Transversal 32.1.**

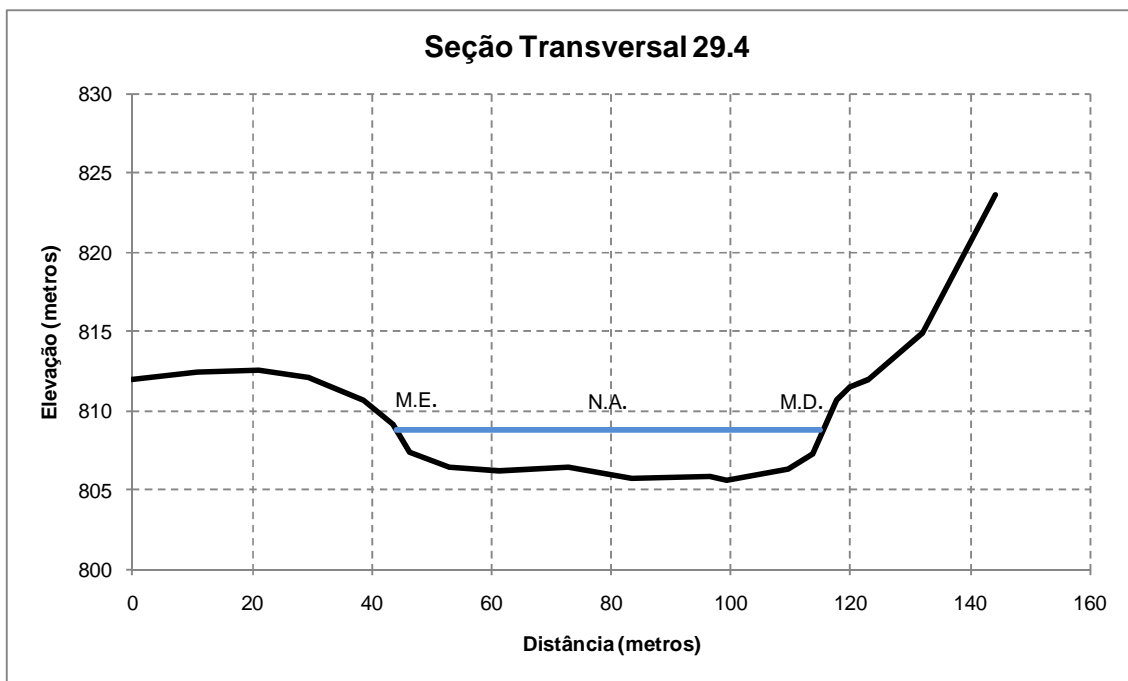


**Vista das margens da seção transversal.**





Vista a jusante da seção transversal.



Seção Transversal 29.4.



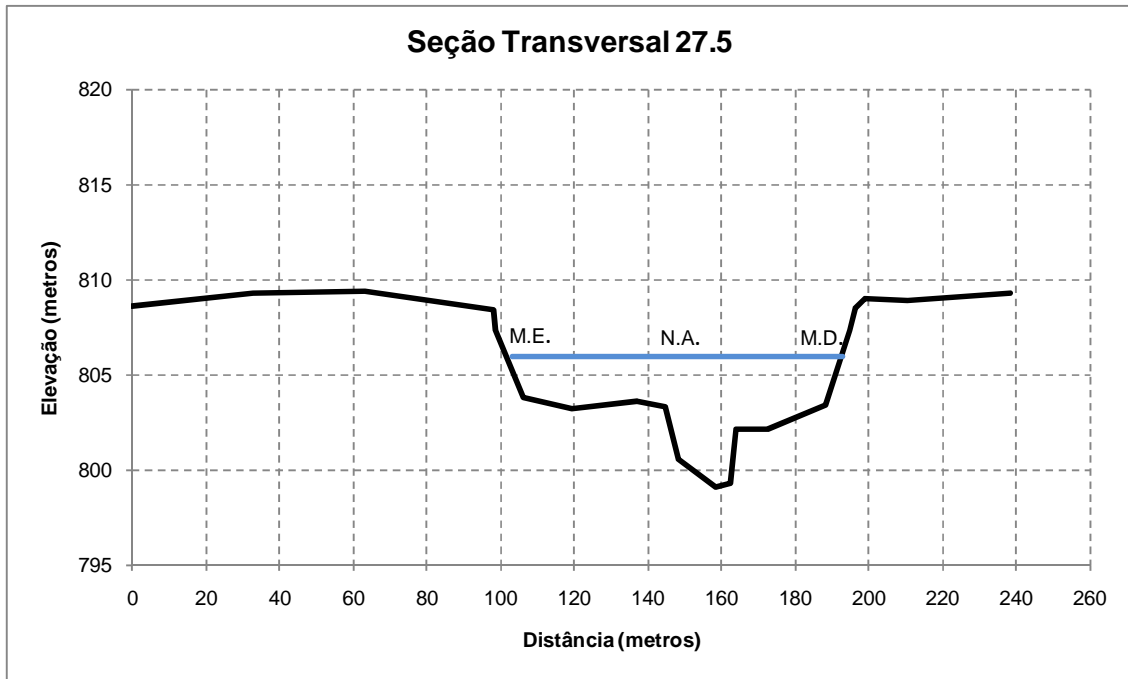


Vista das margens da seção transversal.



Vista das margens da seção transversal.





Seção Transversal 27.5.

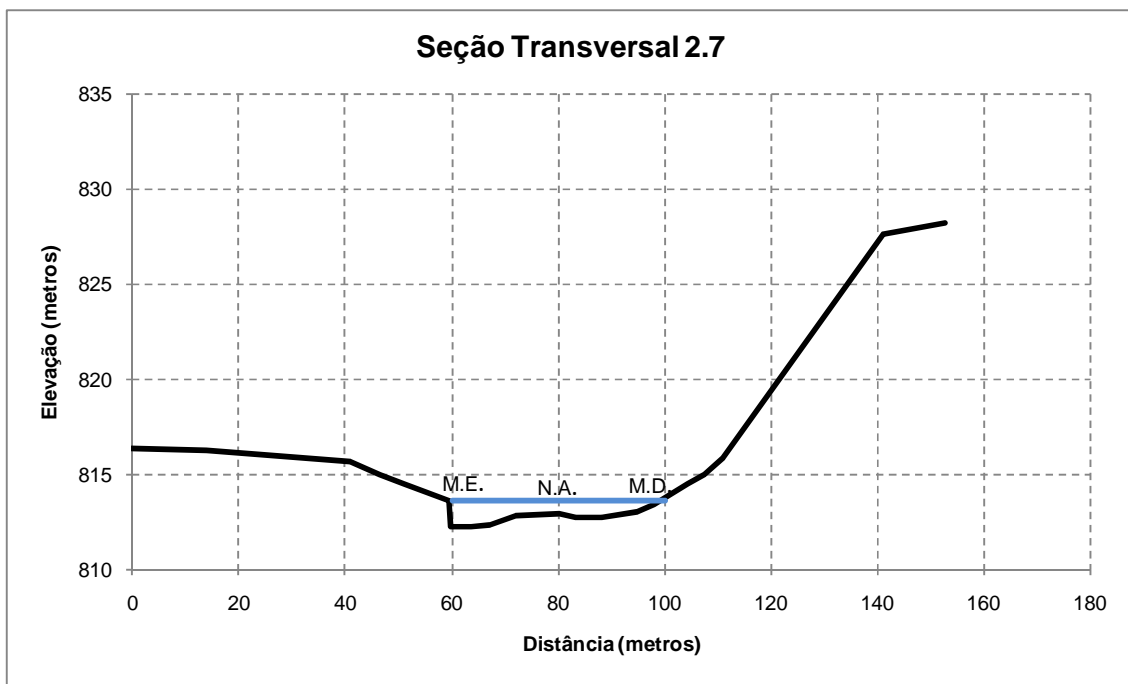


Vista das margens da seção transversal.





Vista do rio a jusante da seção transversal.



Seção Transversal 2.7.



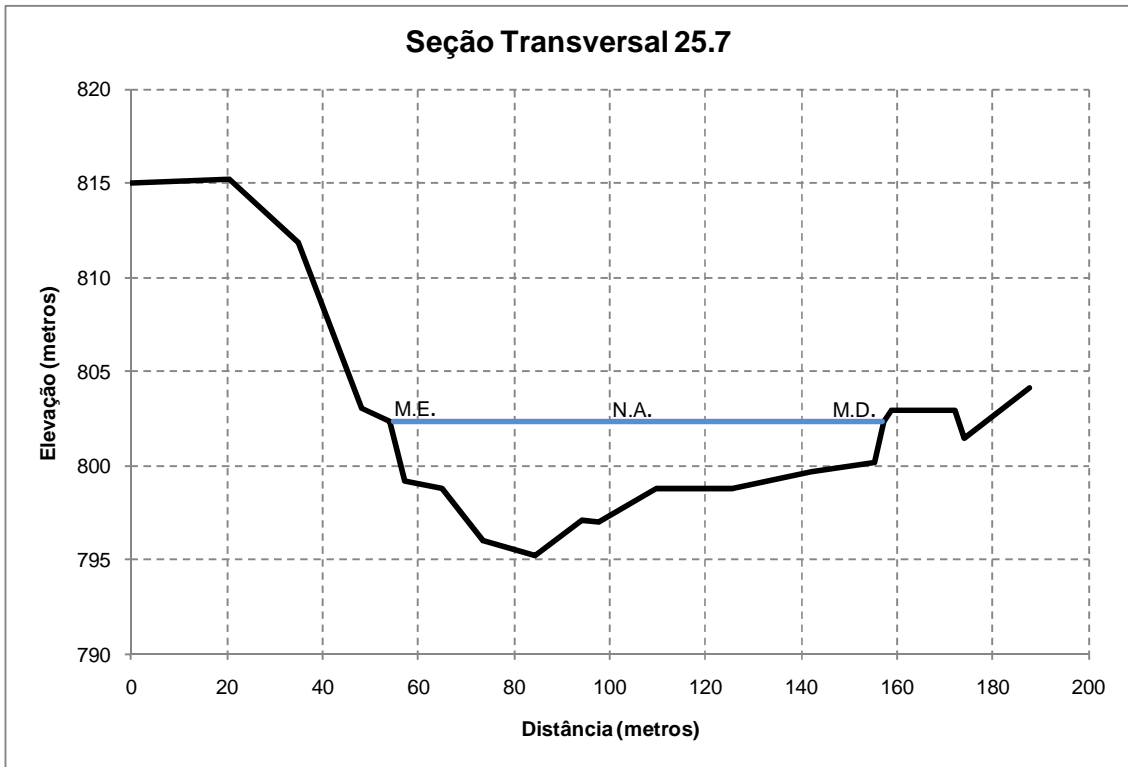


Vista das margens da seção transversal.



Vista das margens da seção transversal.





Seção Transversal 25.7.

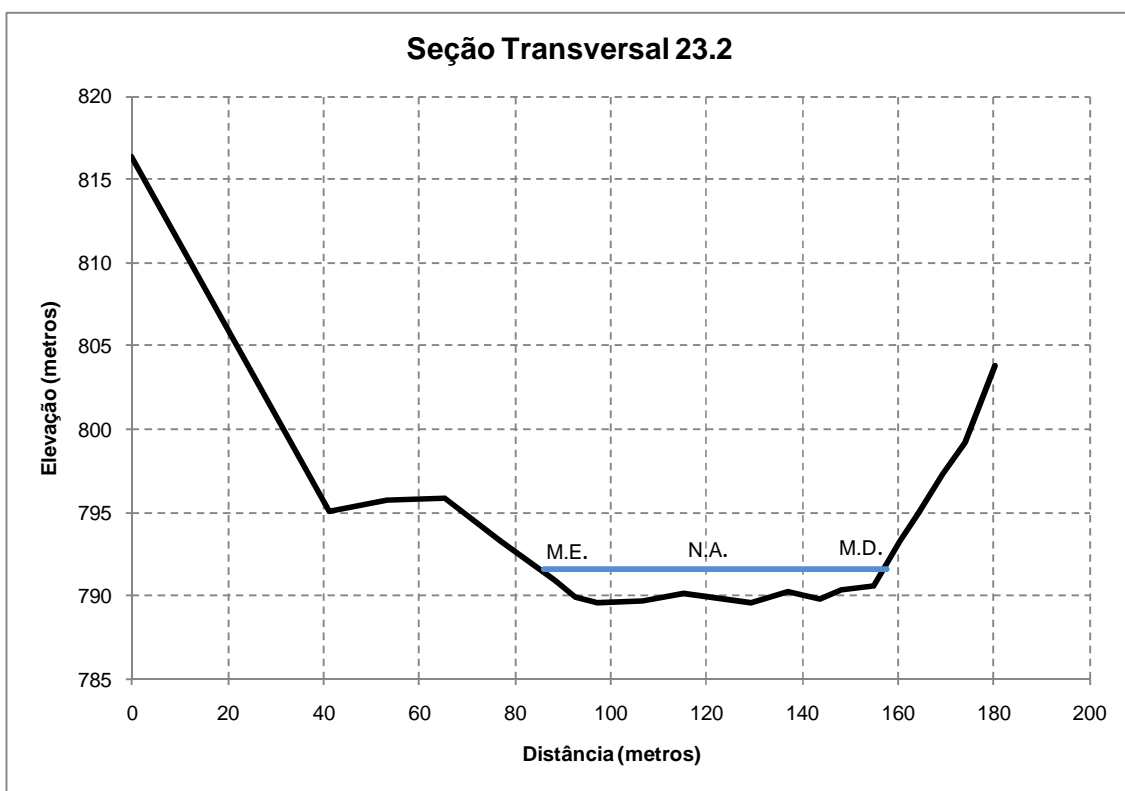


Vista das margens da seção transversal.





Vista do rio a montante da seção transversal.



Seção Transversal 23.2.



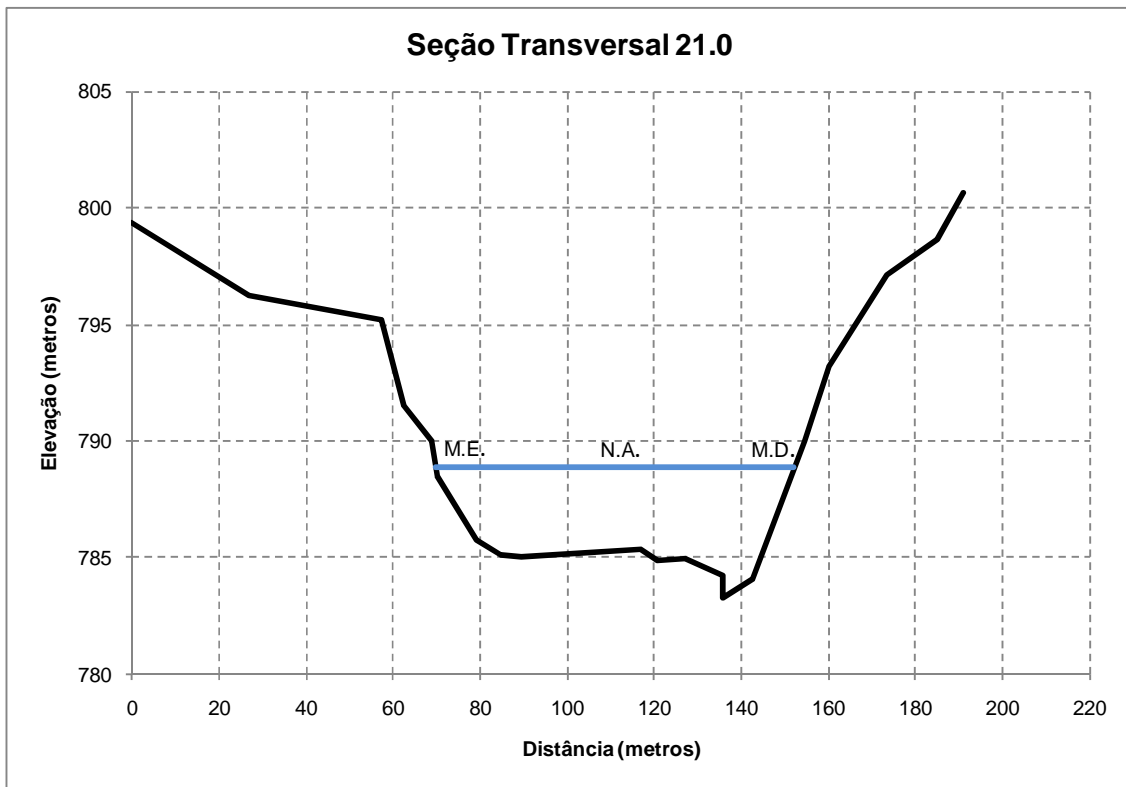


Vista das margens da seção transversal.



Vista das margens da seção transversal.





Seção Transversal 21.0.

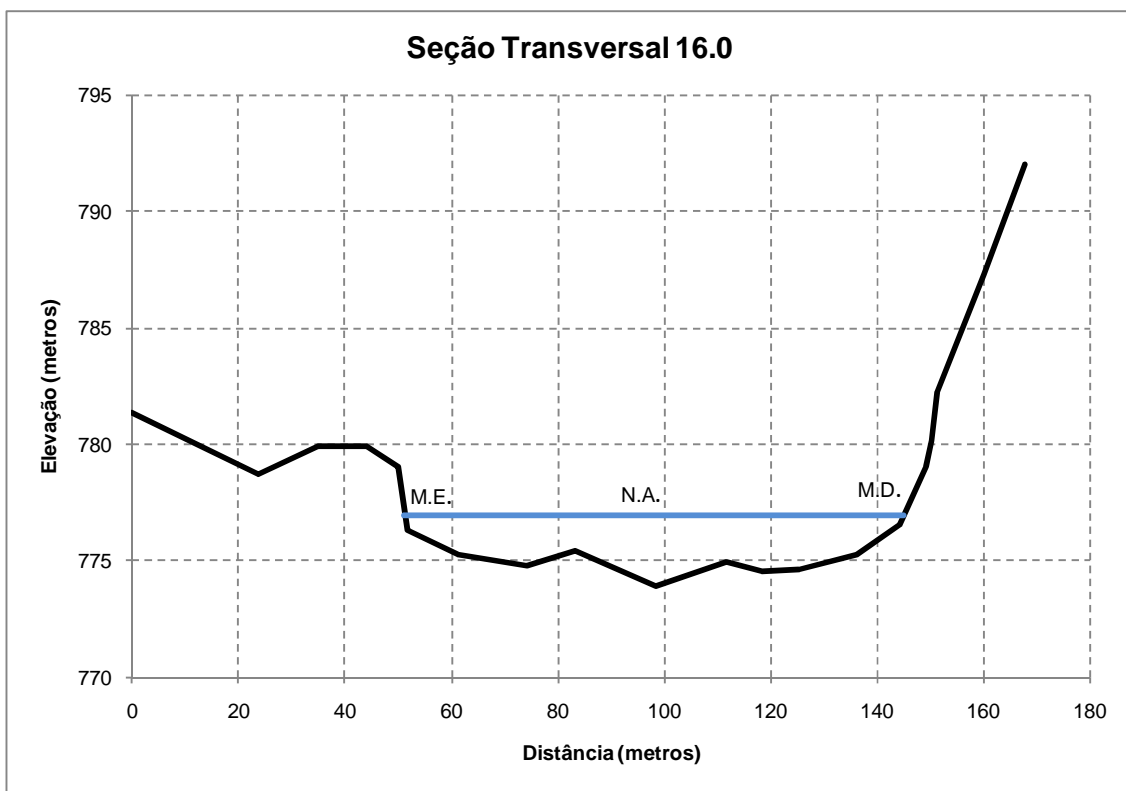


Vista das margens da seção transversal.





Vista das margens da seção transversal.



Seção Transversal 16.0.



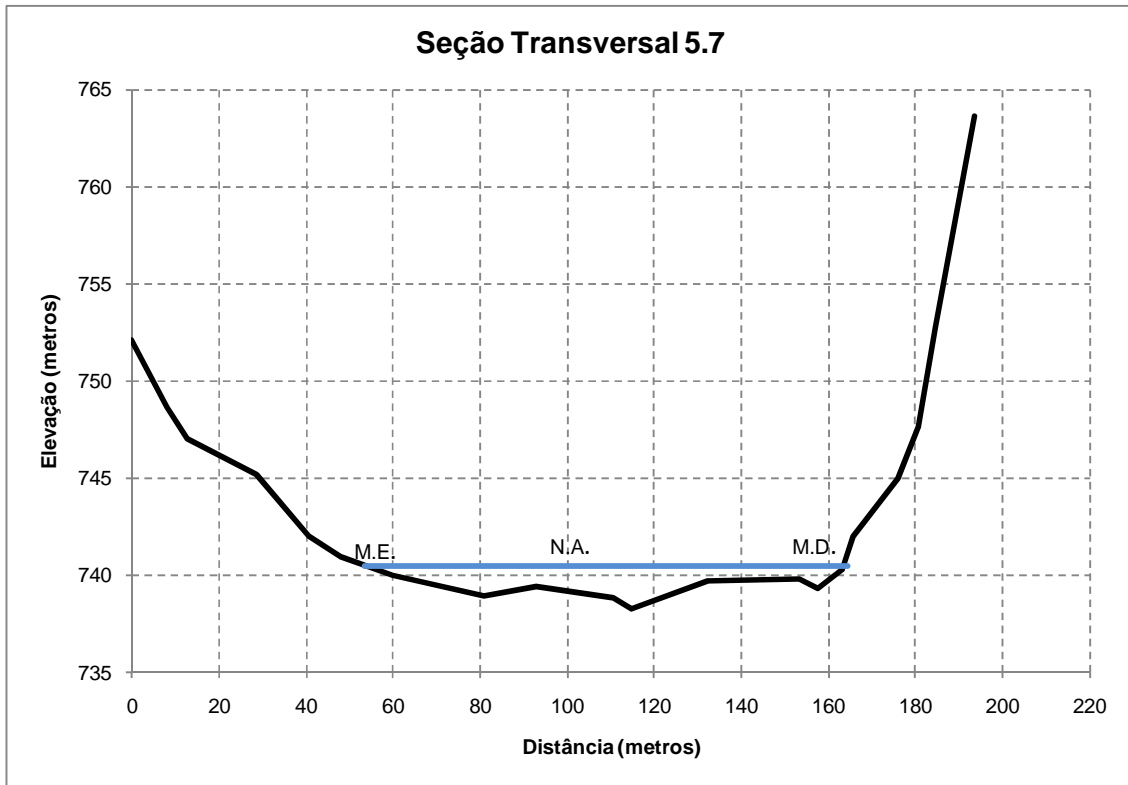


Vista das margens da seção transversal.



Vista das margens da seção transversal.





**Seção Transversal 5.7.**

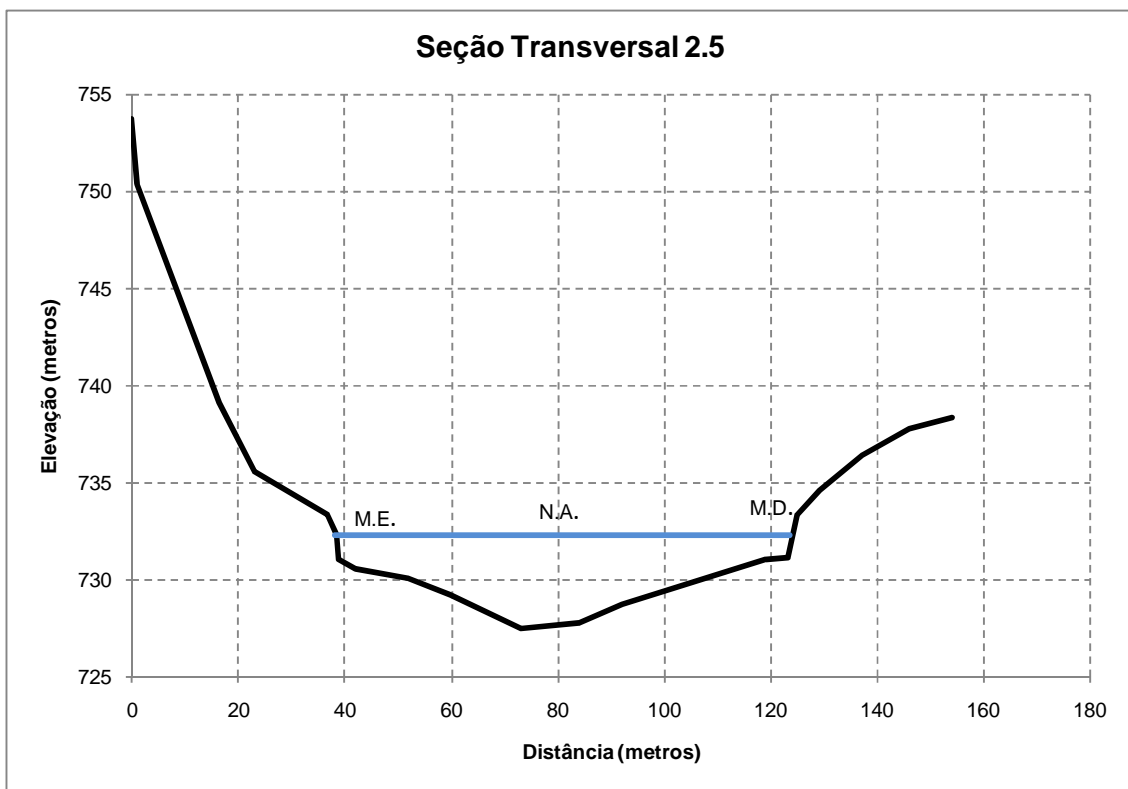


**Vista das margens da seção transversal.**





Vista das margens da seção transversal.



Seção Transversal 2.5.





Vista das margens da seção transversal.

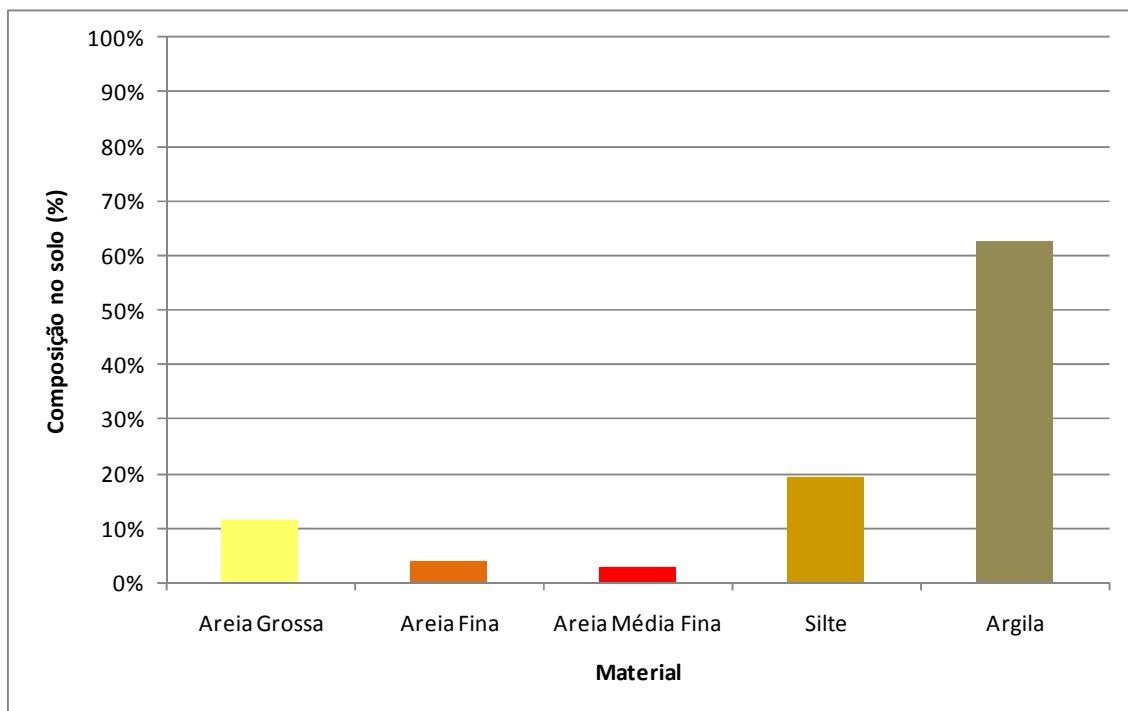


Vista das margens da seção transversal.



## APÊNDICE H – RESUMO DAS CARACTERÍSTICAS FÍSICAS DAS COLETAS DE SEDIMENTOS

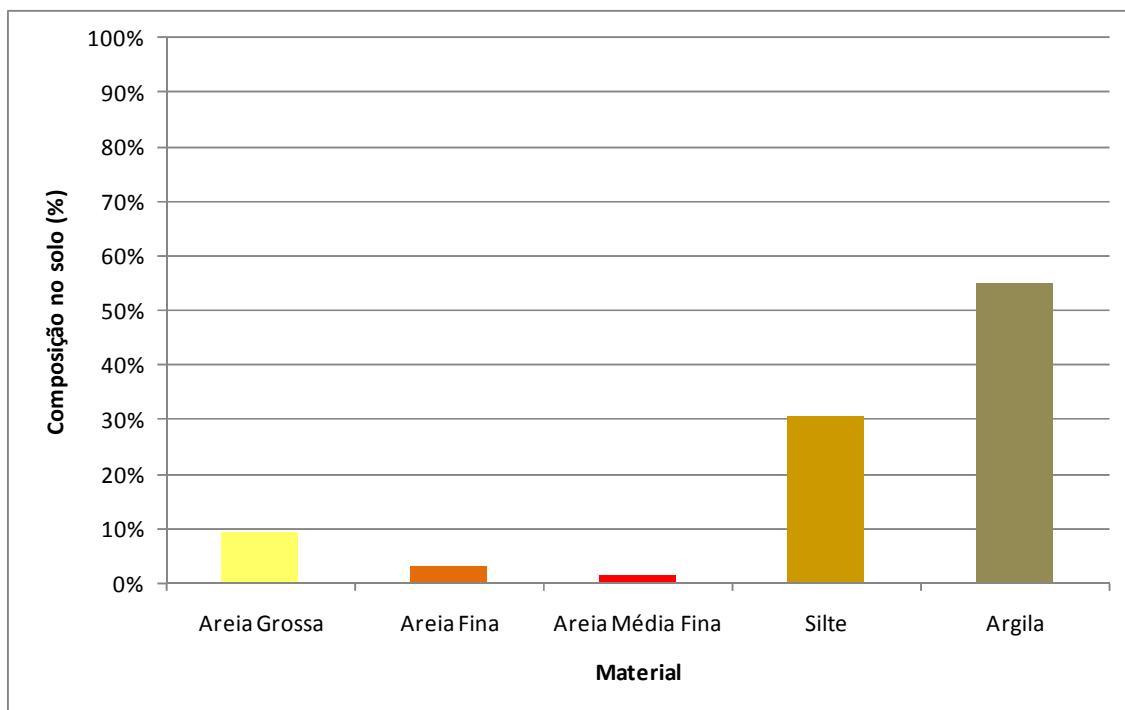




Composição de material no horizonte de solo 2C.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
11.40	4.00	2.75	19.35	62.50
COMPOSIÇÃO MÉDIA (%)				
11.40	4.00	2.75	19.35	62.50

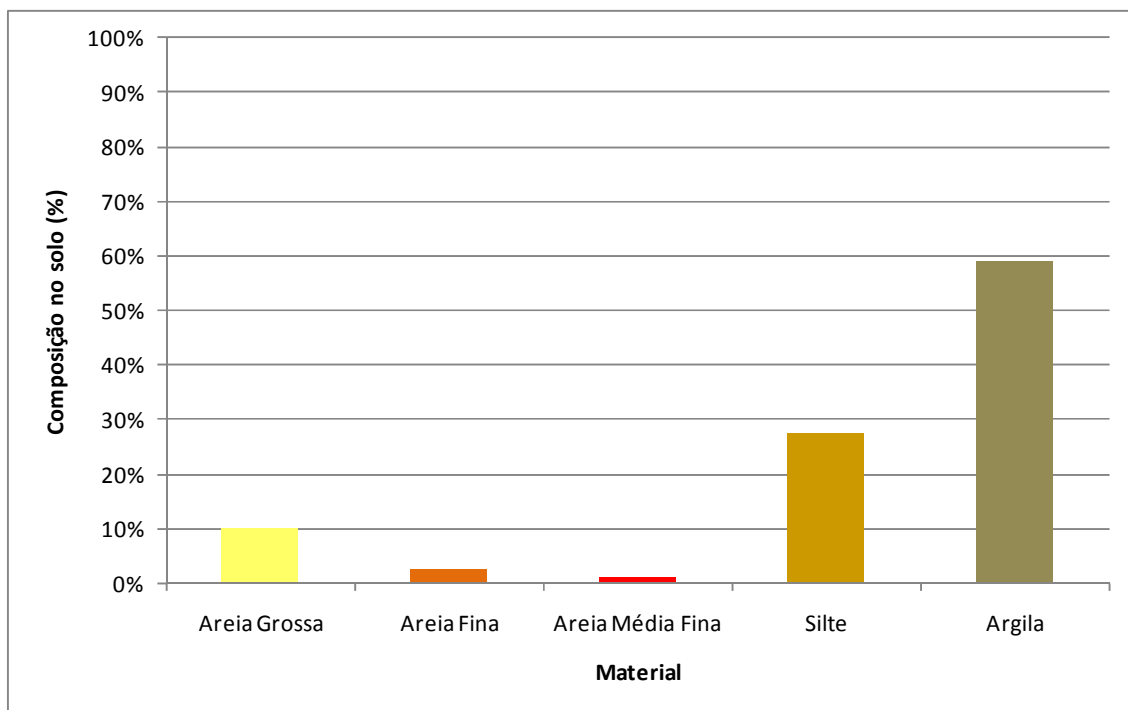




**Composição de material no horizonte de solo 2C2.**

<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
9.39	3.35	1.60	30.54	55.12
<b>COMPOSIÇÃO MÉDIA (%)</b>				
9.39	3.35	1.60	30.54	55.12





Composição de material no horizonte de solo A.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
14.64	4.55	2.57	19.49	58.75
7.96	2.86	1.37	15.30	72.50
6.06	3.77	2.99	23.42	63.75
8.35	1.99	0.77	38.89	50.00
9.67	2.20	1.30	39.20	47.62
4.82	2.77	2.61	30.91	58.87
7.95	3.56	1.46	31.02	56.00
5.52	2.12	1.66	23.44	67.25
6.82	1.79	0.44	24.95	66.00
10.37	2.07	1.01	21.29	65.25
13.67	2.71	0.84	52.52	30.25
10.44	2.90	1.15	21.51	64.00
6.54	1.92	1.30	26.74	63.50
5.44	2.67	1.94	20.20	69.75
11.54	2.76	1.32	14.62	69.75



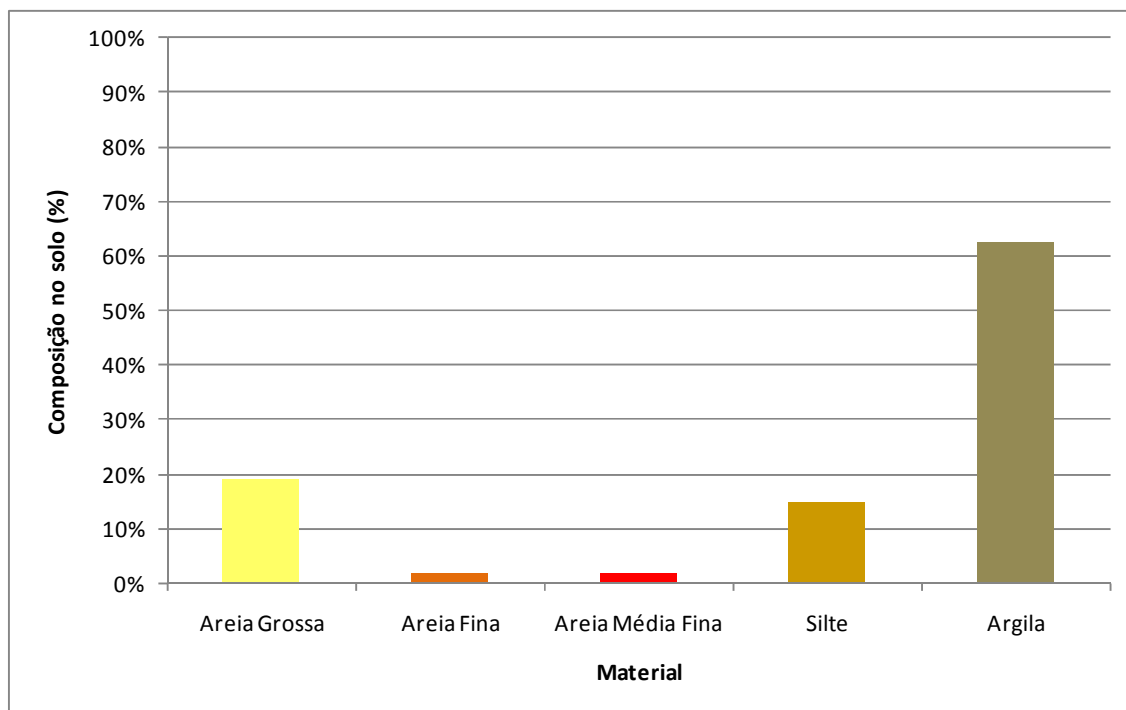
COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
4.14	2.41	1.20	21.75	70.50
20.26	1.61	0.31	21.56	56.25
2.39	0.62	0.19	16.80	80.00
12.11	2.25	0.79	37.35	47.50
21.81	2.95	0.46	31.02	43.75
5.20	1.50	0.72	32.57	60.00
12.72	4.06	1.64	22.82	58.75
10.46	1.26	0.51	30.26	57.50
11.64	2.01	0.82	26.77	58.75
8.27	3.59	1.52	32.86	53.75
7.37	2.09	0.90	21.14	68.50
3.75	0.20	0.09	43.71	52.25
6.26	1.71	0.71	25.31	66.00
4.22	1.67	1.04	22.56	70.50
9.17	3.62	2.54	19.16	65.50
6.72	1.75	0.67	24.35	66.50
4.16	1.51	0.62	18.20	75.50
15.24	3.14	0.56	26.81	54.25
31.37	3.24	0.90	20.24	44.25
11.05	5.31	1.91	37.72	44.00
16.71	4.45	1.30	33.54	44.00
11.75	2.29	0.91	42.05	43.00
6.66	2.42	1.31	31.60	58.00
13.52	1.15	0.81	26.51	58.00
16.16	2.26	0.91	26.16	54.50
7.69	2.84	2.27	25.20	62.00
7.04	2.50	0.82	47.64	42.00
10.55	1.77	0.55	27.37	59.75
14.80	2.45	1.21	24.29	57.25
10.19	2.64	1.27	29.90	56.00
12.72	3.30	0.89	27.59	55.50
15.02	3.30	0.75	19.30	61.62

**APÊNDICES**



<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
17.80	3.99	0.89	31.95	45.37
15.20	1.34	0.34	26.44	56.69
11.35	2.76	0.87	18.26	66.75
11.61	1.62	0.15	47.36	39.25
11.59	3.10	0.90	27.66	56.75
4.30	1.04	0.71	25.95	68.00
8.34	2.81	1.47	24.12	63.25
4.14	2.94	2.37	26.05	64.50
8.12	2.47	0.89	23.51	65.00
3.90	1.06	0.59	18.20	76.25
2.46	1.75	1.24	26.30	68.25
12.26	2.57	0.17	22.99	62.00
<b>COMPOSIÇÃO MÉDIA (%)</b>				
10.04	2.48	1.09	27.40	59.00

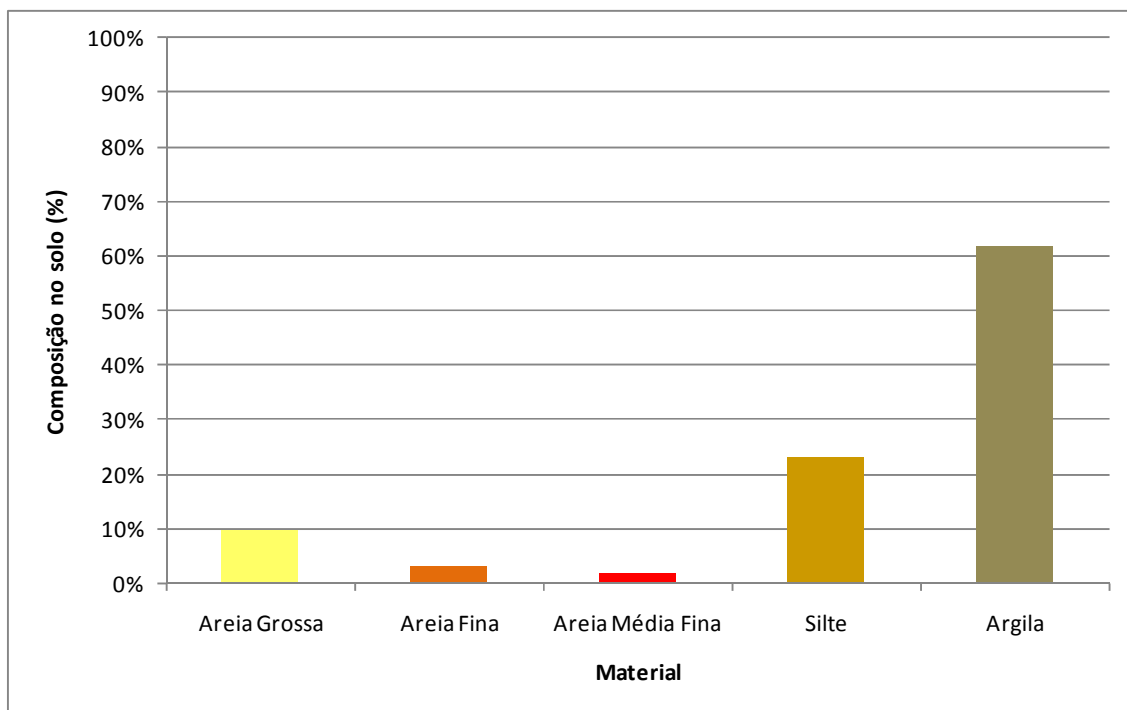




**Composição de material no horizonte de solo 2Bi.**

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
19.05	1.72	1.77	14.95	62.50
COMPOSIÇÃO MÉDIA (%)				
19.05	1.72	1.77	14.95	62.50

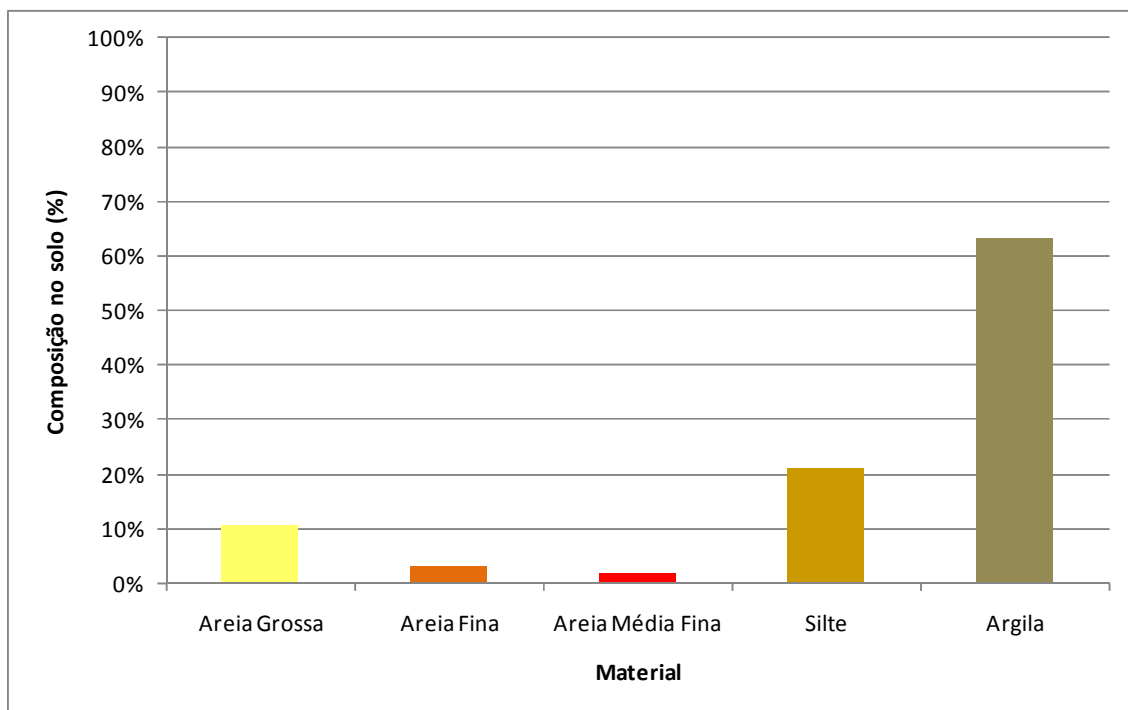




**Composição de material no horizonte de solo A1.**

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
12.45	2.82	1.74	17.74	65.25
7.70	3.01	1.95	22.09	65.25
9.44	3.44	2.25	29.87	55.00
COMPOSIÇÃO MÉDIA (%)				
9.86	3.09	1.98	23.23	61.83

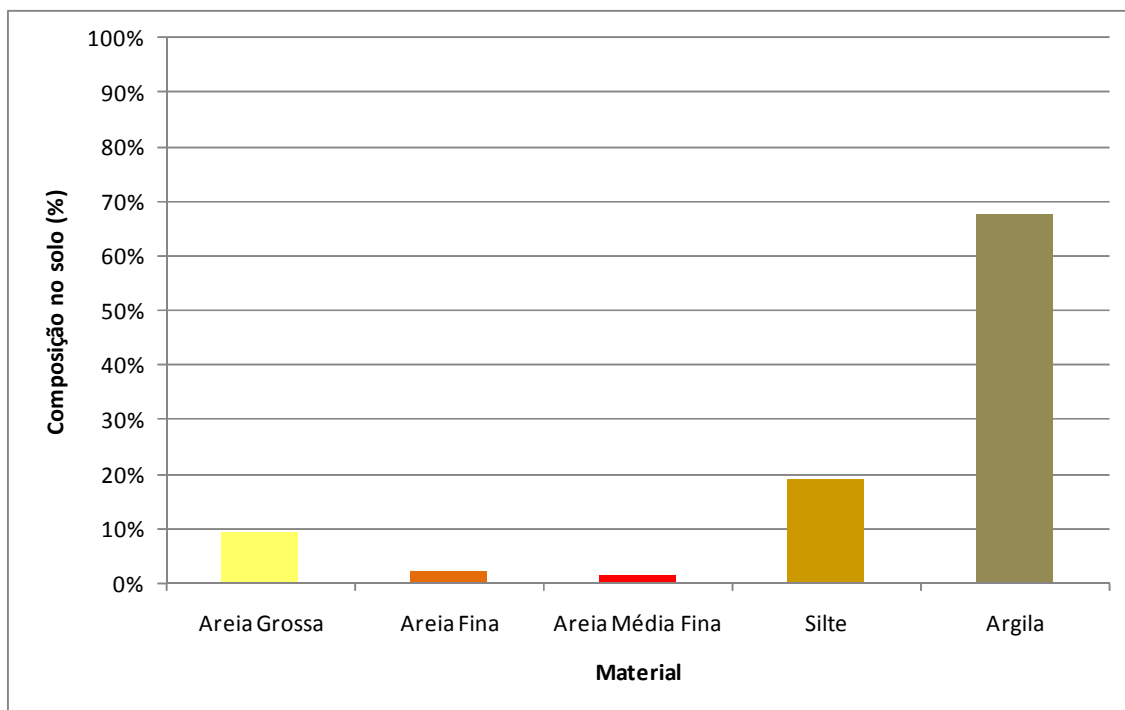




**Composição de material no horizonte de solo A2.**

<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
11.52	4.45	2.36	17.91	63.75
11.01	3.57	1.52	23.64	60.25
7.55	2.85	1.82	25.02	62.75
12.61	2.09	1.16	18.14	66.00
<b>COMPOSIÇÃO MÉDIA (%)</b>				
10.68	3.24	1.72	21.18	63.19

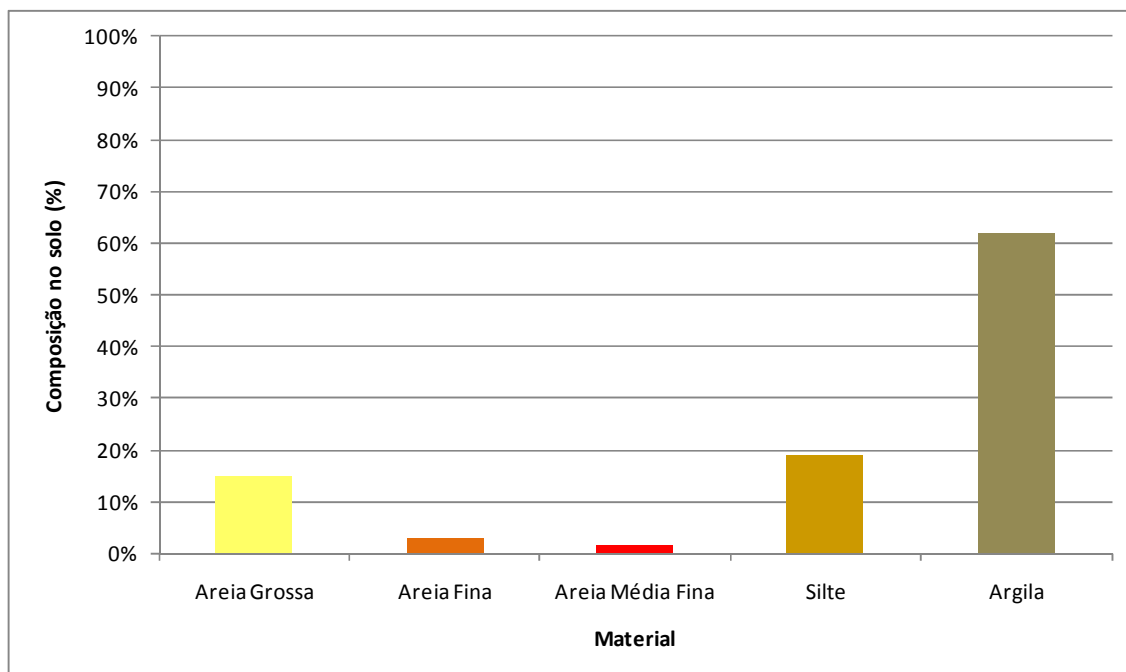




Composição de material no horizonte de solo AB.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
6.82	2.35	1.45	10.62	78.75
8.61	2.10	0.95	30.71	57.62
12.49	1.97	1.24	14.05	70.25
3.45	1.82	1.79	17.94	75.00
2.54	0.67	0.25	16.54	80.00
8.22	2.69	1.17	20.41	67.50
13.10	1.84	1.04	23.52	60.50
8.54	2.50	1.74	22.72	64.50
16.01	1.81	1.59	14.59	66.00
4.84	2.89	2.87	16.15	73.25
8.77	3.85	4.59	21.54	61.25
19.51	3.10	0.56	18.57	58.25
COMPOSIÇÃO MÉDIA (%)				
9.41	2.30	1.60	18.95	67.74

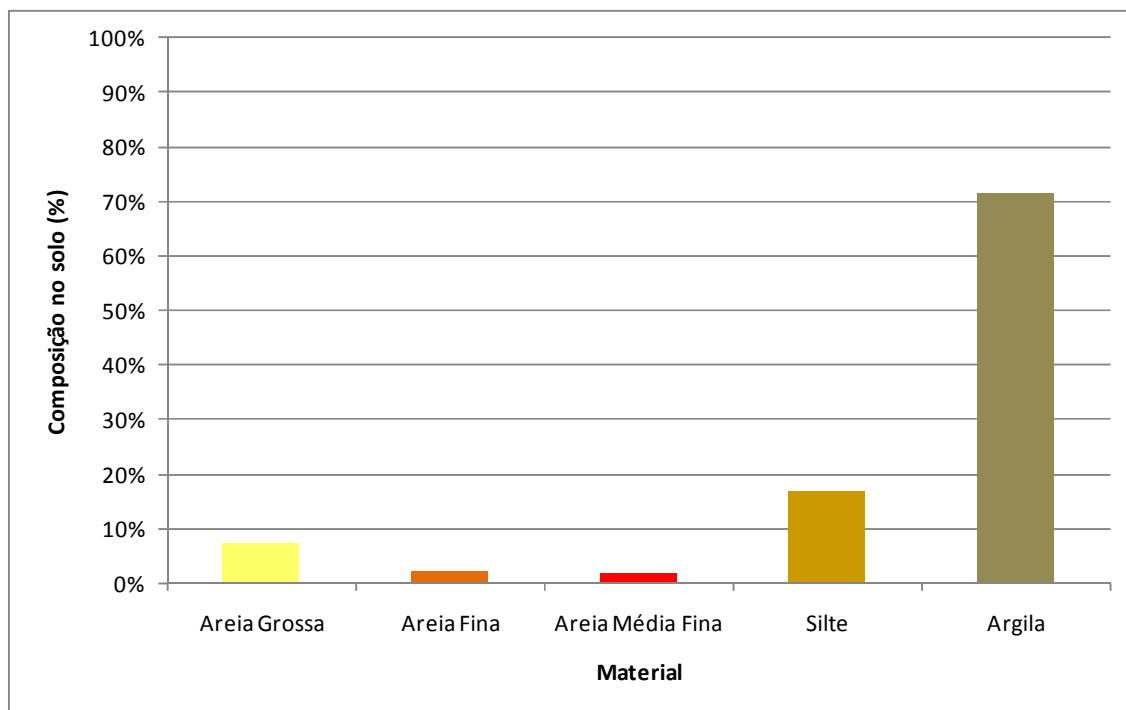




Composição de material no horizonte de solo AC.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
7.40	2.36	2.30	14.44	73.50
12.35	1.86	1.22	17.06	67.50
20.20	3.71	1.25	16.84	58.00
13.97	3.29	1.51	25.72	55.50
20.40	2.52	1.40	21.17	54.50
COMPOSIÇÃO MÉDIA (%)				
14.86	2.75	1.54	19.05	61.80





Composição de material no horizonte de solo B.

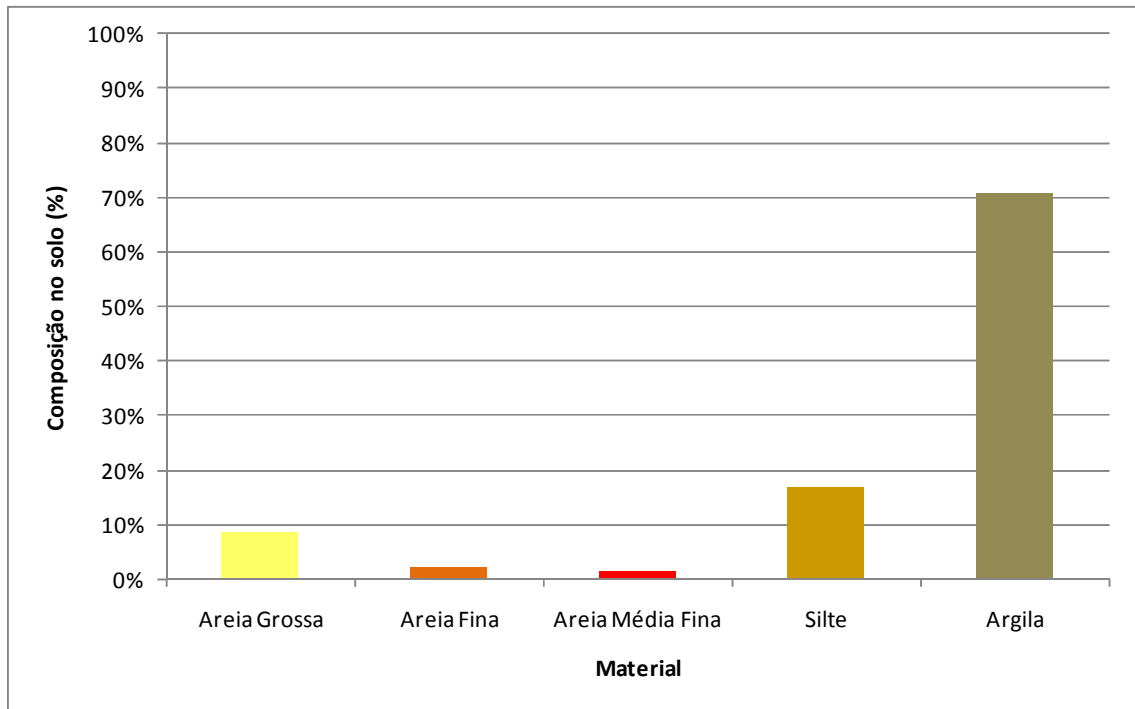
COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
10.06	1.79	1.46	16.94	69.75
11.30	1.99	1.49	9.97	75.25
5.14	1.65	1.44	11.52	80.25
10.90	2.72	1.11	11.76	73.50
2.56	1.39	1.79	9.26	85.00
8.51	1.60	0.76	20.62	68.50
8.19	2.85	2.39	18.82	67.75
3.40	1.31	1.59	13.20	80.50
9.21	1.65	1.52	20.86	66.75
10.85	2.62	2.09	17.44	67.00
12.71	3.35	2.04	16.40	65.50
7.34	2.70	2.09	17.50	70.37
5.60	1.06	1.21	15.12	77.00
4.74	3.10	3.15	14.51	74.50
4.16	2.16	2.96	18.21	72.50

APÊNDICES



<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
7.64	4.26	4.74	20.86	62.50
4.89	1.22	0.11	34.27	59.50
<b>COMPOSIÇÃO MÉDIA (%)</b>				
7.48	2.20	1.88	16.90	71.54

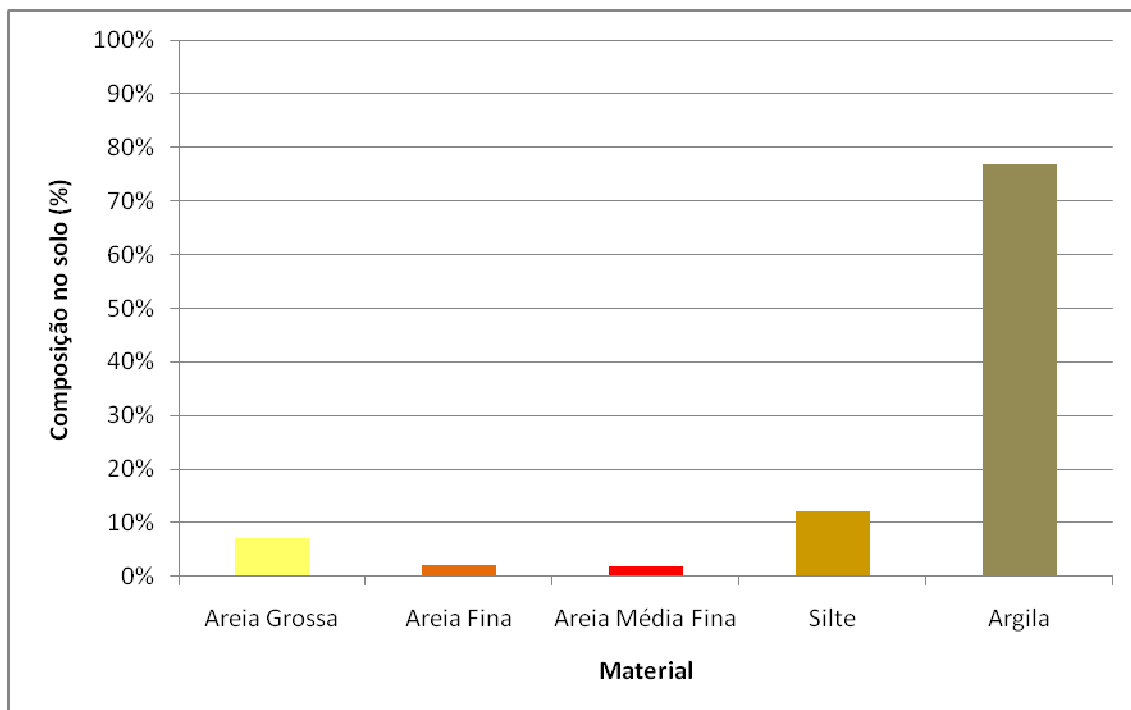




**Composição de material no horizonte de solo B1.**

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
7.29	1.19	0.66	19.61	71.25
4.92	2.19	2.05	10.84	80.00
8.15	2.61	1.71	25.02	62.50
6.52	1.54	0.72	13.96	77.25
10.15	3.04	2.82	14.74	69.25
8.42	1.52	0.79	15.26	74.00
10.50	3.99	2.10	23.16	60.25
14.36	1.61	1.16	11.86	71.00
COMPOSIÇÃO MÉDIA (%)				
8.79	2.21	1.50	16.81	70.69

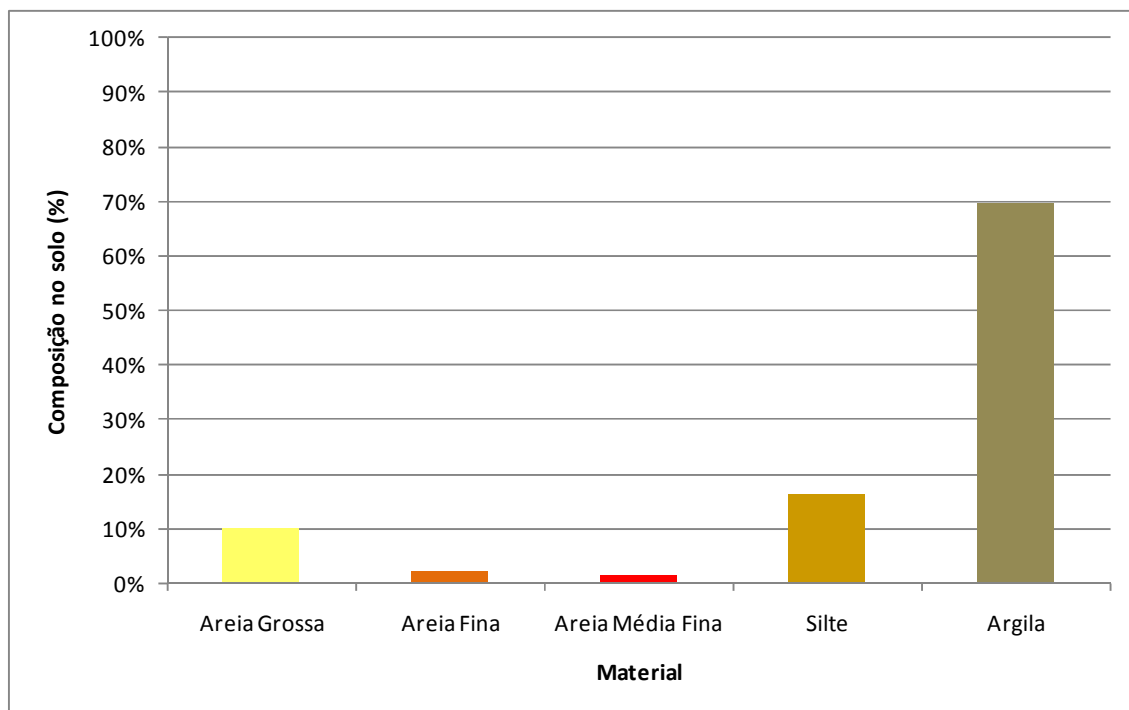




**Composição de material no horizonte de solo B2.**

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
5.20	1.05	1.30	13.70	78.75
6.01	2.84	2.91	10.74	77.50
3.47	1.56	1.90	13.06	80.00
5.47	1.62	0.95	10.95	81.00
7.09	2.24	2.14	8.04	80.50
6.91	1.86	1.85	11.62	77.75
9.90	2.92	2.60	15.57	69.00
12.94	1.91	1.57	12.57	71.00
COMPOSIÇÃO MÉDIA (%)				
7.13	2.00	1.90	12.03	76.94





**Composição de material no horizonte de solo BA.**

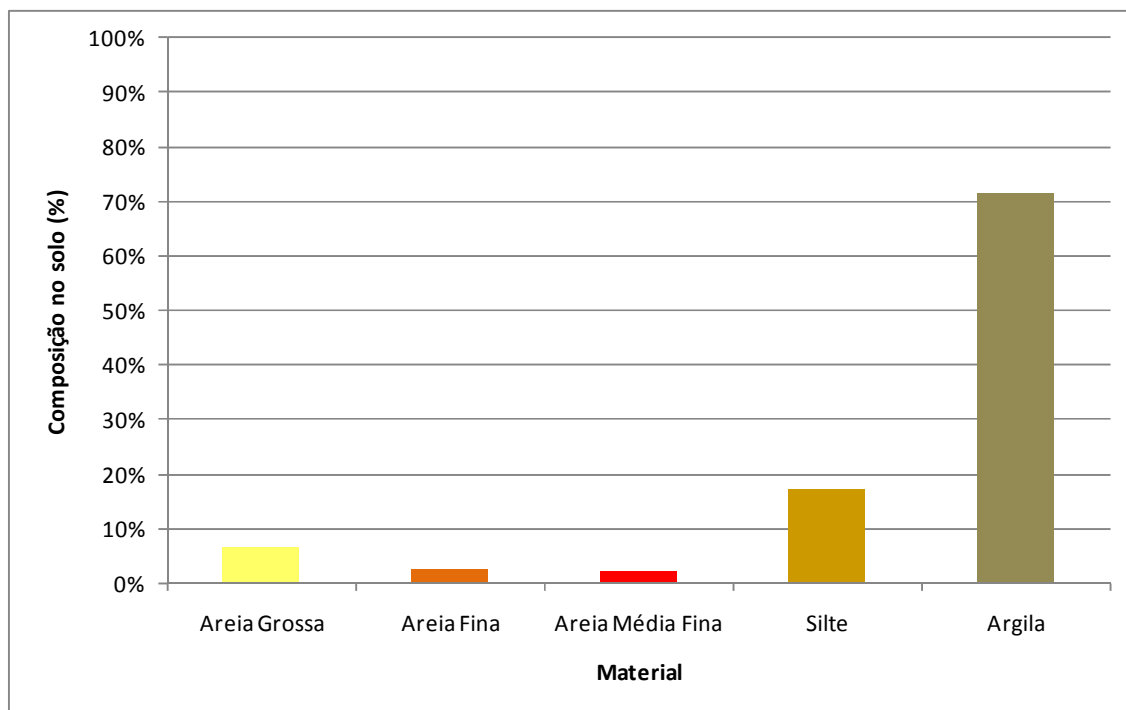
COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
5.34	2.01	1.62	7.27	83.75
10.01	2.30	2.36	21.45	63.87
8.12	1.76	1.01	19.35	69.75
13.37	1.77	1.00	9.85	74.00
8.69	2.00	1.45	12.61	75.25
7.85	1.56	1.15	8.44	81.00
5.54	1.95	3.02	10.99	78.50
3.54	1.39	1.25	15.82	78.00
28.59	3.62	2.29	13.75	51.75
11.45	4.21	1.89	18.45	64.00
12.52	2.90	2.04	17.04	65.50
12.34	2.67	3.36	22.37	59.25
12.05	2.31	0.82	15.69	69.12
14.69	2.72	1.30	15.79	65.50
5.54	0.90	0.85	18.46	74.25

**APÊNDICES**



<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
9.41	3.51	2.09	21.74	63.25
4.92	1.44	1.80	14.34	77.50
3.95	2.15	0.90	19.75	73.25
11.29	1.76	0.36	28.34	58.25
<b>COMPOSIÇÃO MÉDIA (%)</b>				
9.96	2.26	1.61	16.39	69.78





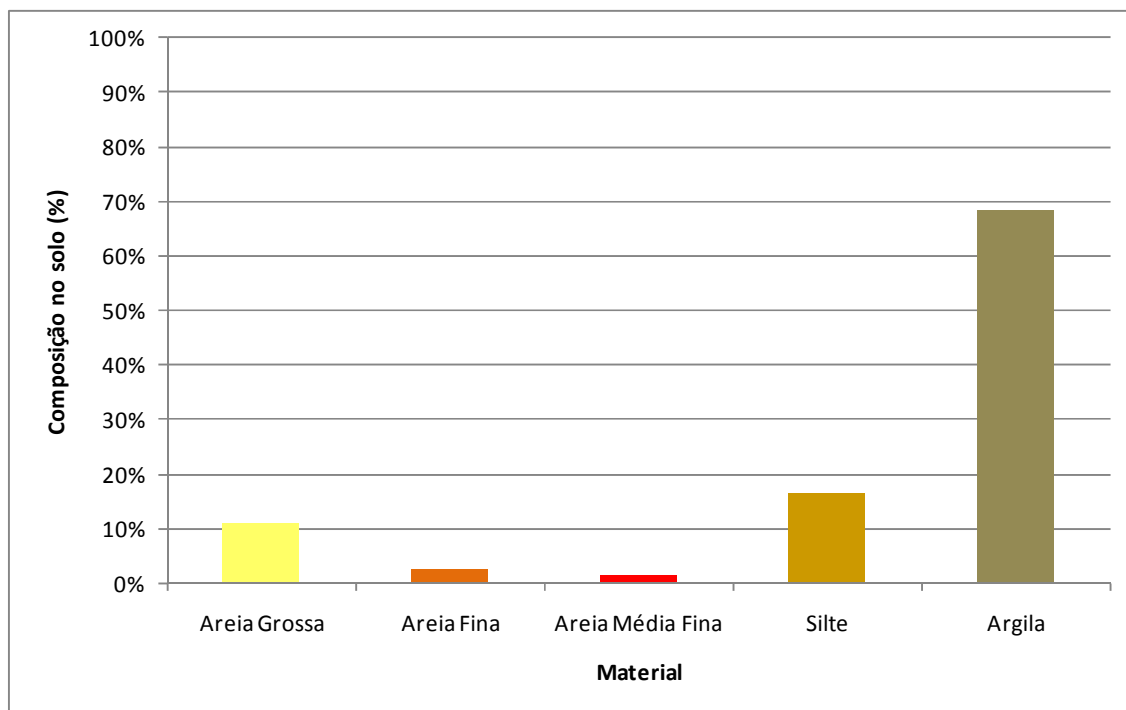
**Composição de material no horizonte de solo BC.**

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
5.39	2.80	2.90	10.16	78.75
5.07	2.56	2.20	30.04	60.12
8.44	2.37	2.27	17.16	69.75
9.42	1.76	1.62	11.94	75.25
4.47	1.49	1.79	14.75	77.50
3.37	1.52	0.69	15.91	78.50
4.11	1.71	1.45	11.72	81.00
8.09	2.12	0.91	20.37	68.50
7.32	2.56	2.21	12.65	75.25
6.36	2.07	1.82	16.99	72.75
7.22	3.02	2.49	12.01	75.25
3.55	1.42	1.29	15.74	78.00
2.62	2.51	2.27	16.09	76.50
5.89	2.10	2.14	8.37	81.50
7.72	1.92	1.92	22.92	65.50



<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
8.95	4.06	2.55	22.44	62.00
8.47	3.49	3.29	13.75	71.00
15.39	3.29	1.95	19.62	59.75
12.40	4.79	3.24	16.57	63.00
7.17	2.65	1.24	21.06	67.87
8.87	3.49	1.34	23.42	62.87
13.64	3.67	2.77	16.91	63.00
4.59	1.46	2.19	14.76	77.00
7.24	2.99	2.10	10.67	77.00
4.61	3.04	2.80	15.05	74.50
4.04	2.16	2.81	18.49	72.50
2.69	0.87	0.94	8.00	87.50
7.34	4.79	6.36	21.51	60.00
2.79	2.34	2.07	12.05	80.75
4.50	1.20	0.15	42.15	52.00
<b>COMPOSIÇÃO MÉDIA (%)</b>				
6.73	2.54	2.13	17.11	71.50

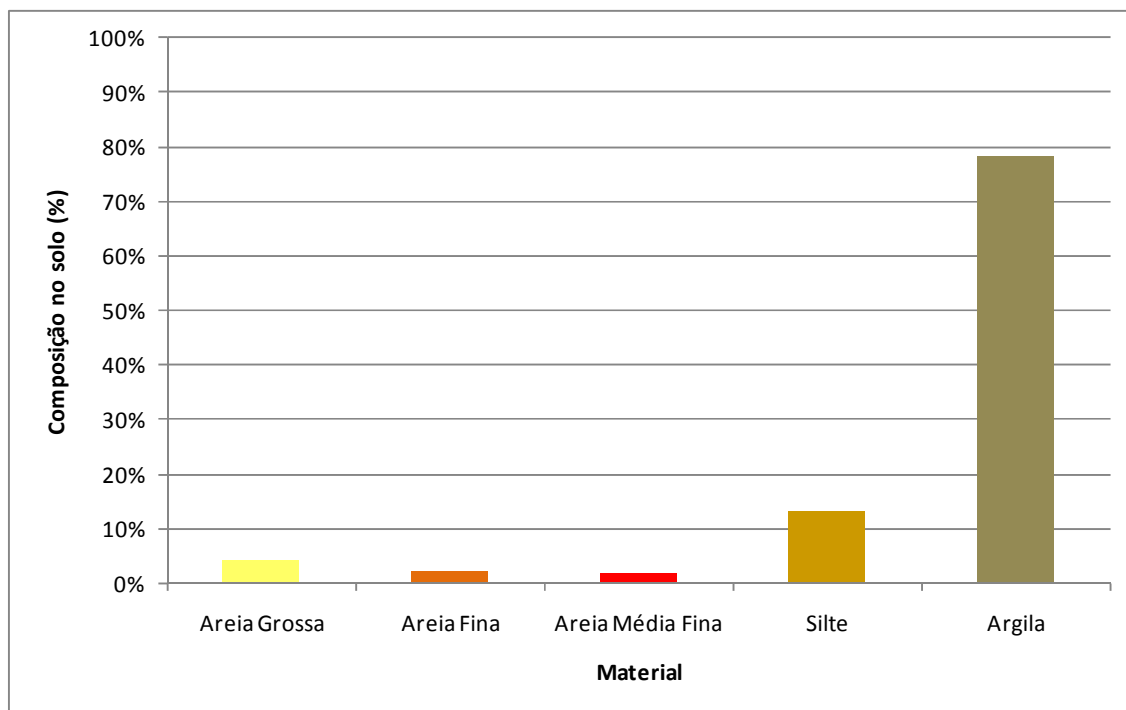




Composição de material no horizonte de solo Bi.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
7.31	2.69	2.11	25.26	62.62
7.39	2.76	1.89	20.71	67.25
2.25	0.66	0.52	10.31	86.25
25.60	4.47	2.86	22.06	45.00
20.61	3.10	1.14	23.65	51.50
15.19	2.67	0.90	20.86	60.37
12.81	2.12	1.55	13.01	70.50
17.24	2.97	1.66	11.37	66.75
8.95	3.00	1.46	12.09	74.50
3.14	0.89	0.66	10.31	85.00
1.11	1.26	2.77	12.85	82.00
COMPOSIÇÃO MÉDIA (%)				
11.05	2.42	1.59	16.59	68.34

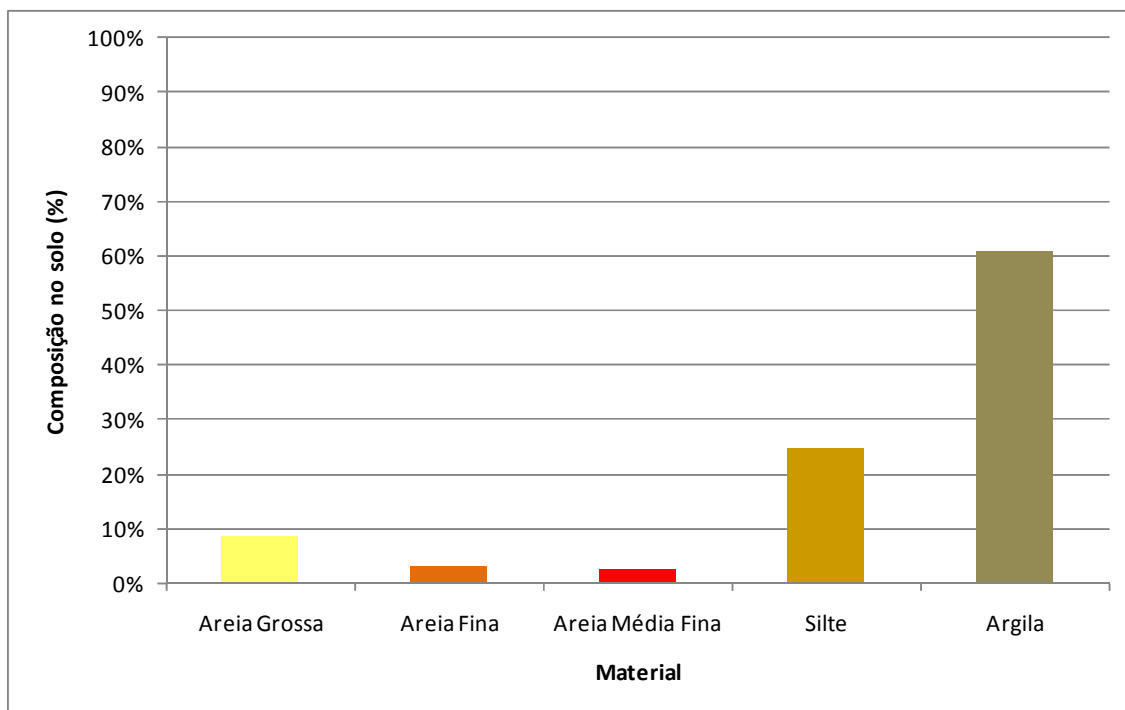




Composição de material no horizonte de solo Bt.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
5.44	2.40	2.11	8.80	81.25
2.04	1.06	0.86	18.41	77.62
5.37	3.06	2.70	12.36	76.50
COMPOSIÇÃO MÉDIA (%)				
4.28	2.18	1.89	13.19	78.46

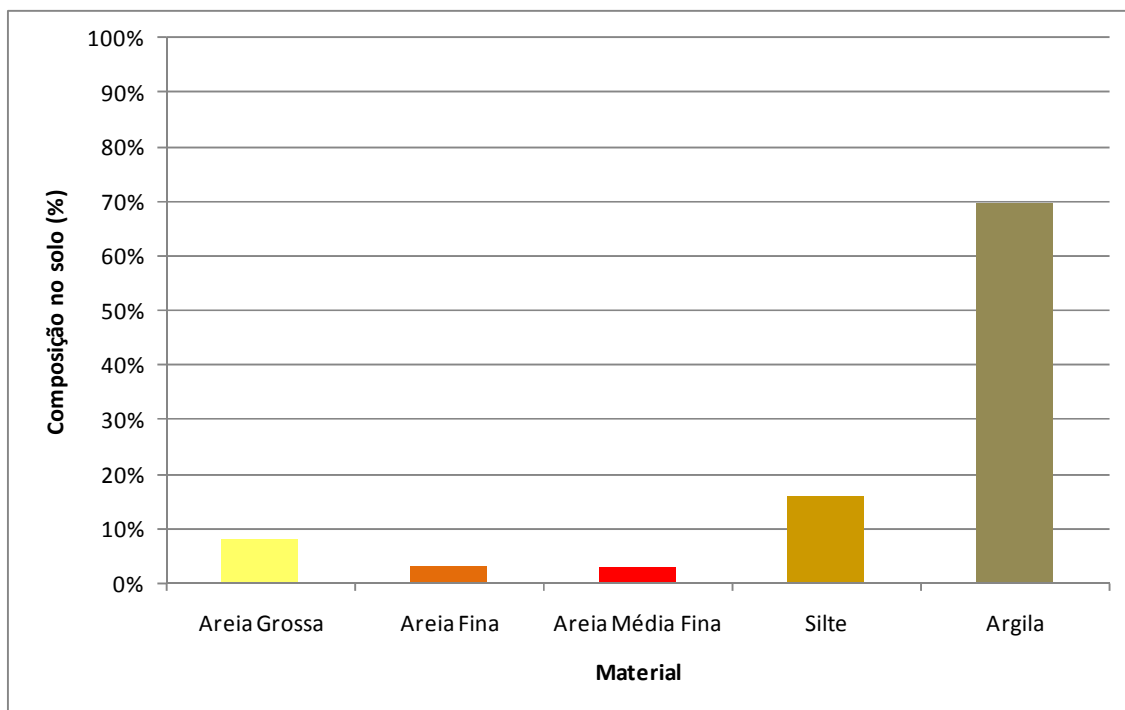




**Composição de material no horizonte de solo Bt1.**

<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
8.56	3.21	2.57	24.90	60.75
<b>COMPOSIÇÃO MÉDIA (%)</b>				
8.56	3.21	2.57	24.90	60.75

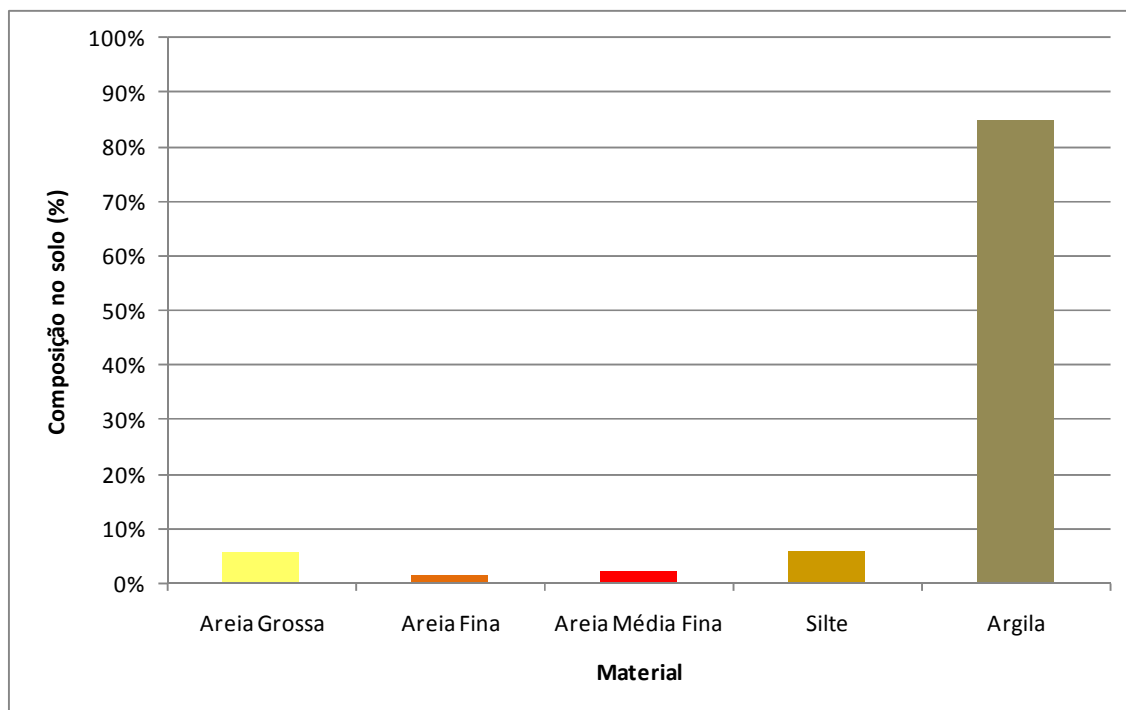




**Composição de material no horizonte de solo Bt2.**

<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
8.06	3.22	2.92	16.04	69.75
<b>COMPOSIÇÃO MÉDIA (%)</b>				
8.06	3.22	2.92	16.04	69.75

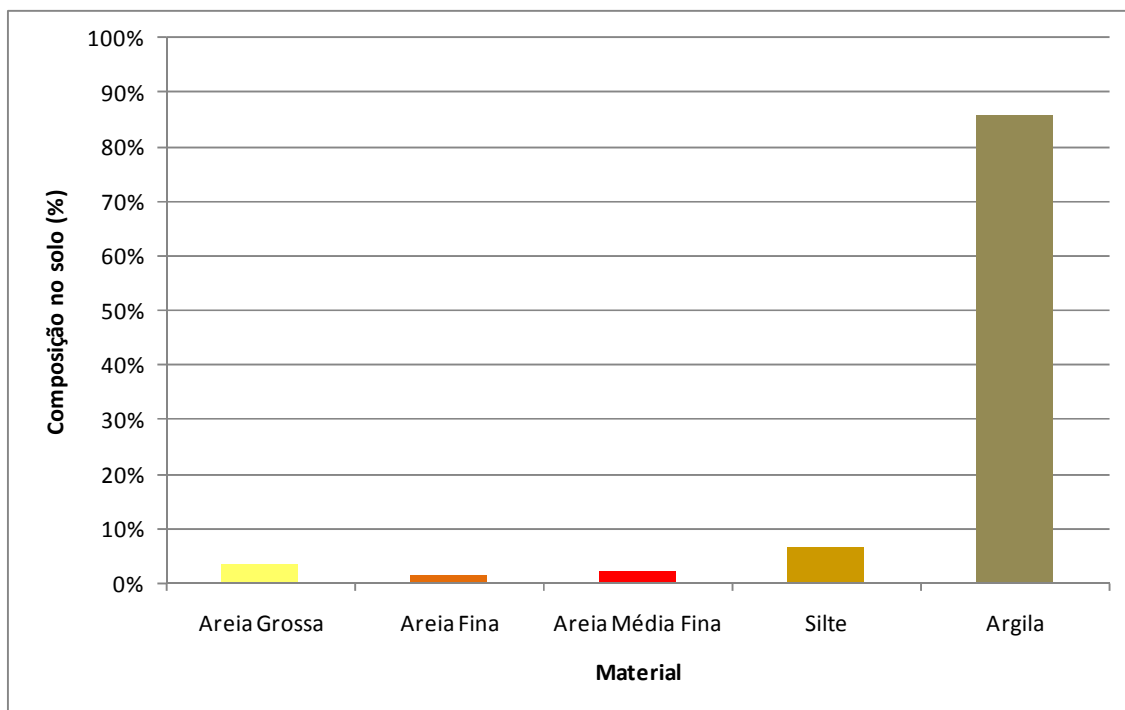




**Composição de material no horizonte de solo Bw1.**

<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
6.80	1.11	1.16	4.92	86.00
4.49	1.77	2.97	7.26	83.50
<b>COMPOSIÇÃO MÉDIA (%)</b>				
5.64	1.44	2.07	6.09	84.75

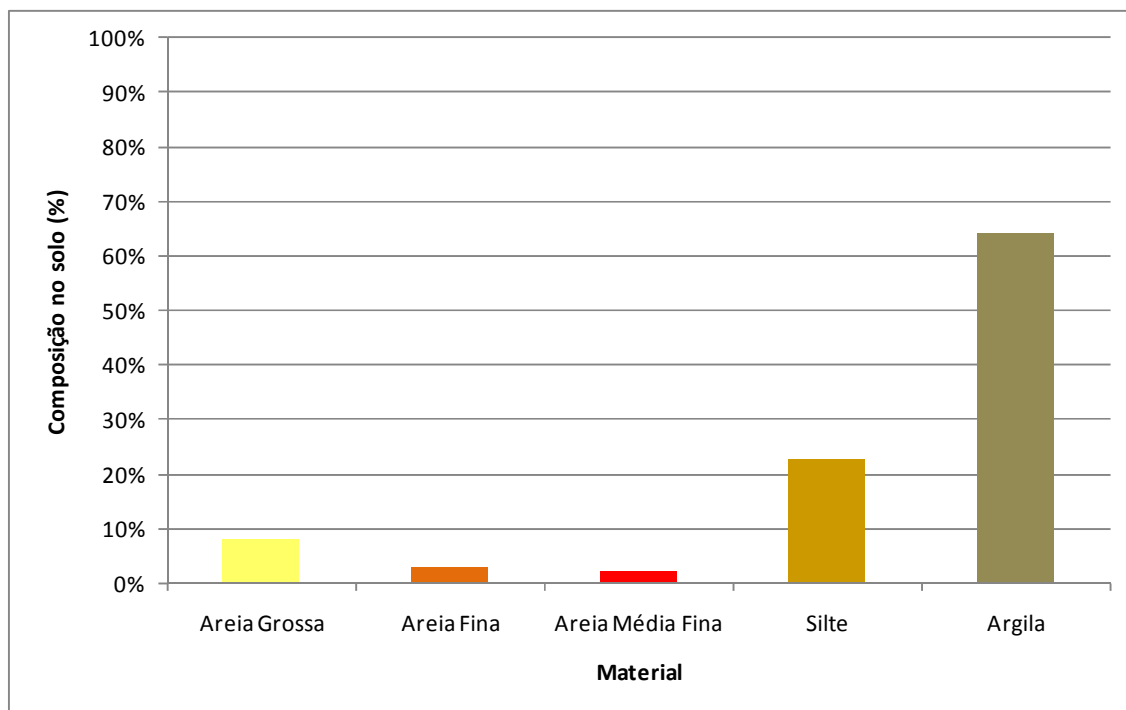




**Composição de material no horizonte de solo Bw2.**

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
3.01	1.12	1.36	6.00	88.50
3.87	1.96	3.07	7.59	83.50
COMPOSIÇÃO MÉDIA (%)				
3.44	1.54	2.22	6.79	86.00





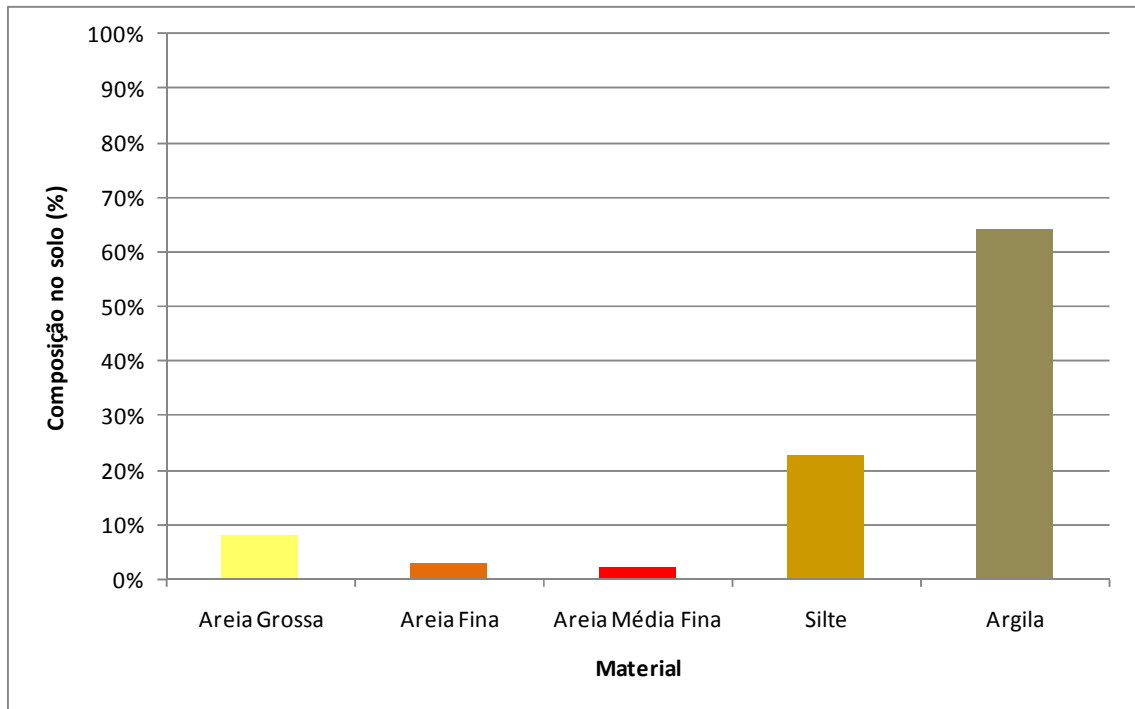
Composição de material no horizonte de solo C.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
4.27	3.00	4.91	11.56	76.25
15.22	3.47	1.84	31.84	47.62
5.30	2.70	1.26	27.24	63.50
9.97	1.82	1.62	11.32	75.25
4.85	1.90	2.02	12.72	78.50
11.49	3.39	0.52	31.10	53.50
2.37	0.79	0.55	8.79	87.50
7.17	2.27	1.04	22.26	67.25
3.67	1.69	1.51	17.62	75.50
9.11	3.31	3.82	15.75	68.00
2.97	3.65	2.16	29.71	61.50
6.27	2.70	2.70	12.95	75.37
6.94	2.02	1.85	26.19	63.00
8.05	2.34	1.59	22.27	65.75
7.74	3.92	2.91	23.42	62.00



<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
13.55	5.39	4.25	18.81	58.00
10.11	3.07	1.10	35.34	50.37
14.87	3.36	2.34	26.42	53.00
10.35	4.40	2.87	17.87	64.50
4.30	2.21	2.27	19.96	71.25
9.37	4.11	3.51	24.75	58.25
5.45	1.92	0.45	51.42	40.75
<b>COMPOSIÇÃO MÉDIA (%)</b>				
7.88	2.88	2.14	22.70	64.39





Composição de material no horizonte de solo C1.

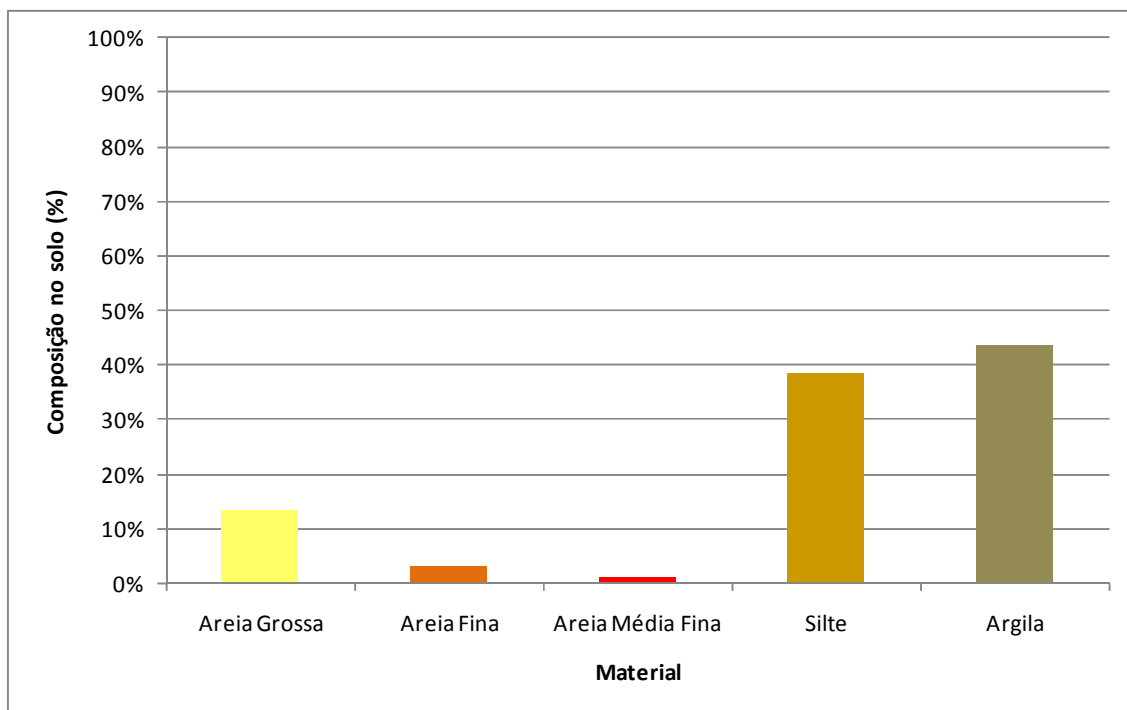
COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
4.27	3.00	4.91	11.56	76.25
15.22	3.47	1.84	31.84	47.62
5.30	2.70	1.26	27.24	63.50
9.97	1.82	1.62	11.32	75.25
4.85	1.90	2.02	12.72	78.50
11.49	3.39	0.52	31.10	53.50
2.37	0.79	0.55	8.79	87.50
7.17	2.27	1.04	22.26	67.25
3.67	1.69	1.51	17.62	75.50
9.11	3.31	3.82	15.75	68.00
2.97	3.65	2.16	29.71	61.50
6.27	2.70	2.70	12.95	75.37
6.94	2.02	1.85	26.19	63.00
8.05	2.34	1.59	22.27	65.75
7.74	3.92	2.91	23.42	62.00

APÊNDICES



<b>COMPOSIÇÃO DE MATERIAL NO SOLO (%)</b>				
<b>Areia Grossa</b>	<b>Areia Fina</b>	<b>Areia Média Fina</b>	<b>Silte</b>	<b>Argila</b>
13.55	5.39	4.25	18.81	58.00
10.11	3.07	1.10	35.34	50.37
14.87	3.36	2.34	26.42	53.00
10.35	4.40	2.87	17.87	64.50
4.30	2.21	2.27	19.96	71.25
9.37	4.11	3.51	24.75	58.25
5.45	1.92	0.45	51.42	40.75
<b>COMPOSIÇÃO MÉDIA (%)</b>				
7.88	2.88	2.14	22.70	64.39

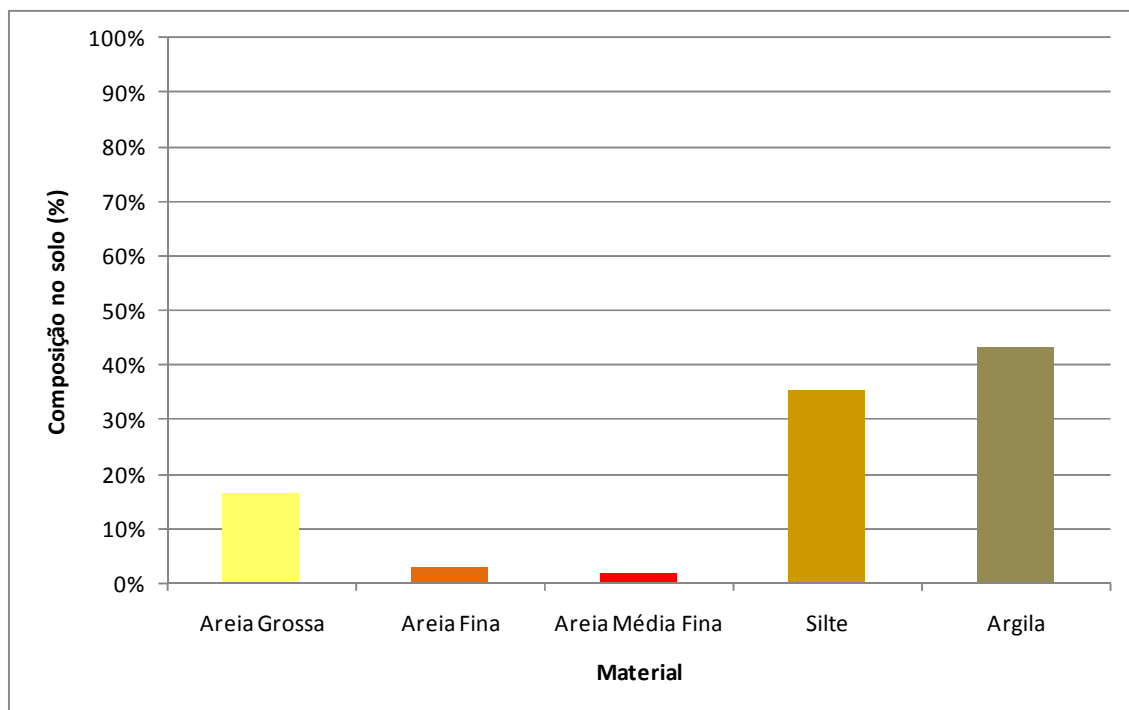




**Composição de material no horizonte de solo C2.**

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
13.35	3.34	1.02	38.54	43.75
COMPOSIÇÃO MÉDIA (%)				
13.35	3.34	1.02	38.54	43.75





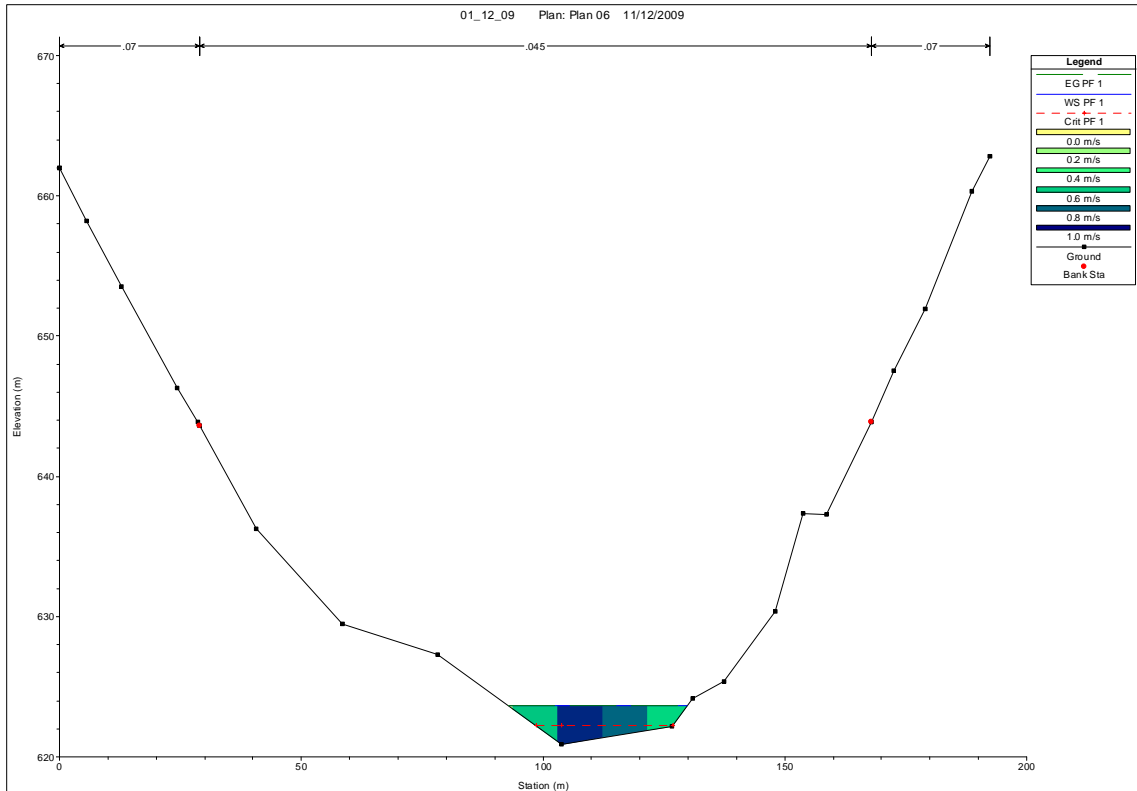
Composição de material no horizonte de solo CR.

COMPOSIÇÃO DE MATERIAL NO SOLO (%)				
Areia Grossa	Areia Fina	Areia Média Fina	Silte	Argila
11.44	3.64	3.06	15.86	66.00
28.79	3.90	1.91	20.40	45.00
11.11	0.91	0.10	46.87	41.00
20.02	1.75	1.12	65.35	11.75
11.72	3.81	2.29	29.17	53.00
COMPOSIÇÃO MÉDIA (%)				
16.62	2.80	1.70	35.53	43.35

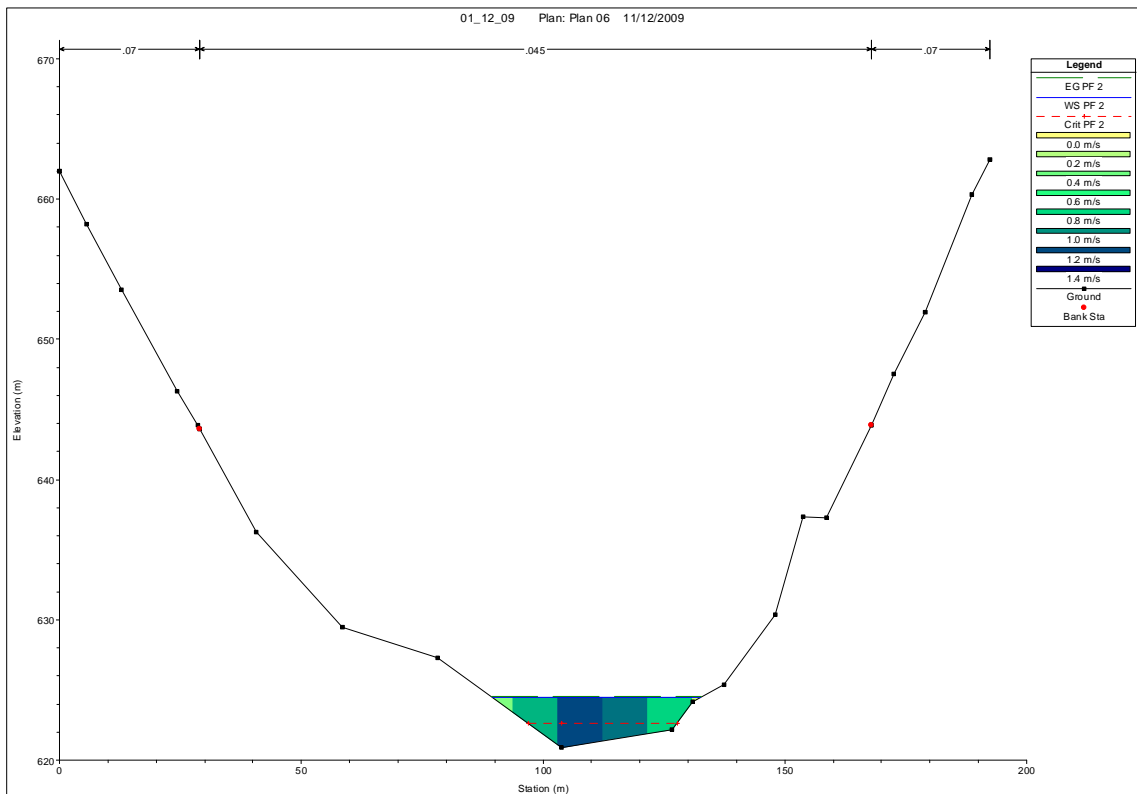


## APÊNDICE I – DISTRIBUIÇÃO DAS VELOCIDADES NAS SEÇÕES TRANSVERSAIS



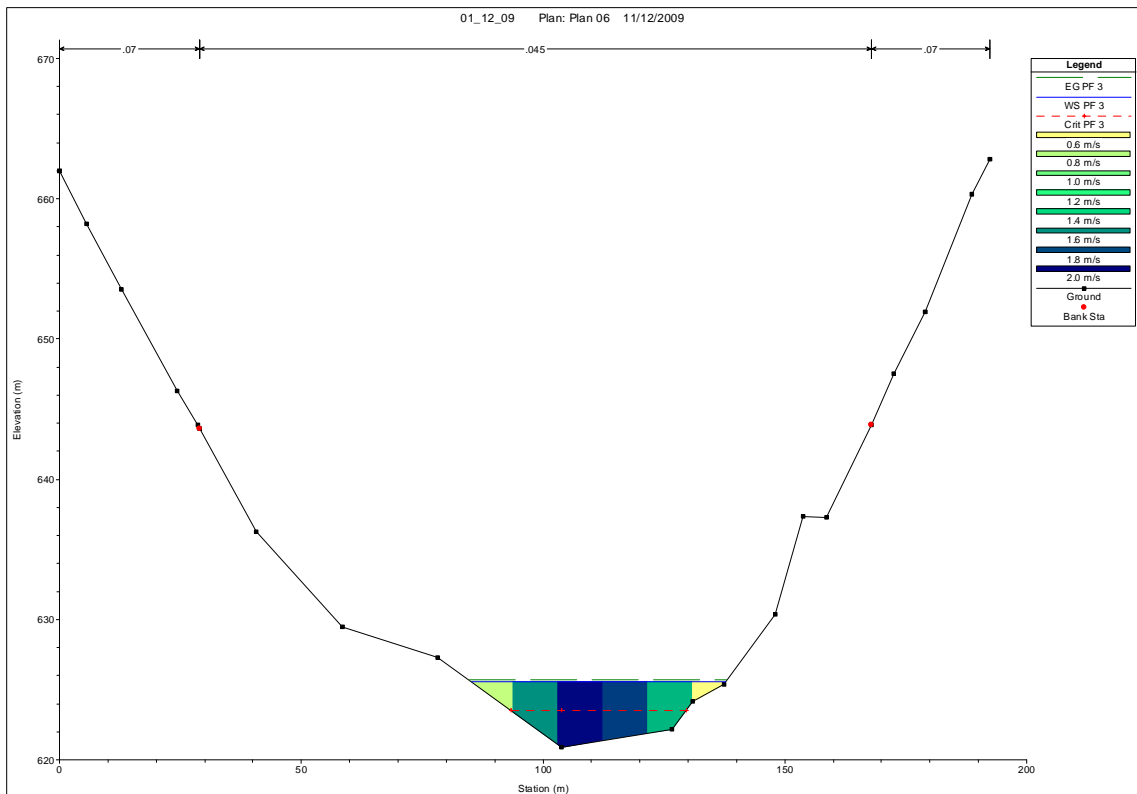


**Seção -12.2, Perfil 1.**

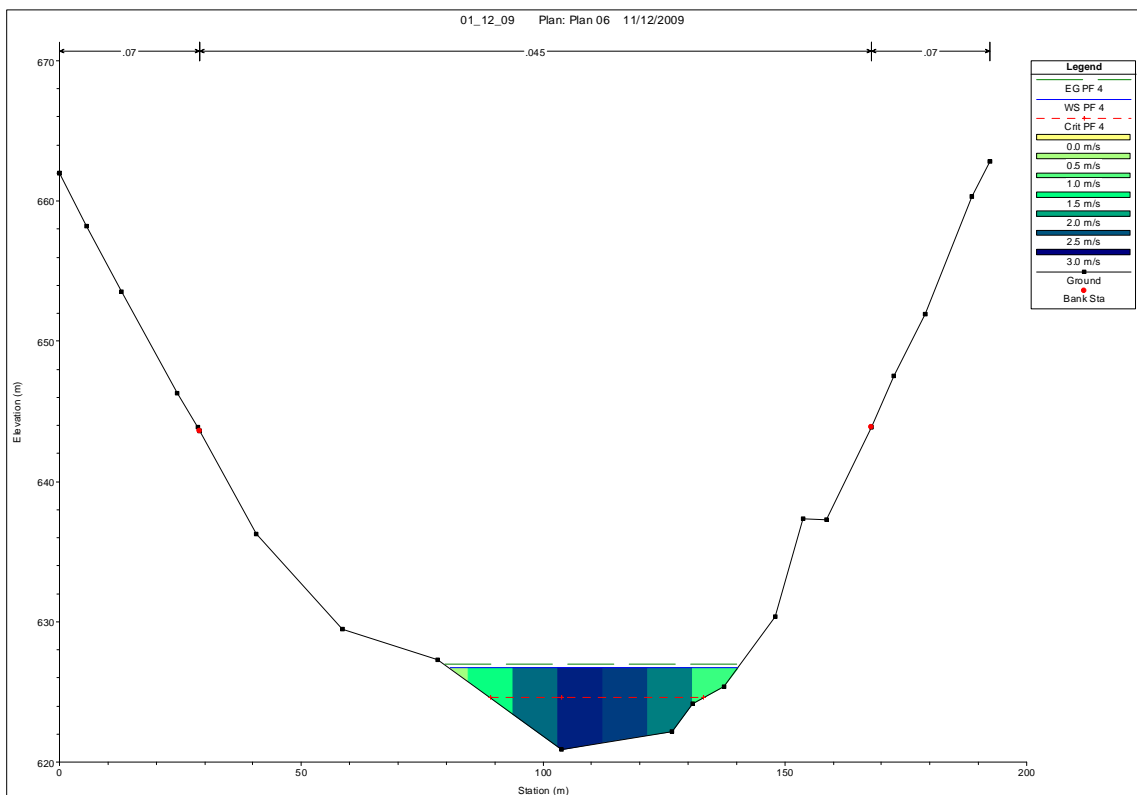


**Seção -12.2, Perfil 2.**



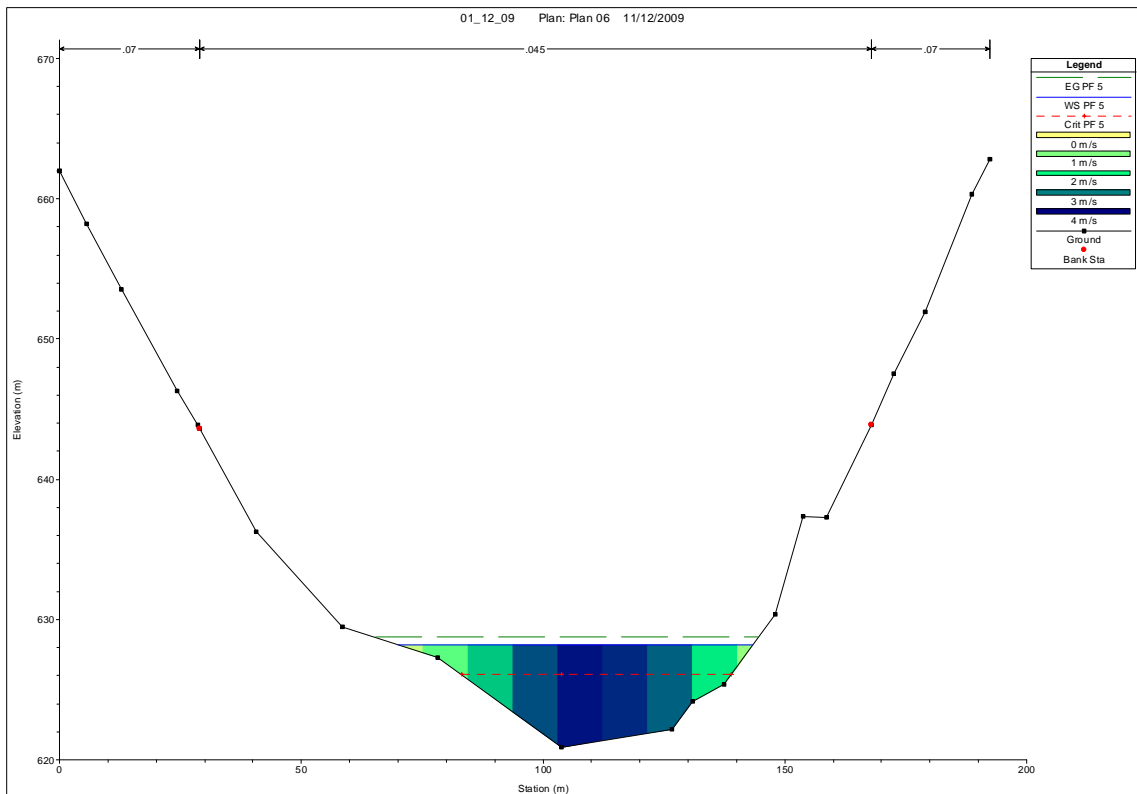


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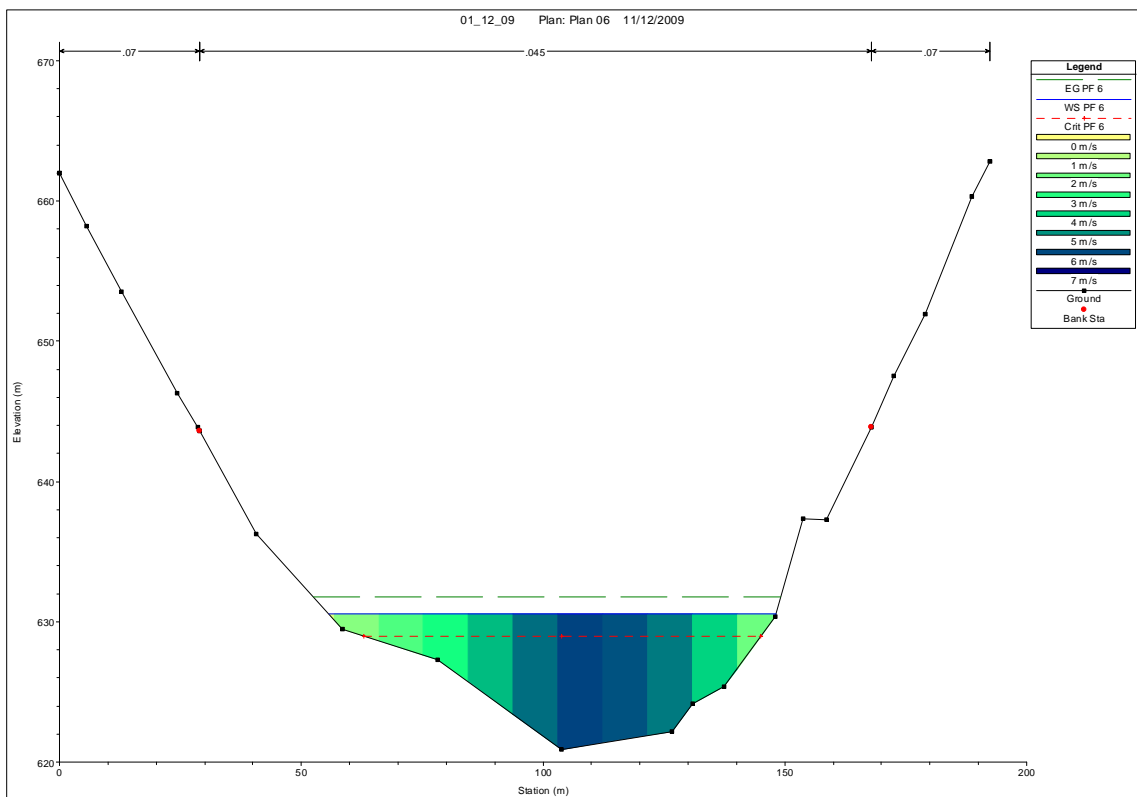


**Seção -12.2, Perfil 4.**



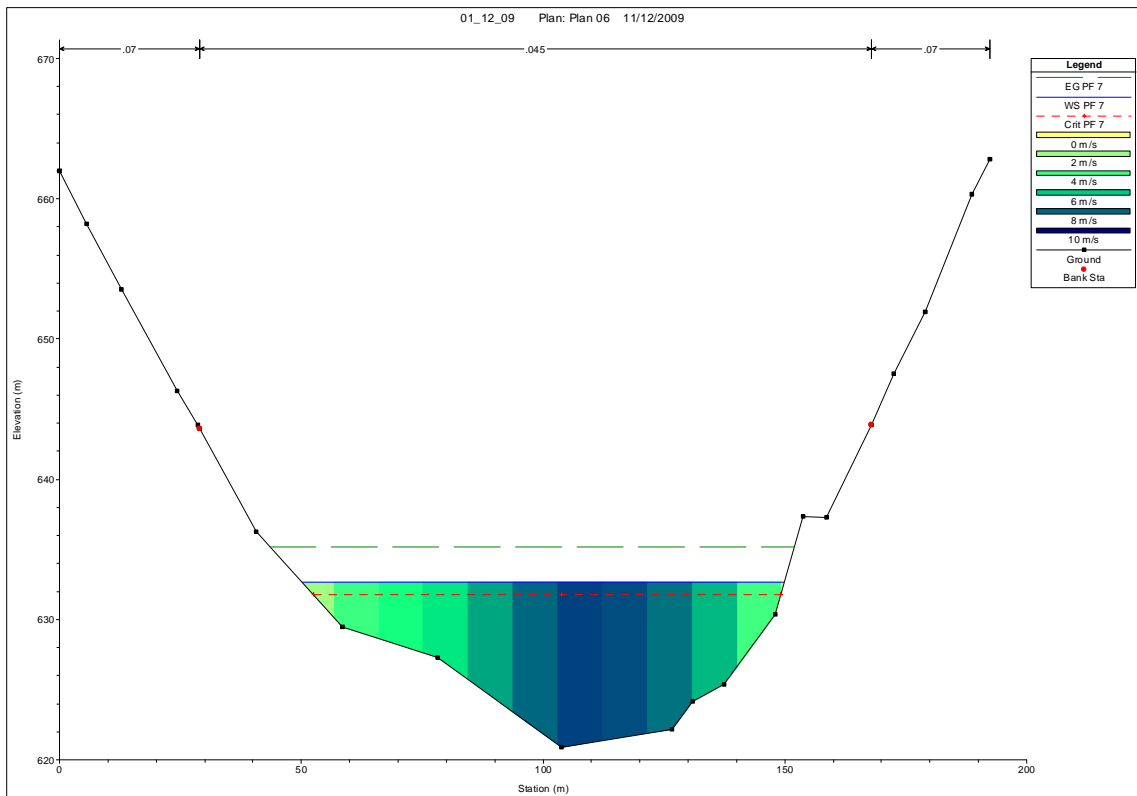


**Seção -12.2, Perfil 5.**

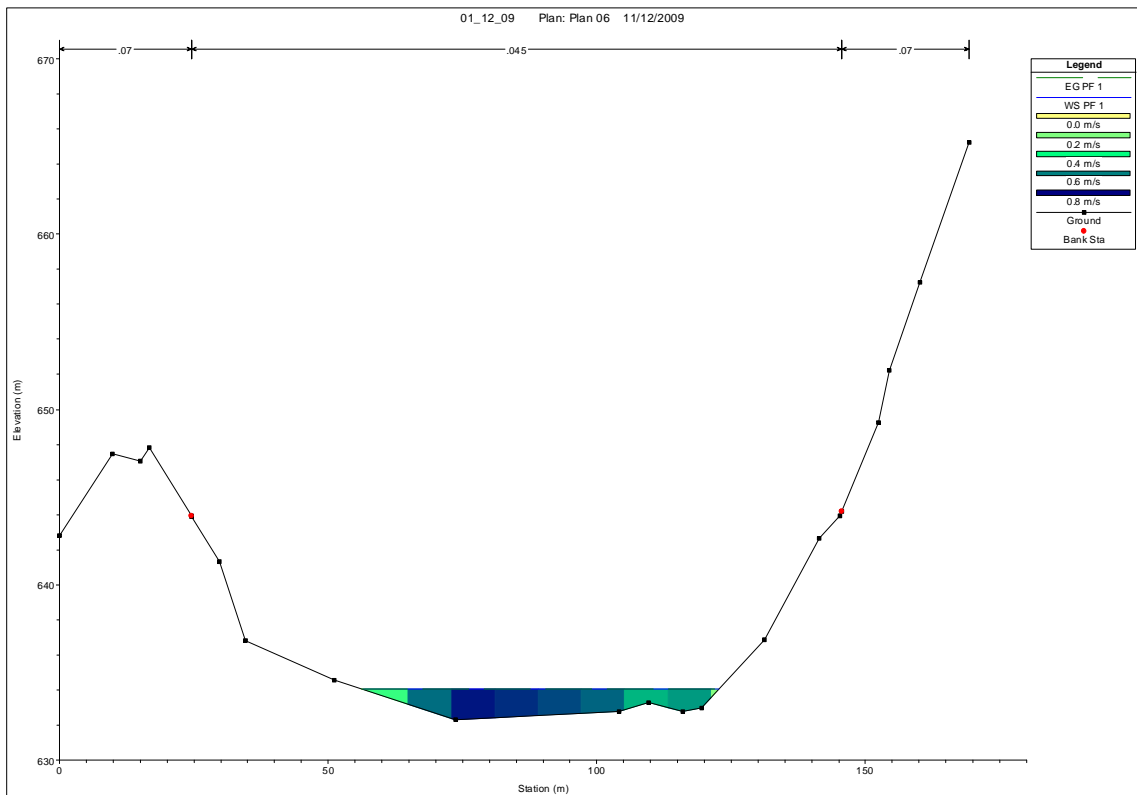


**Seção -12.2, Perfil 6.**



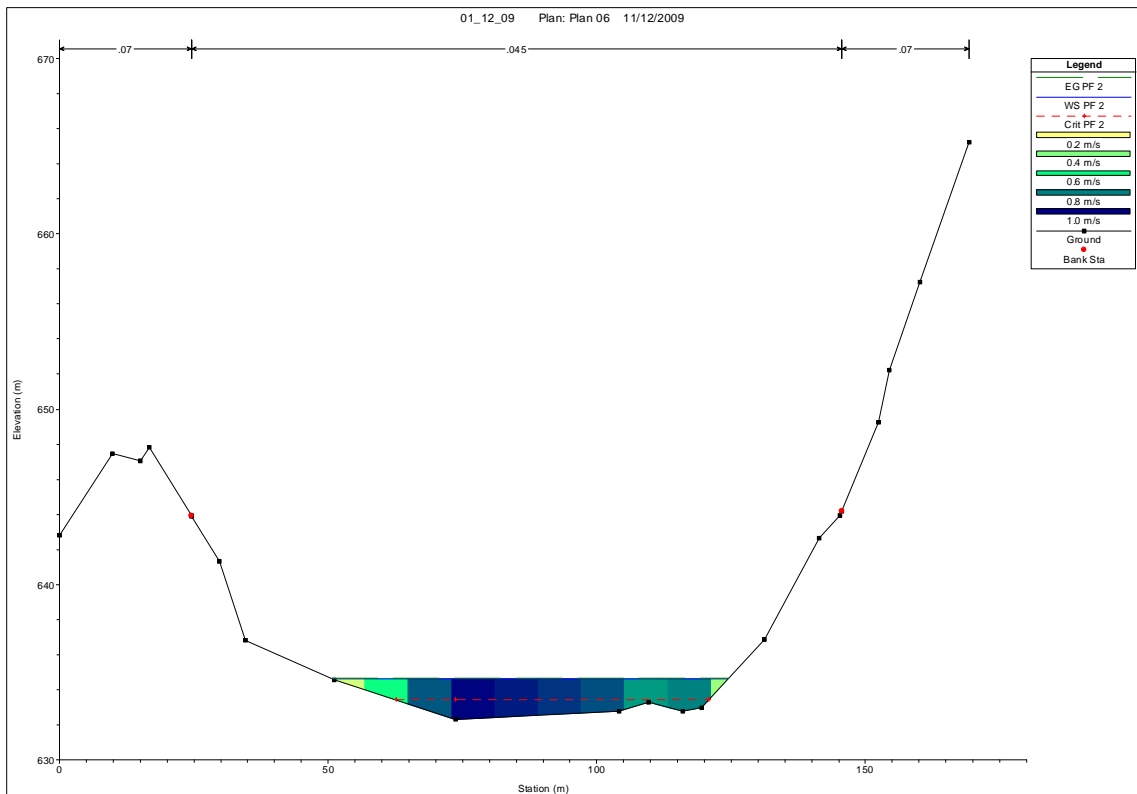


**Seção -12.2, Perfil 7.**

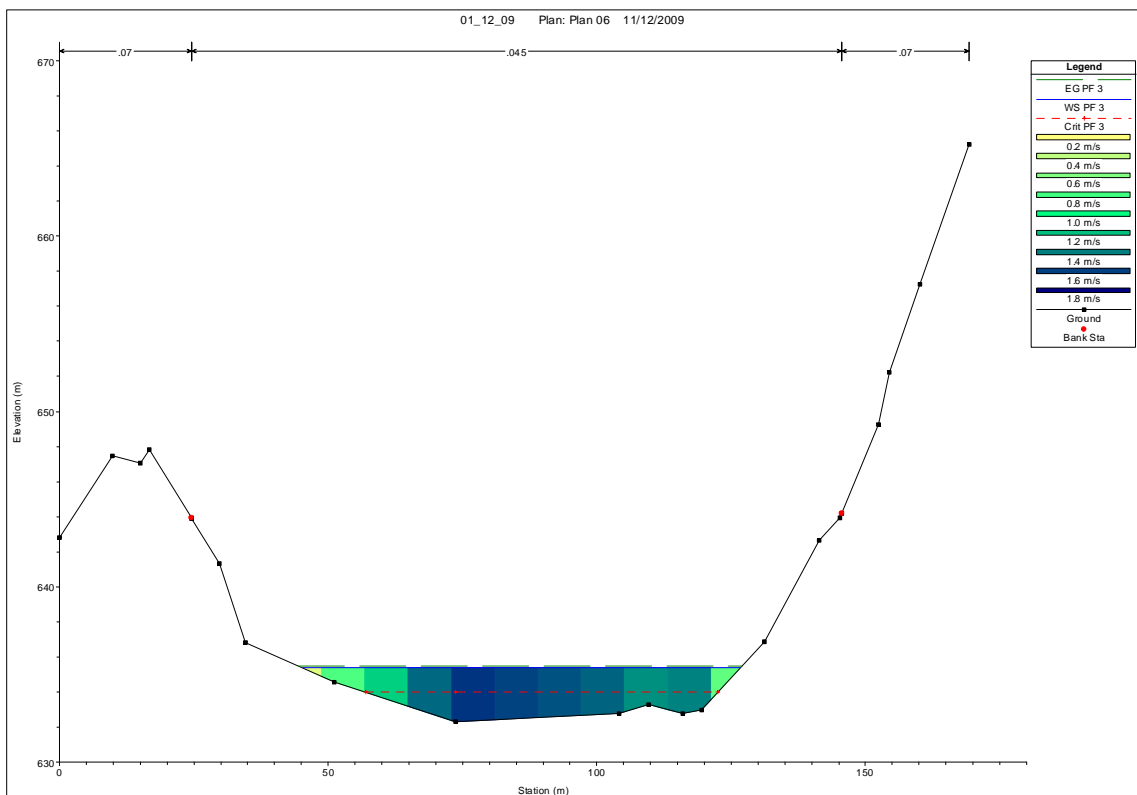


**Seção -7.10, Perfil 1.**



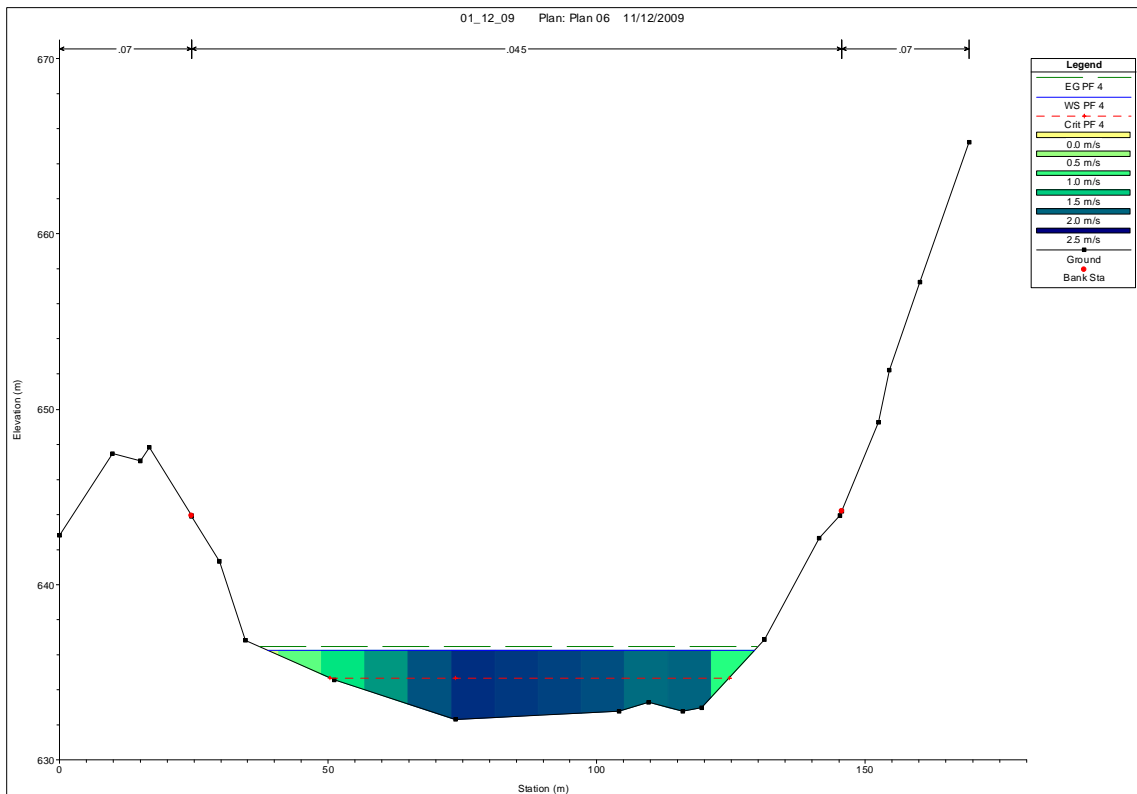


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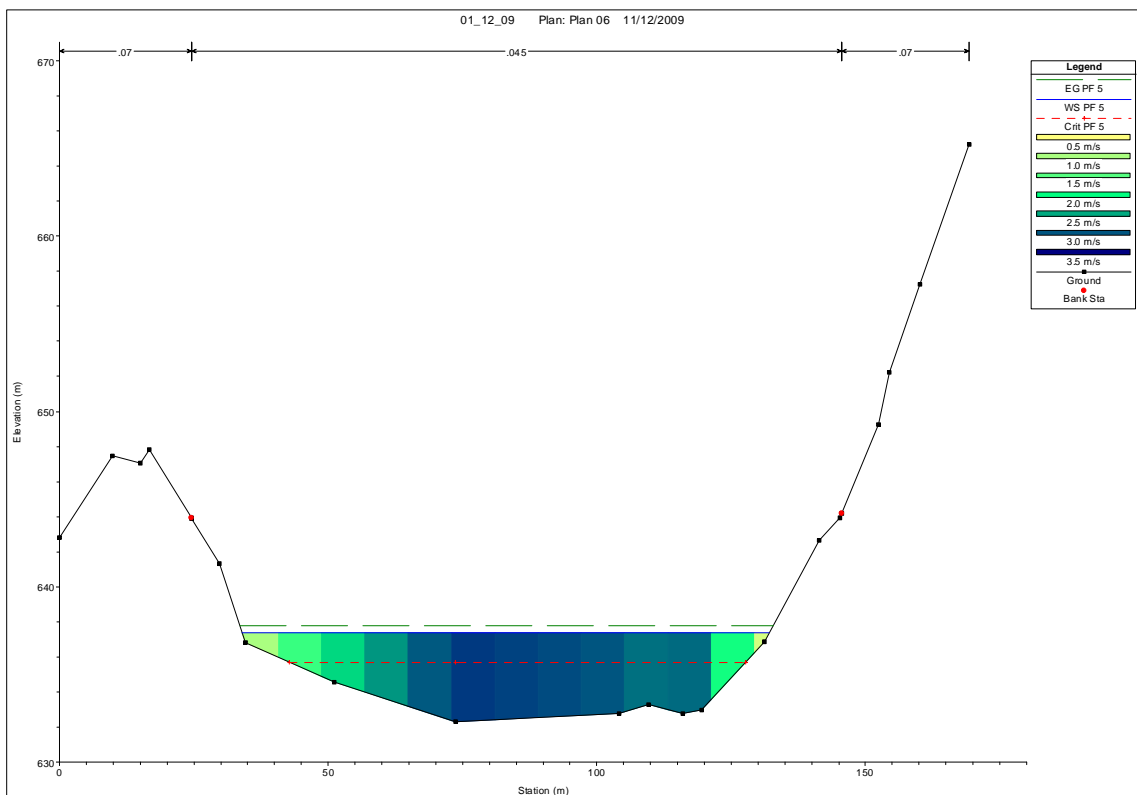


**Seção -7.10, Perfil 3.**



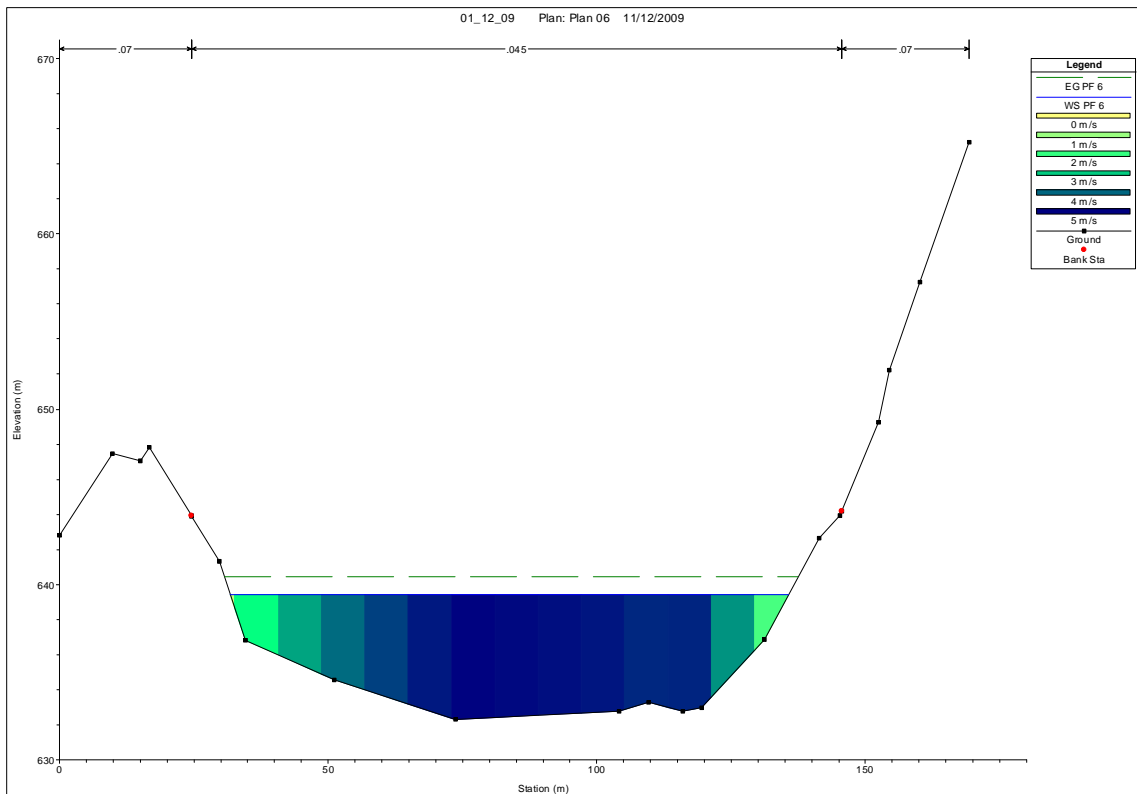


**Seção -7.10, Perfil 4.**

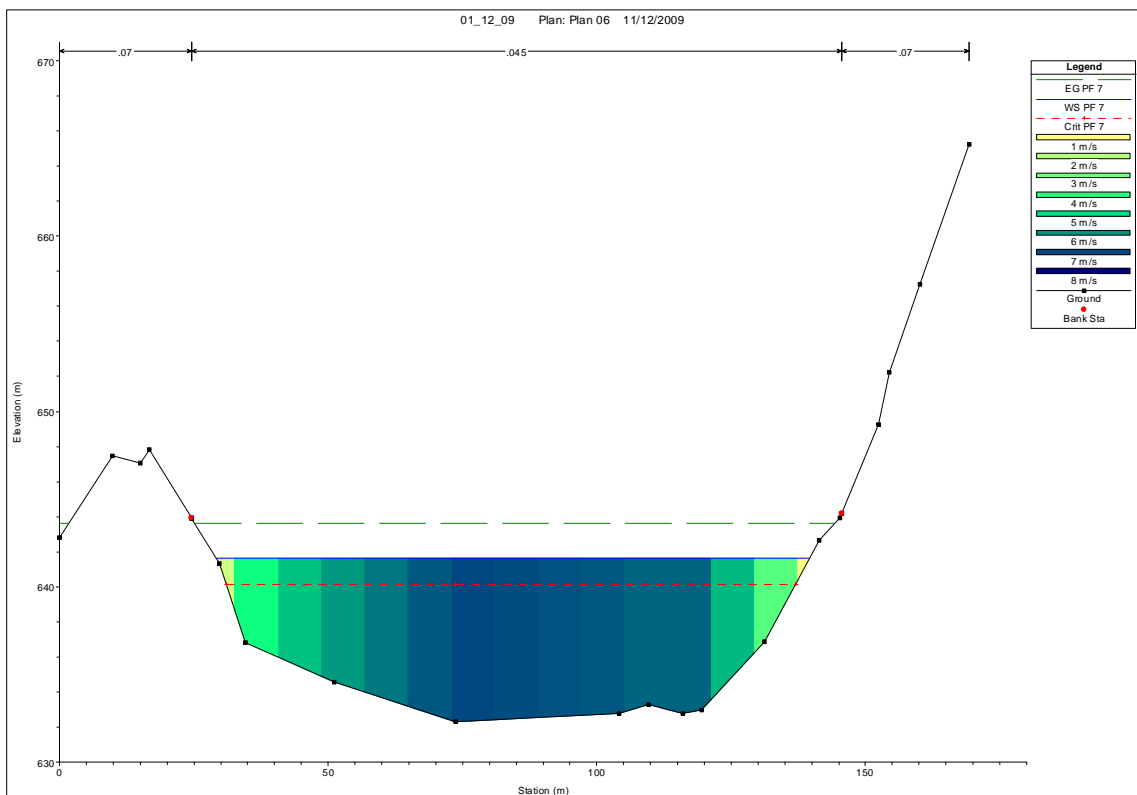


**Seção -7.10, Perfil 5.**



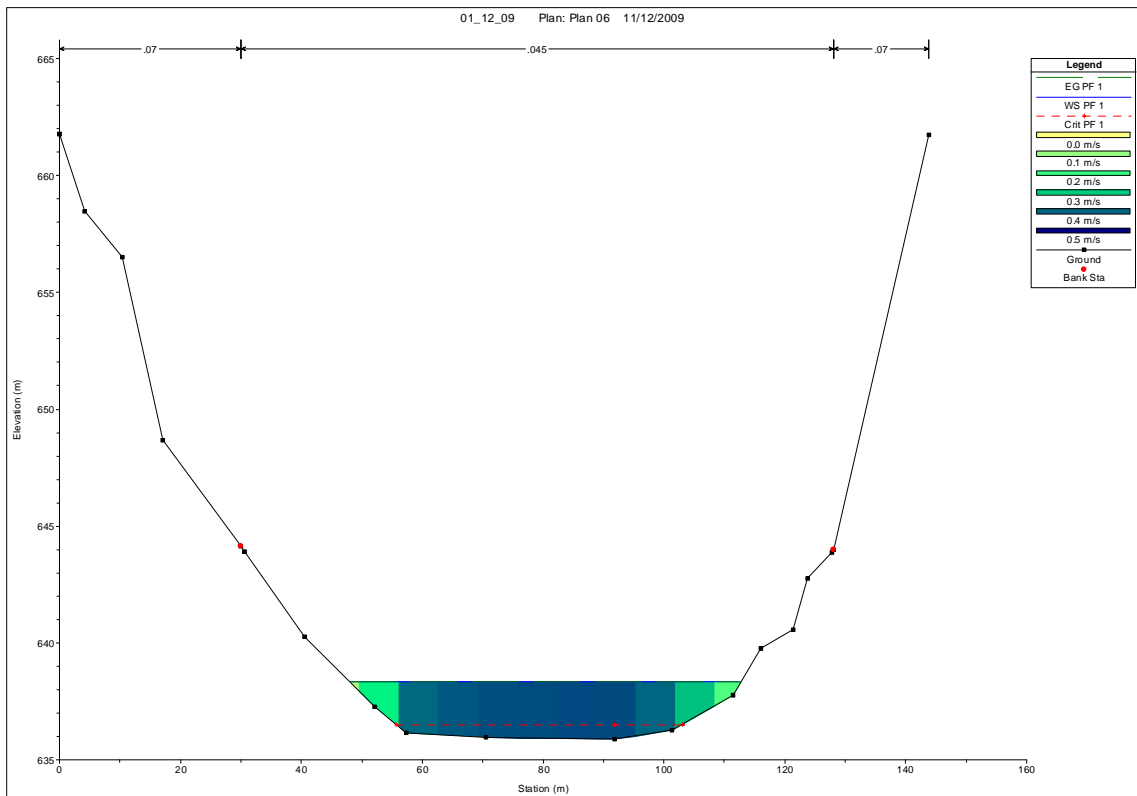


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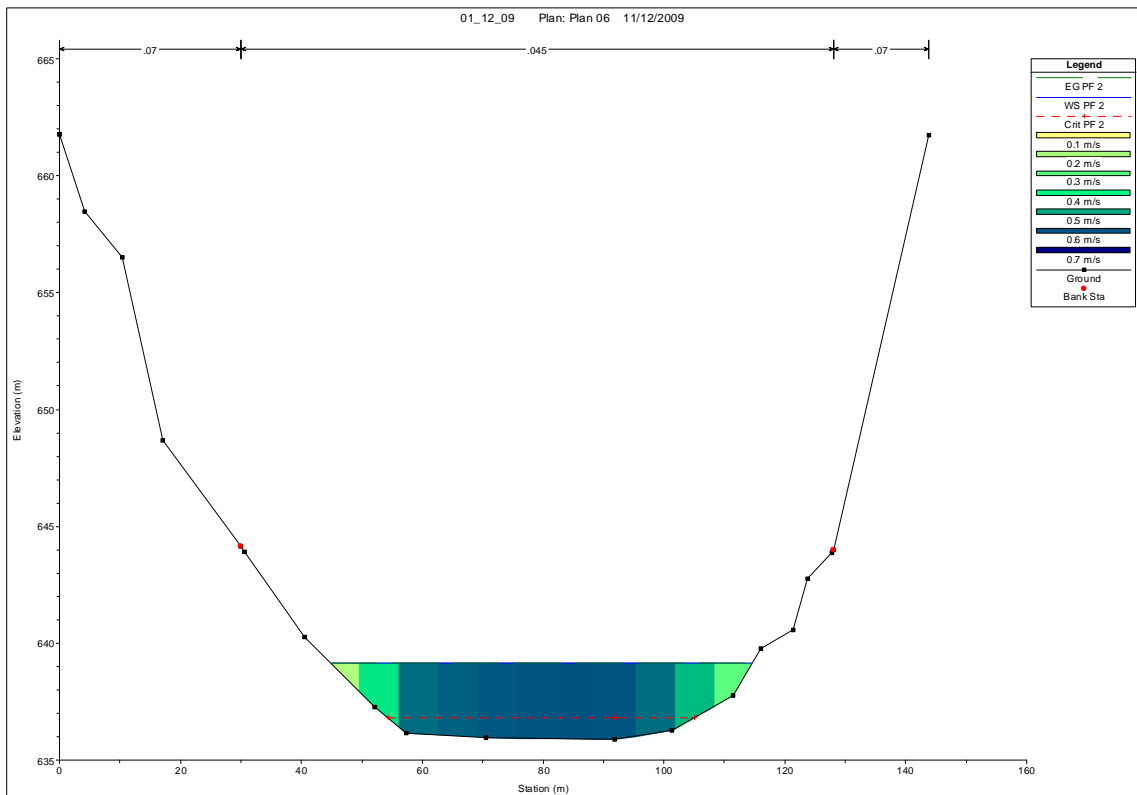


**Seção -7.10, Perfil 7.**



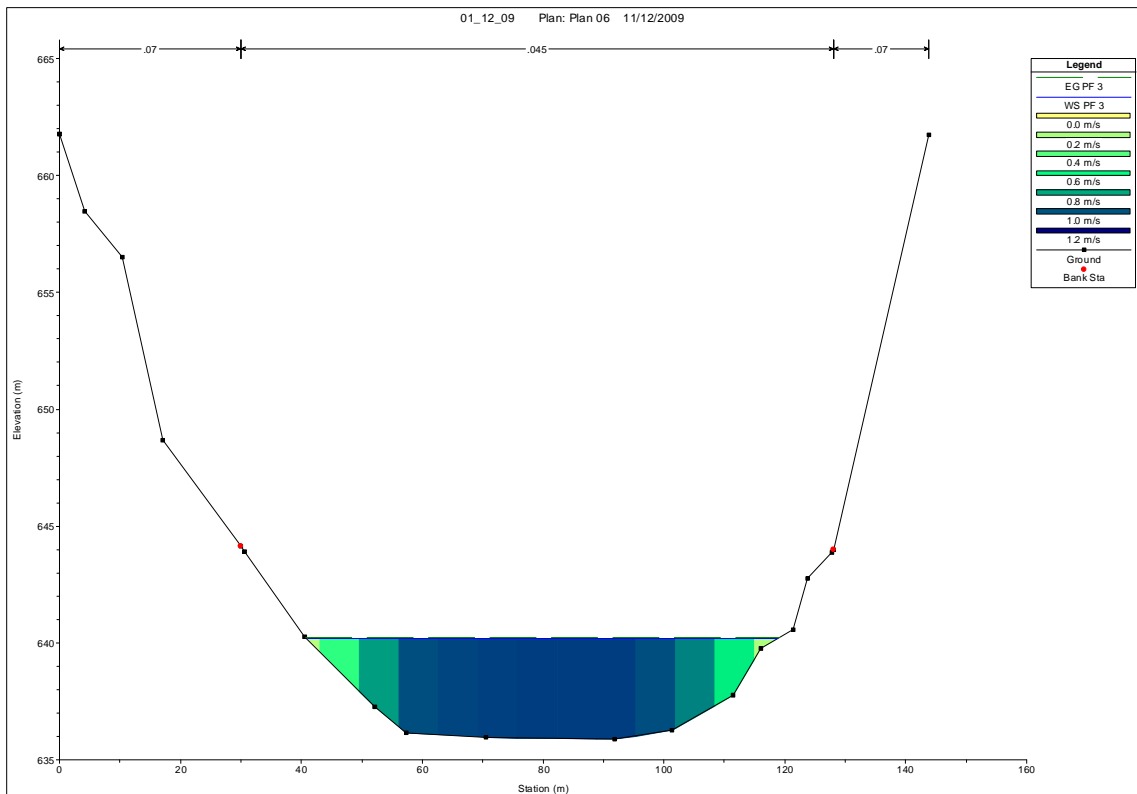


**Seção -1.9, Perfil 1.**

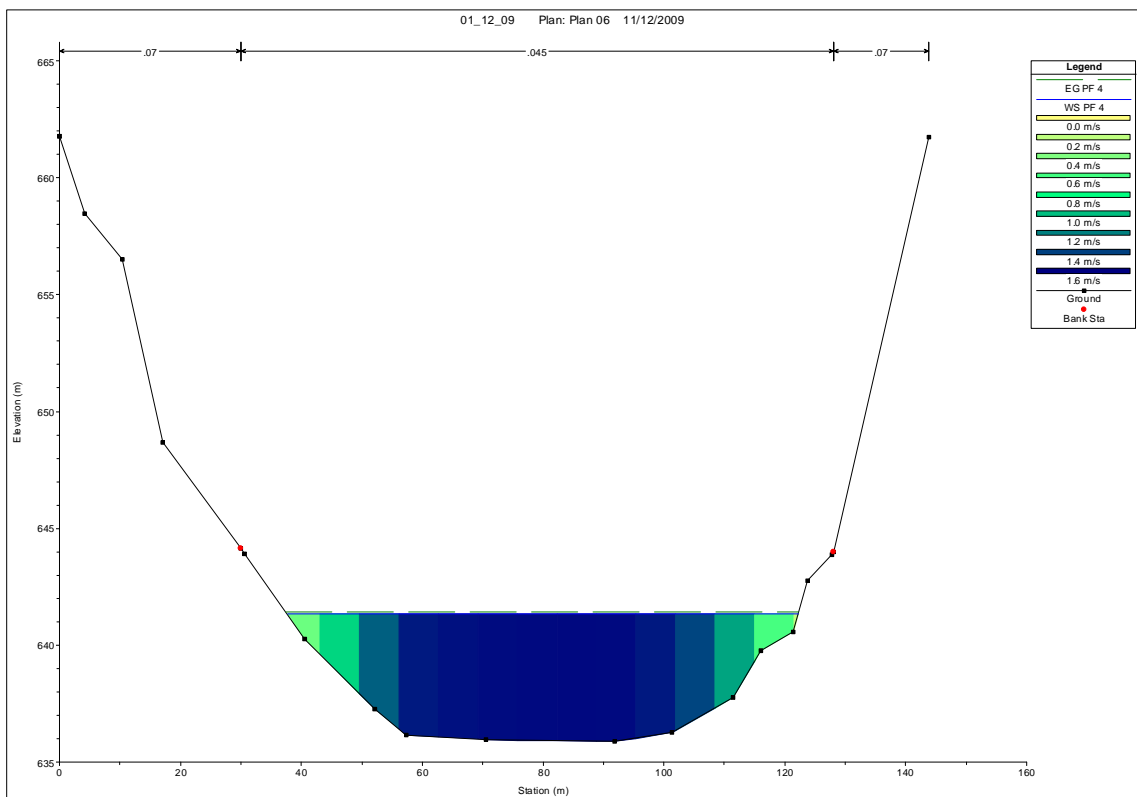


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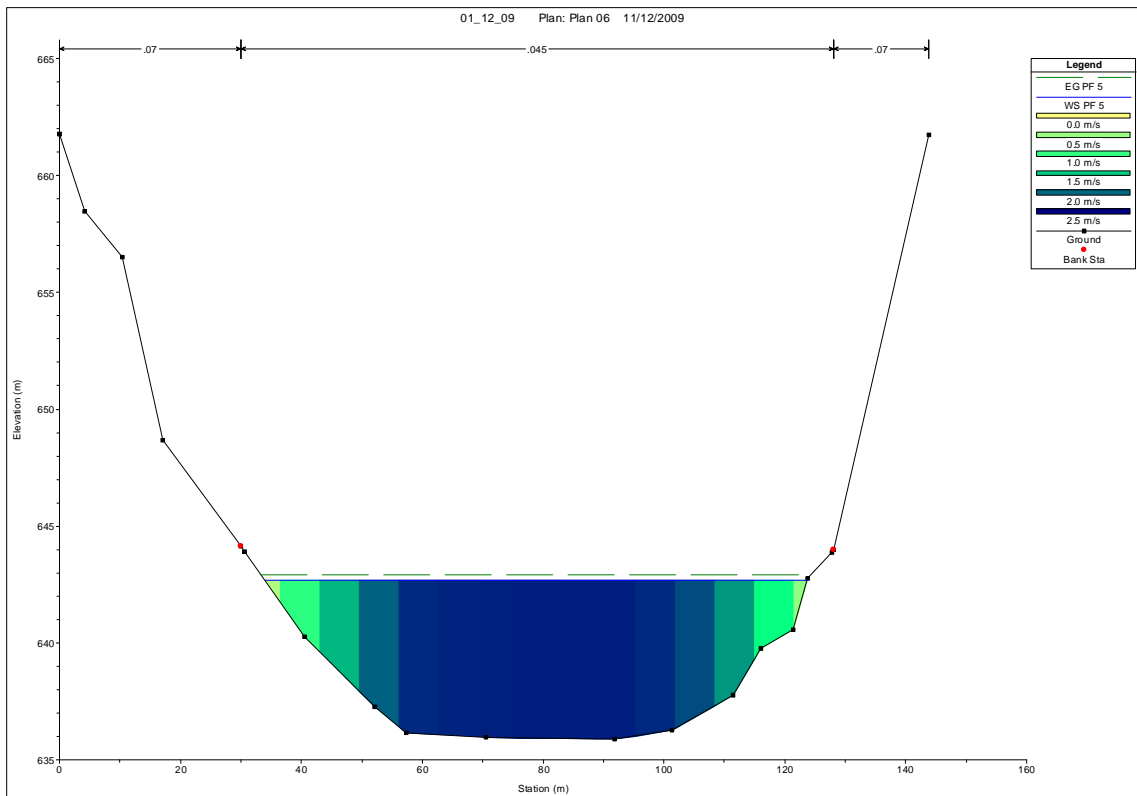


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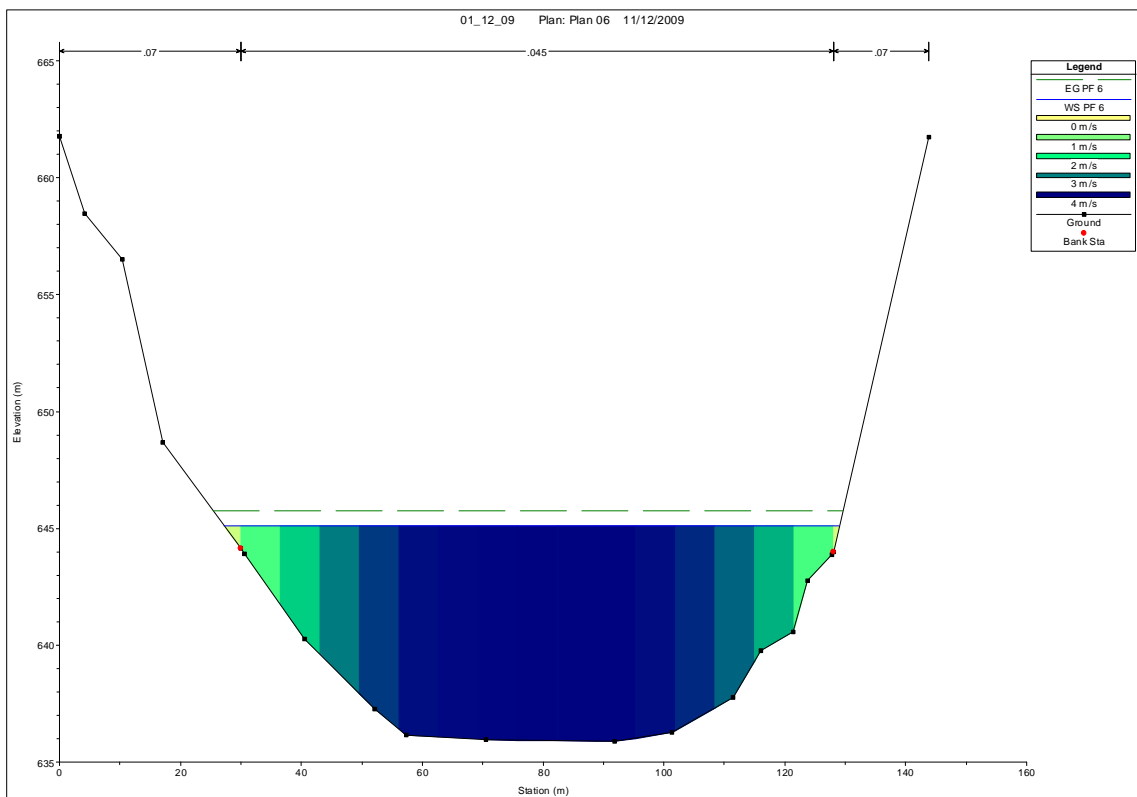


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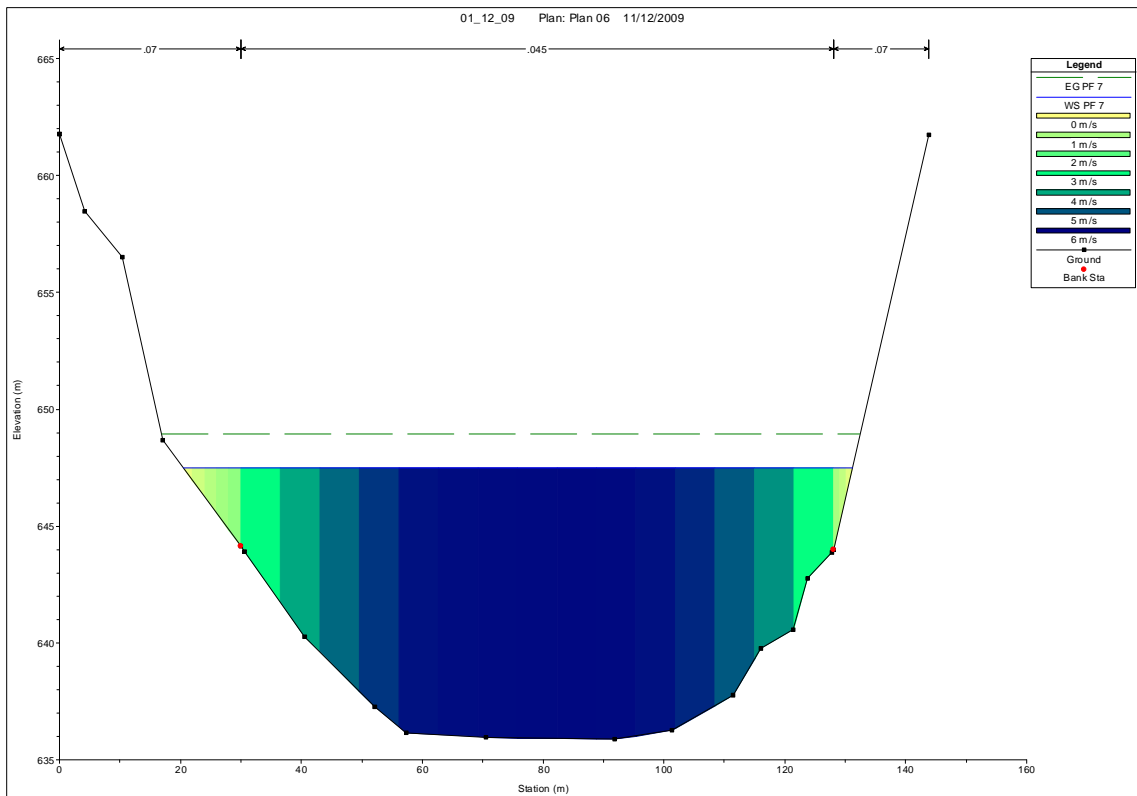


**Seção -1.9, Perfil 5.**

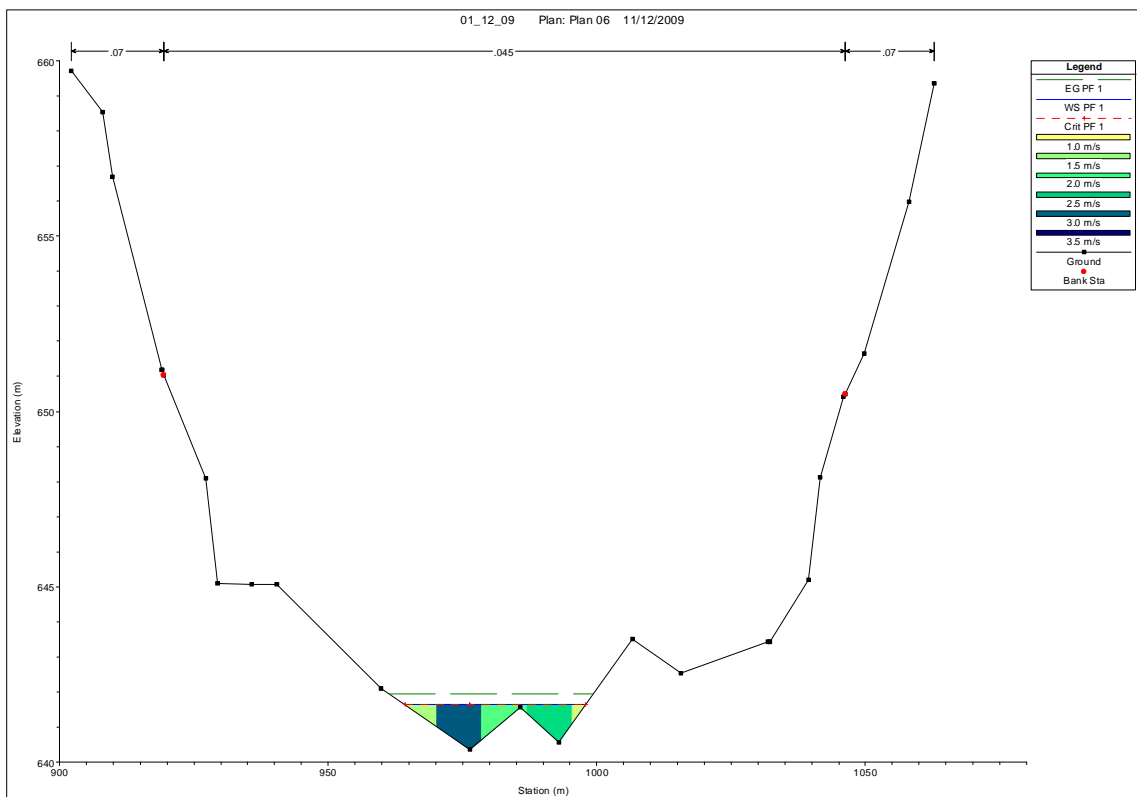


**Seção -1.9, Perfil 6.**



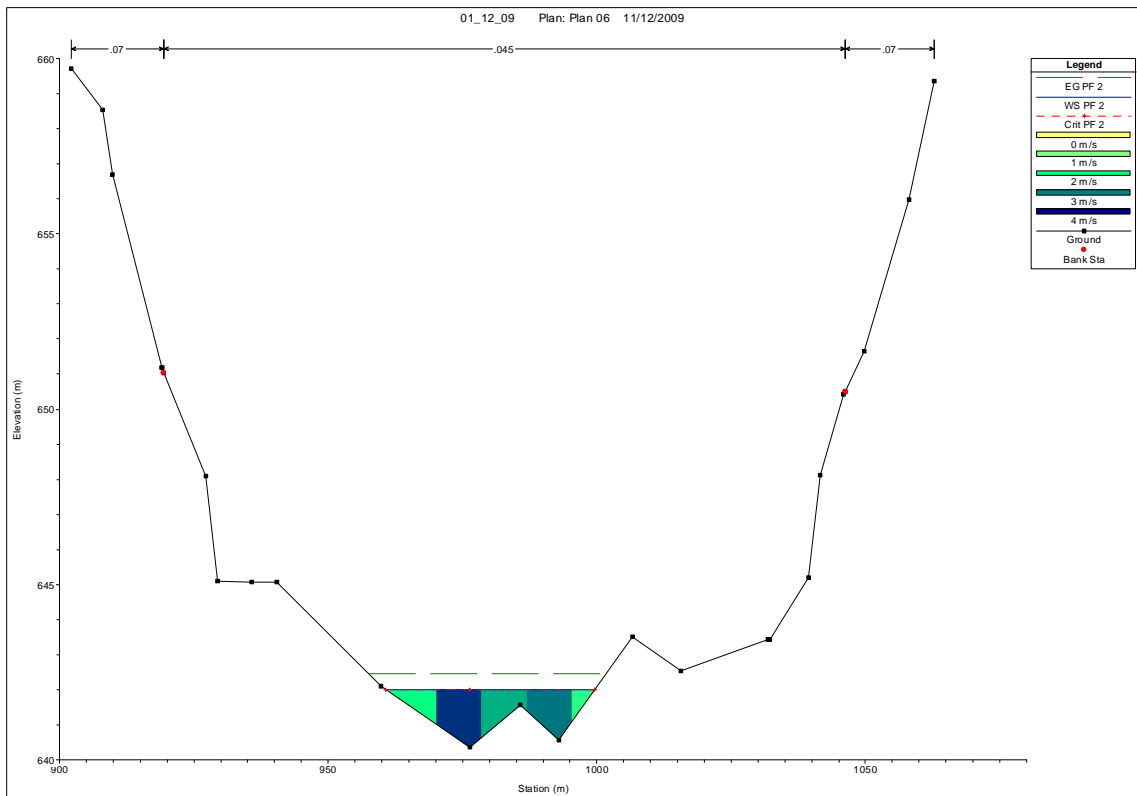


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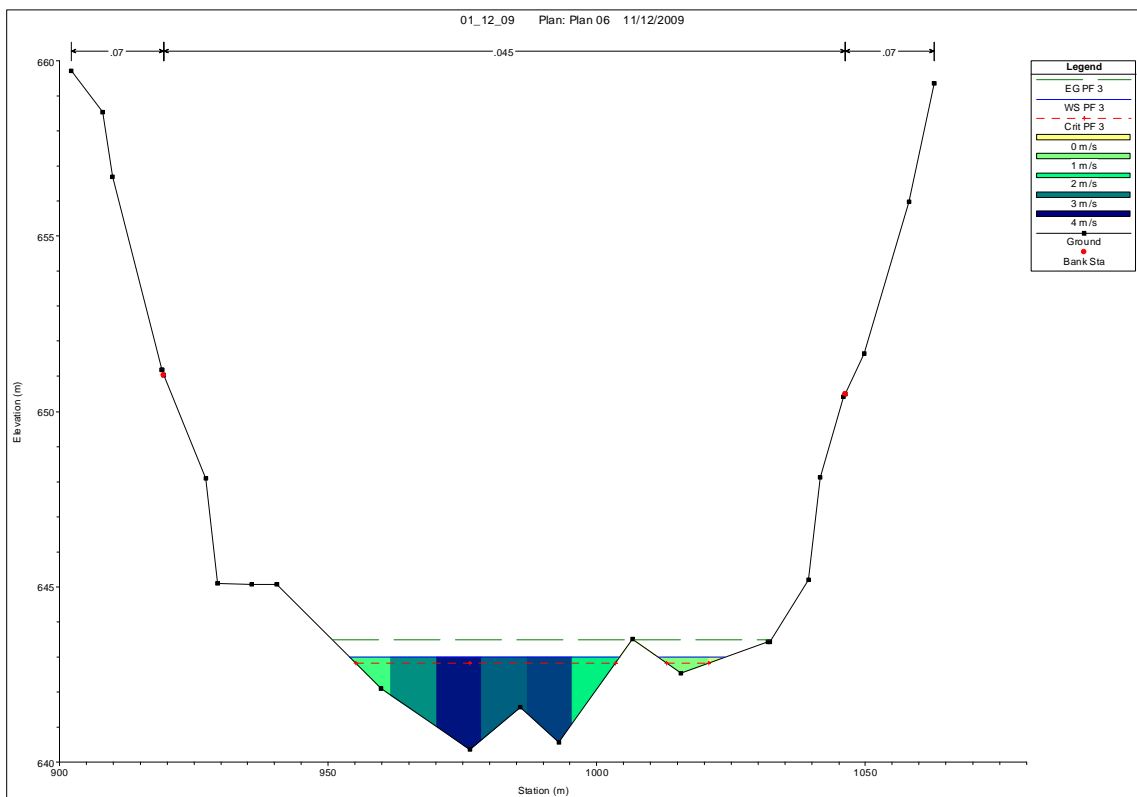


**Seção 0.0, Perfil 1.**



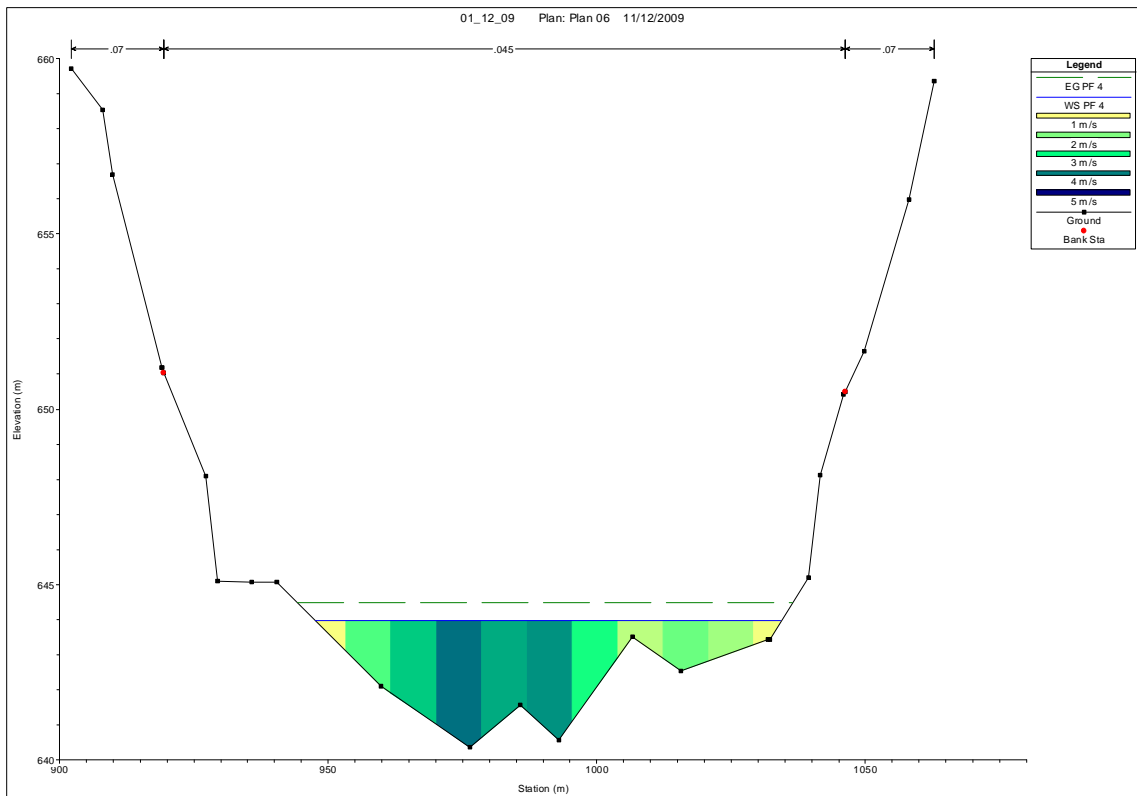


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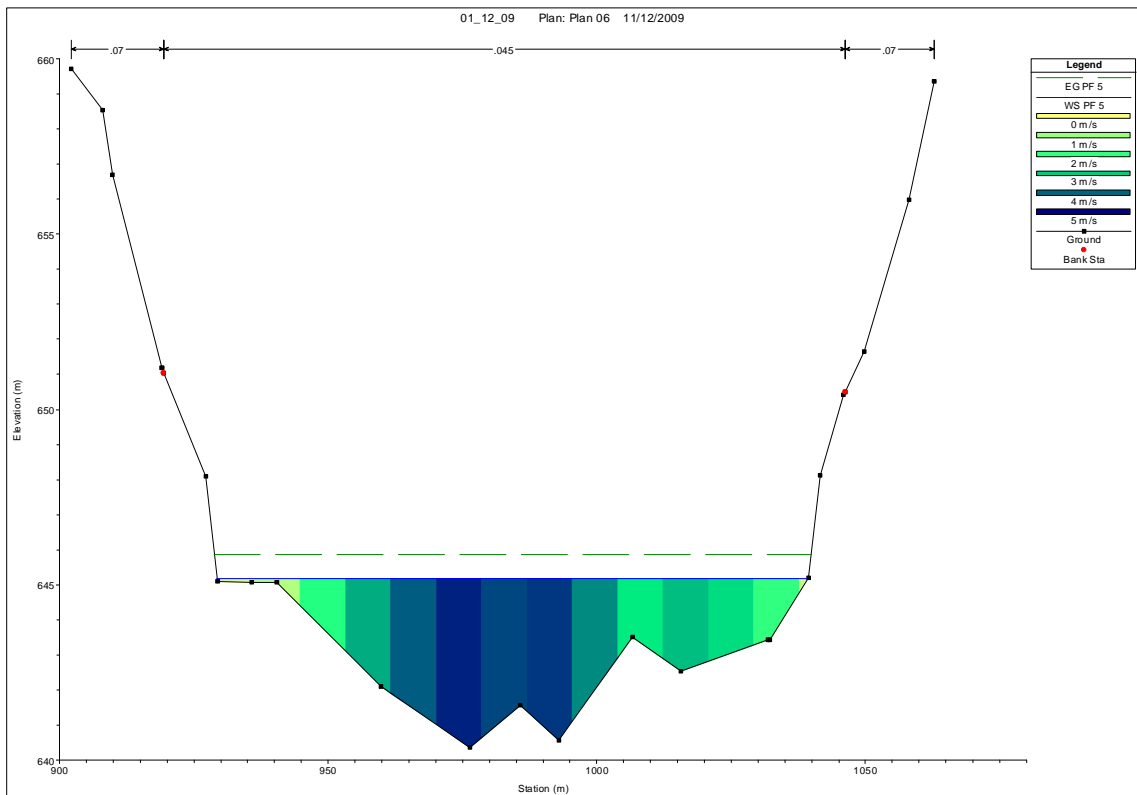


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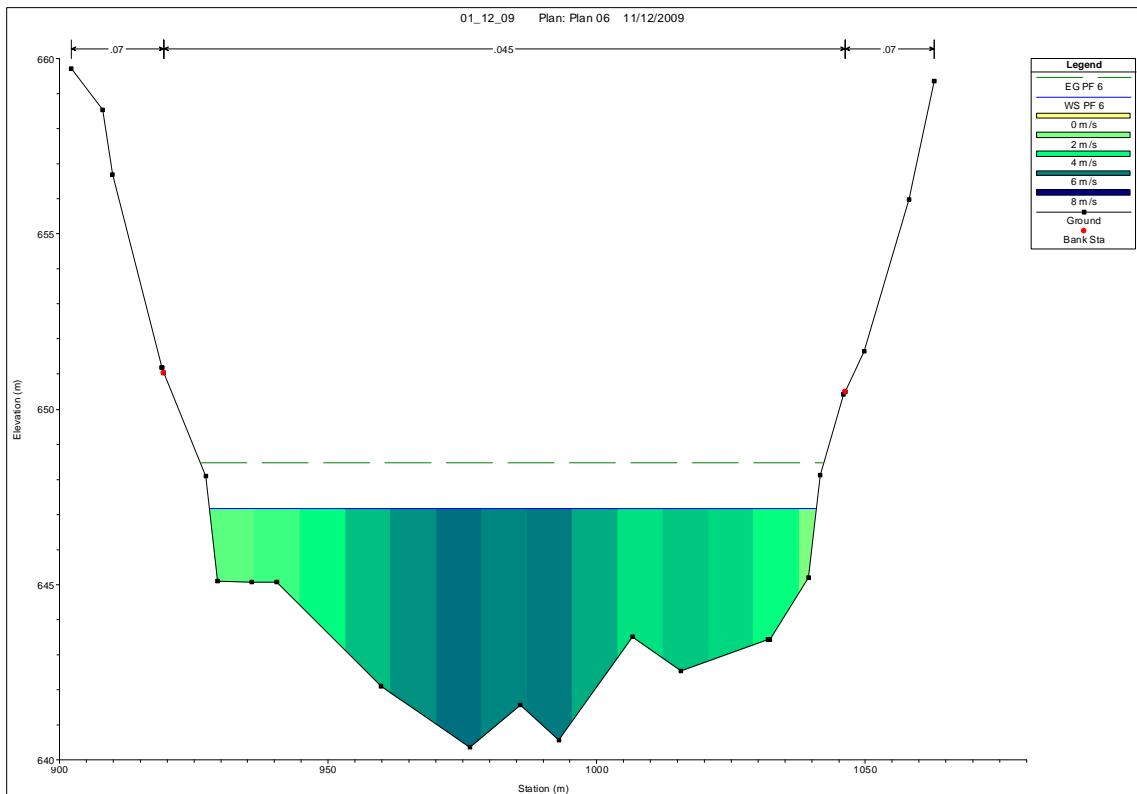


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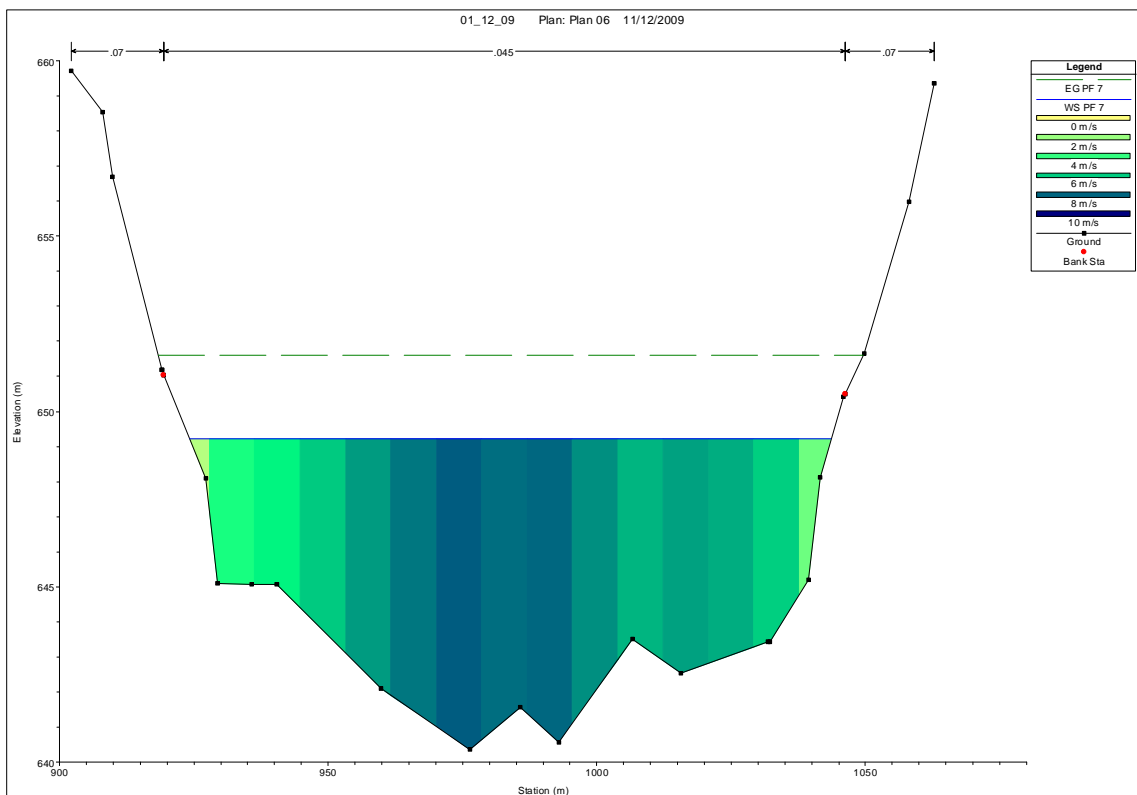


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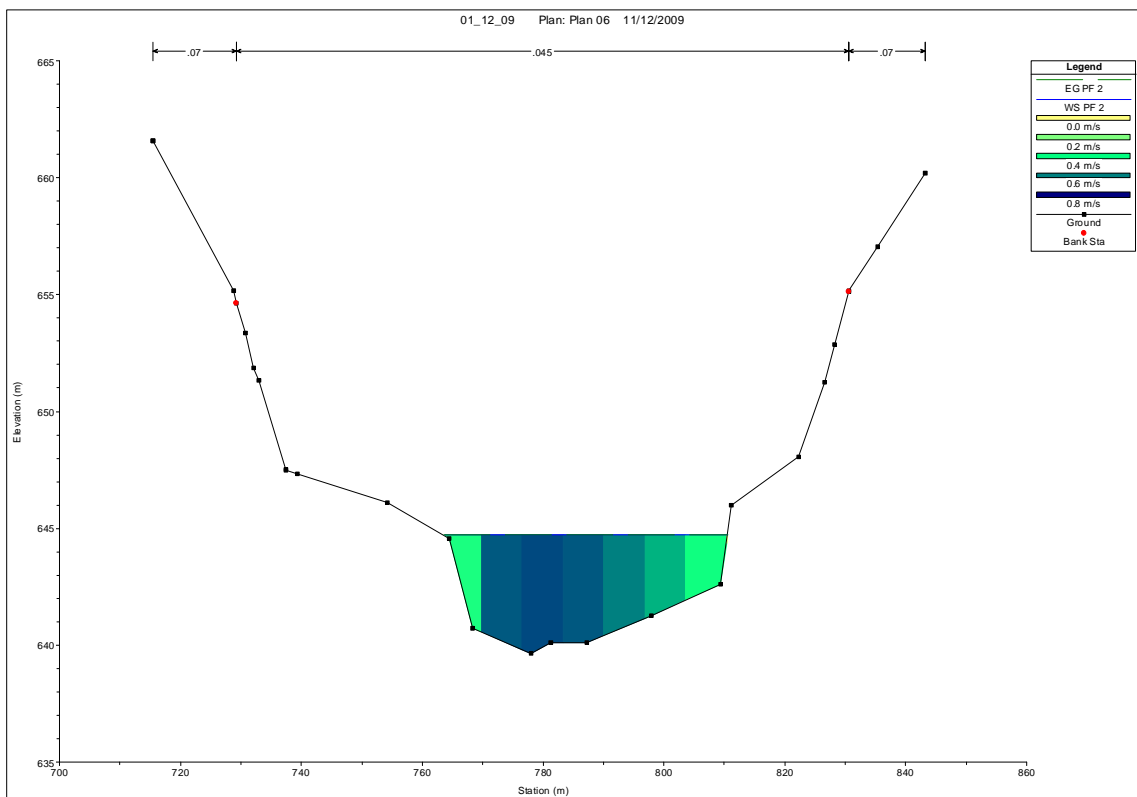
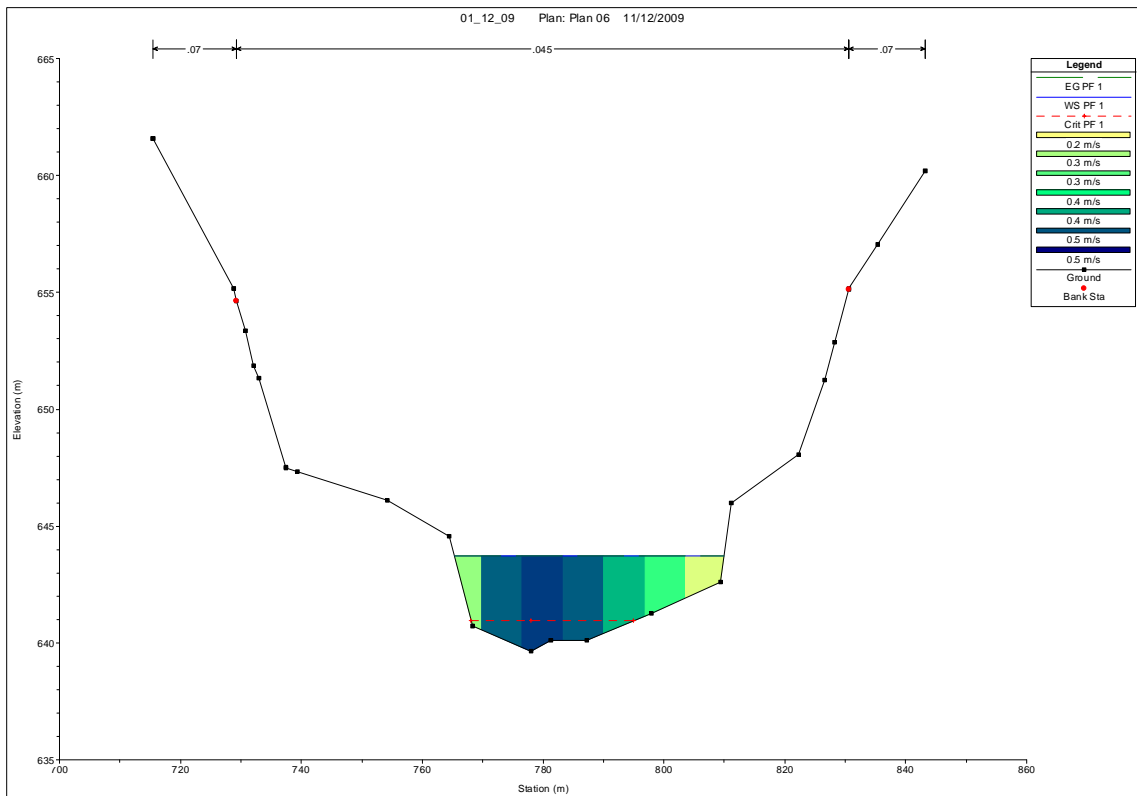


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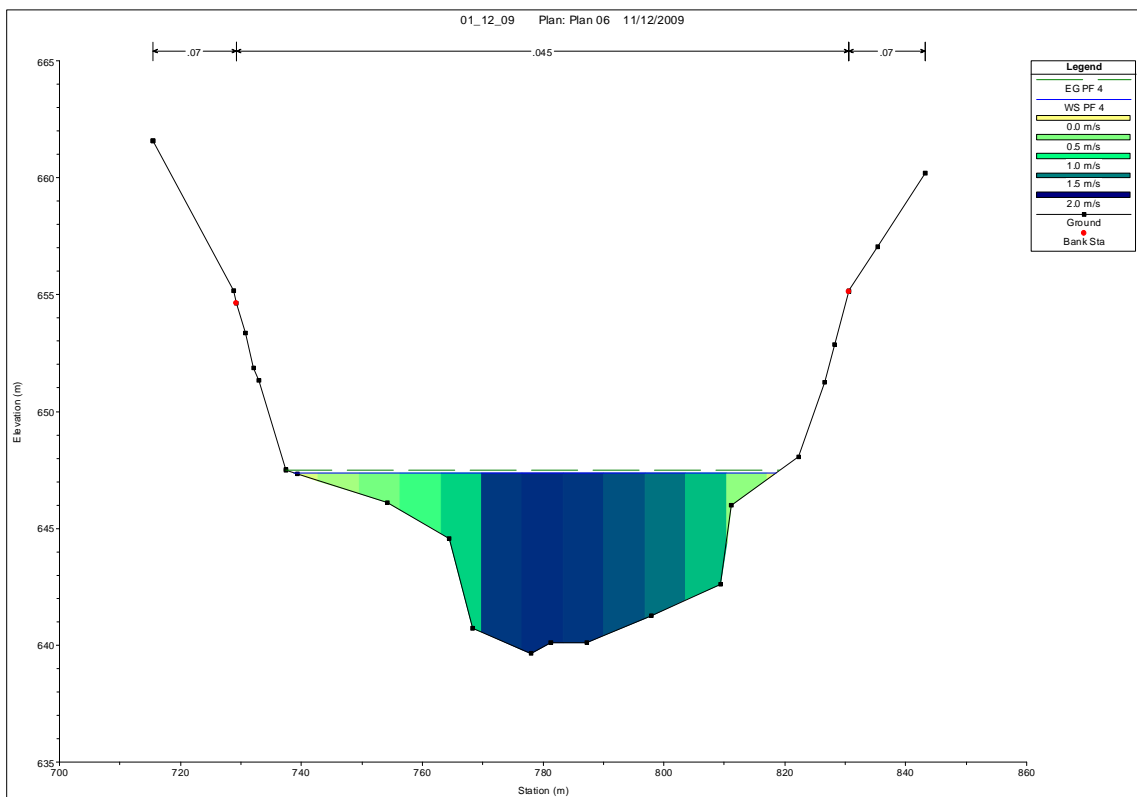
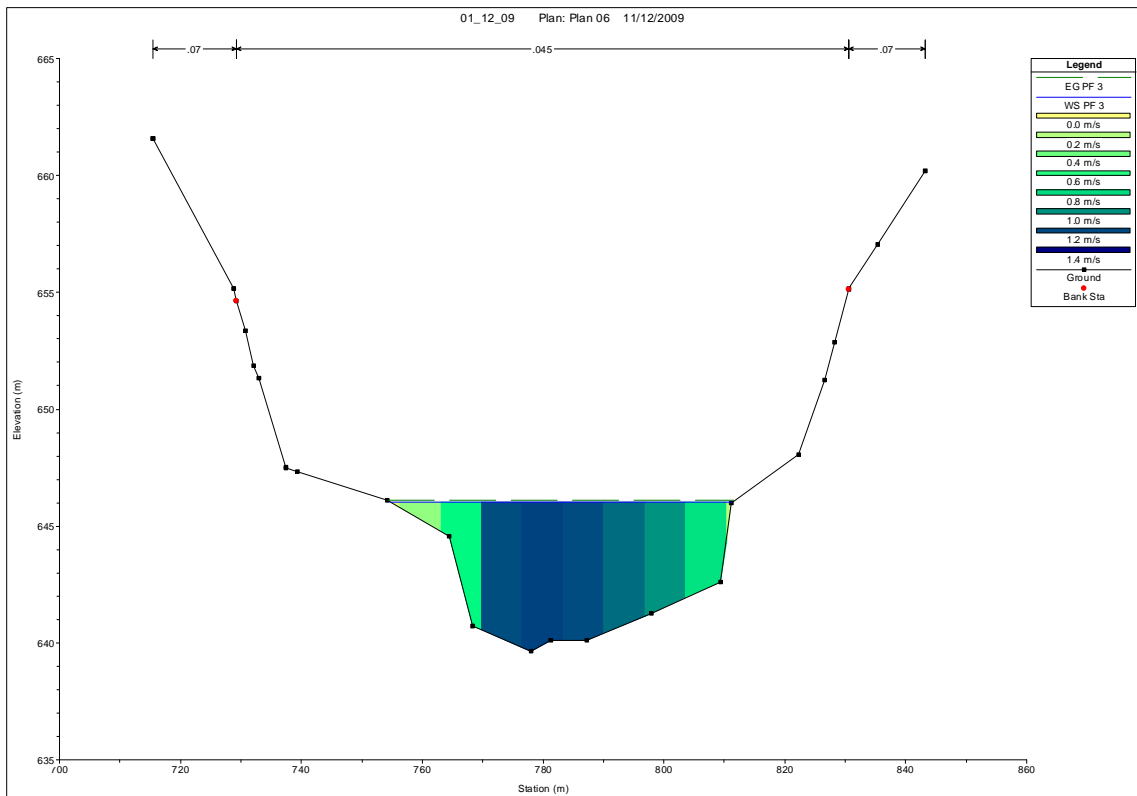


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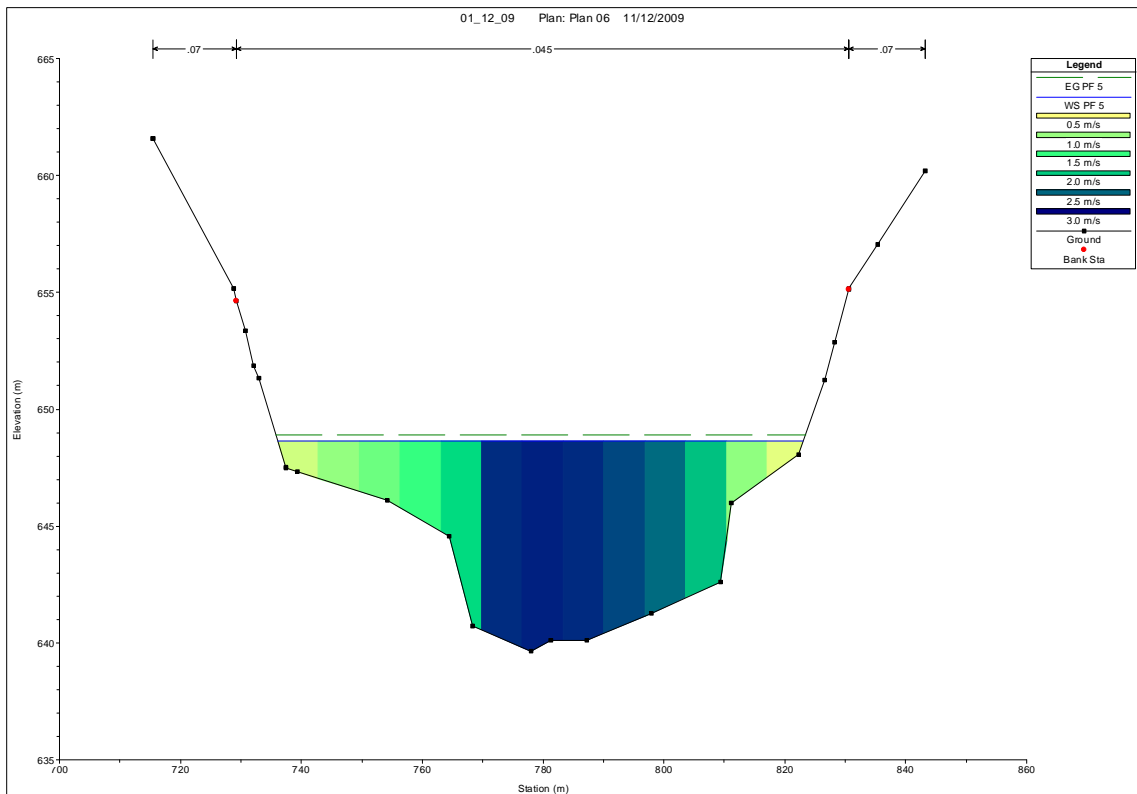




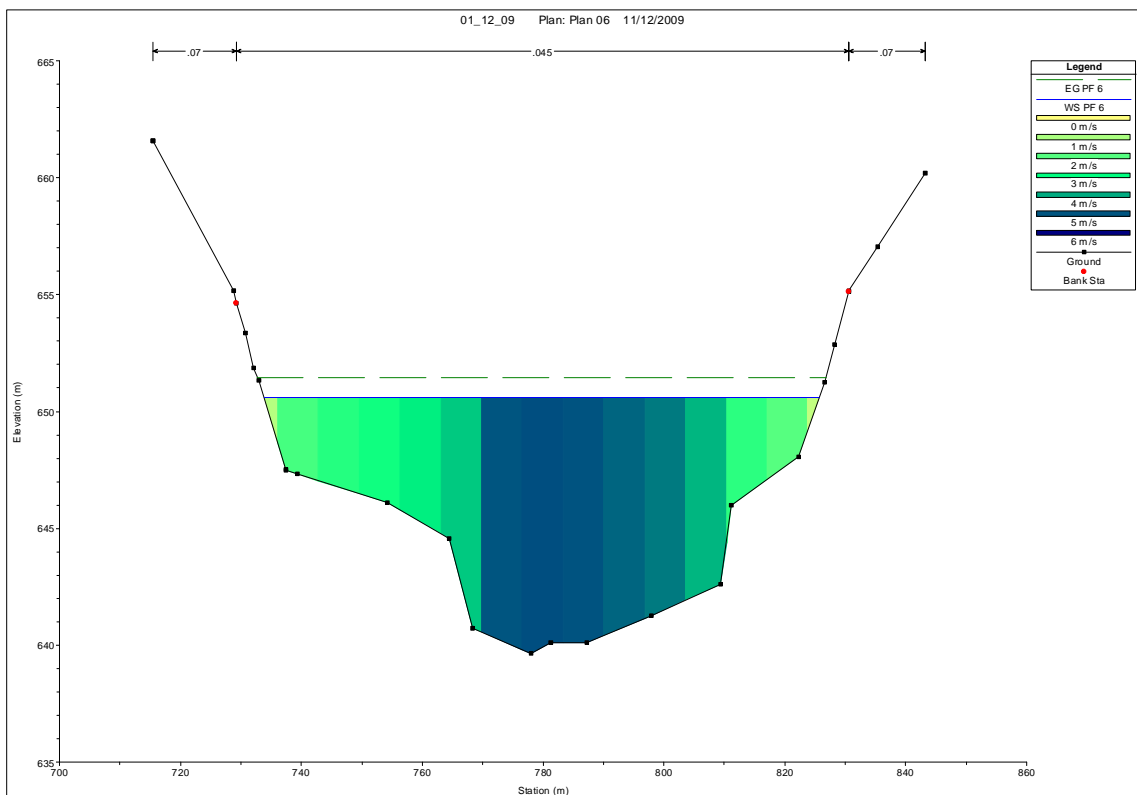






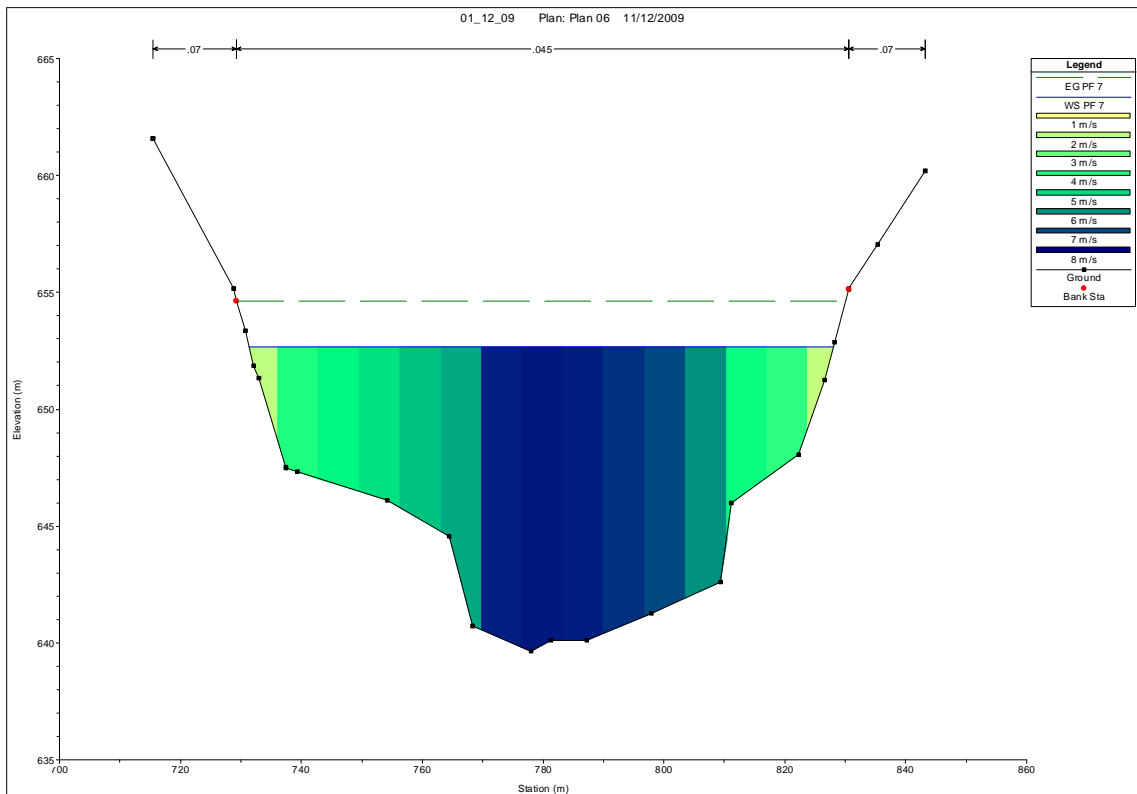


**Seção 1.8, Perfil 5.**

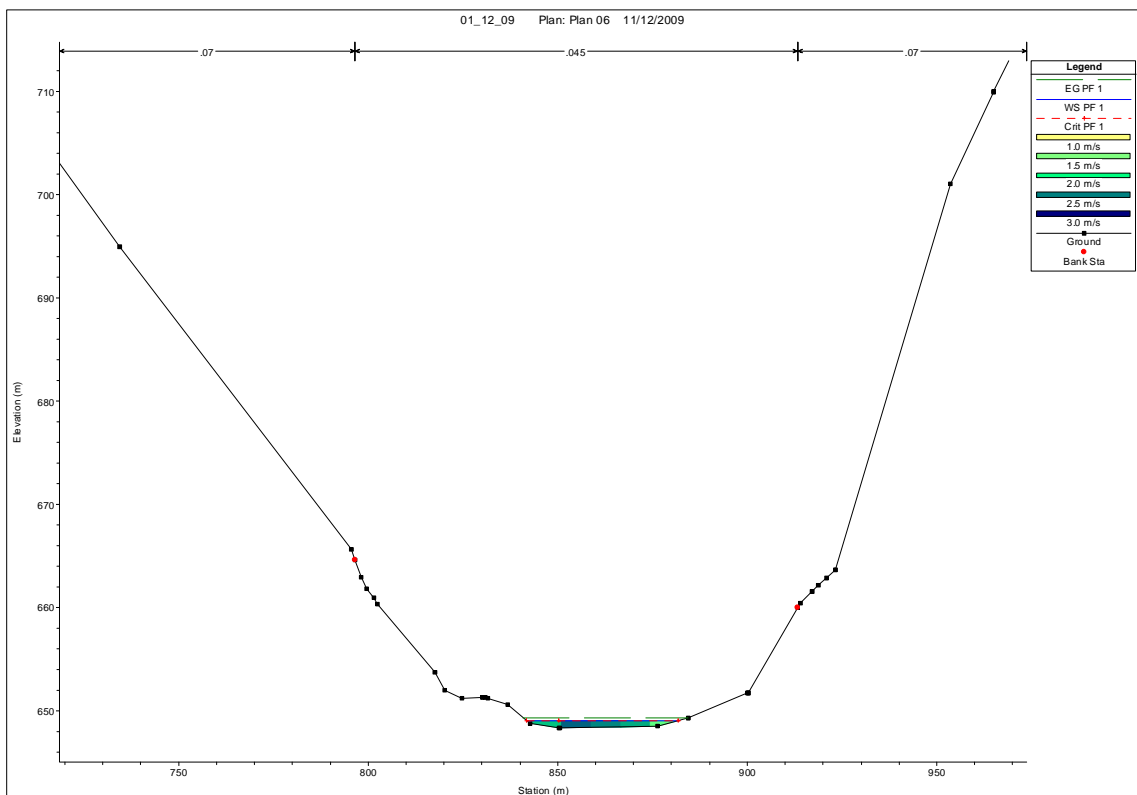


**Seção 1.8, Perfil 6.**

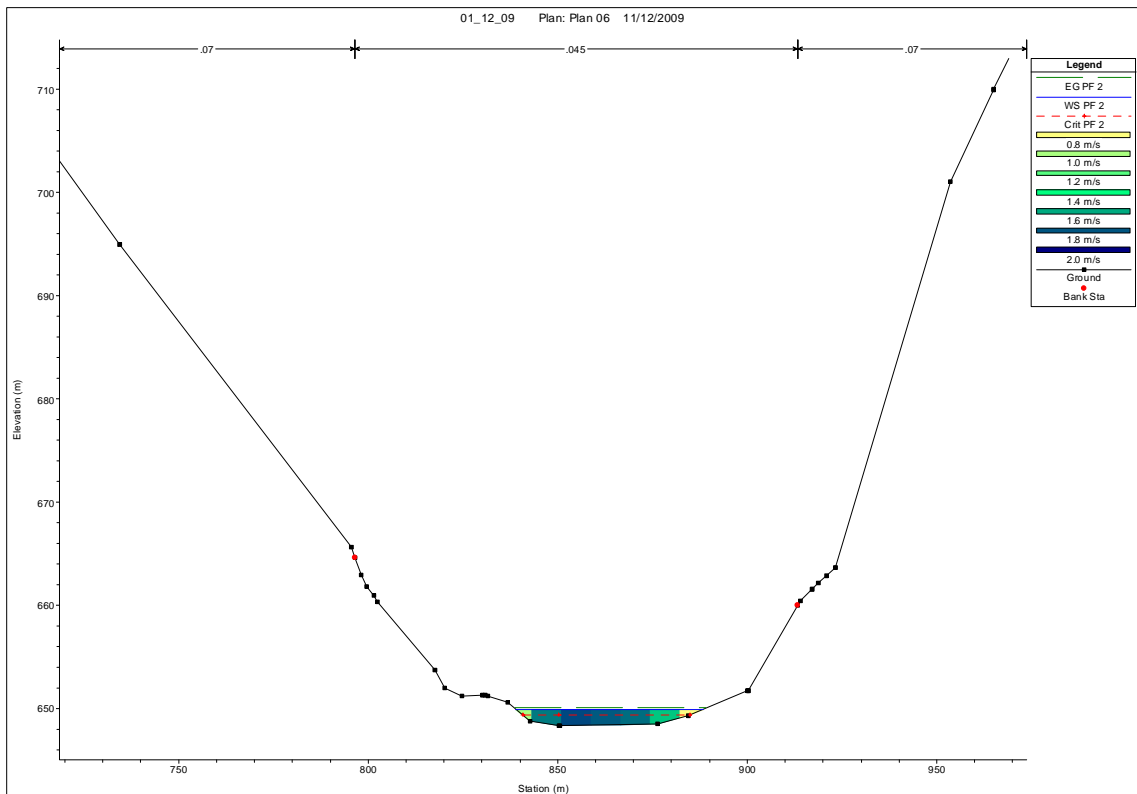




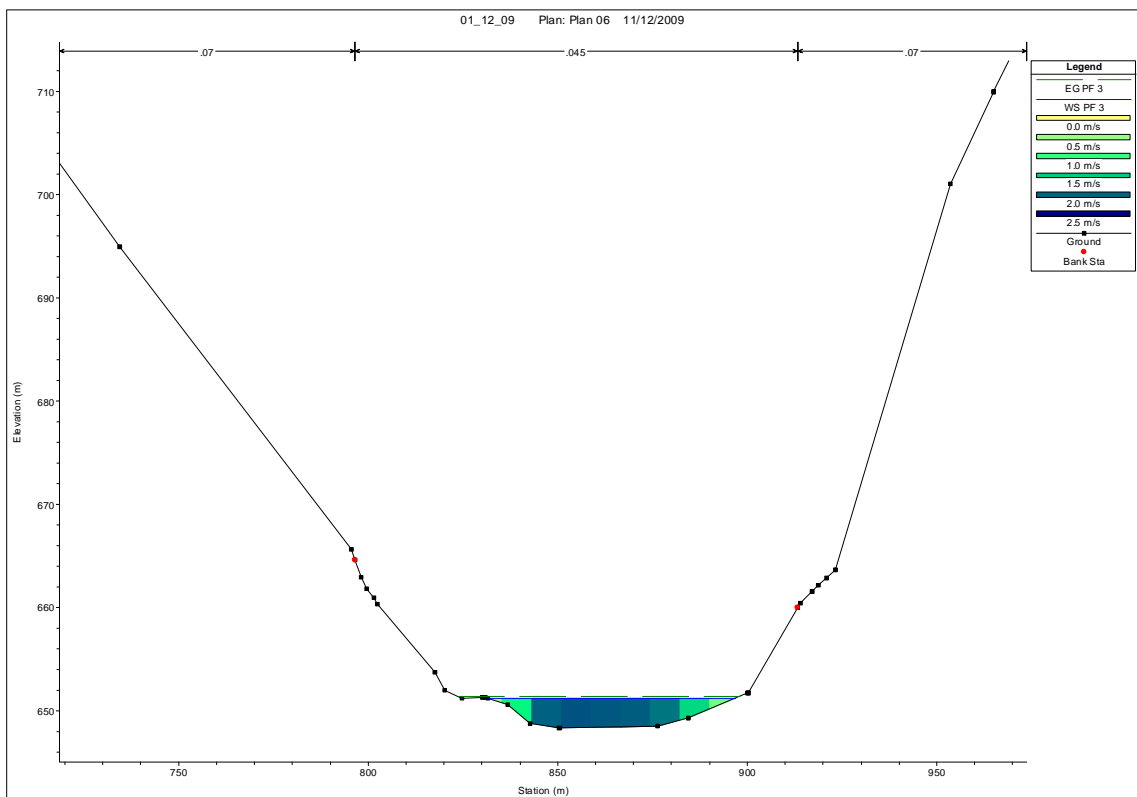
**Seção 1.8, Perfil 7.**



**Seção 6.8, Perfil 1.**

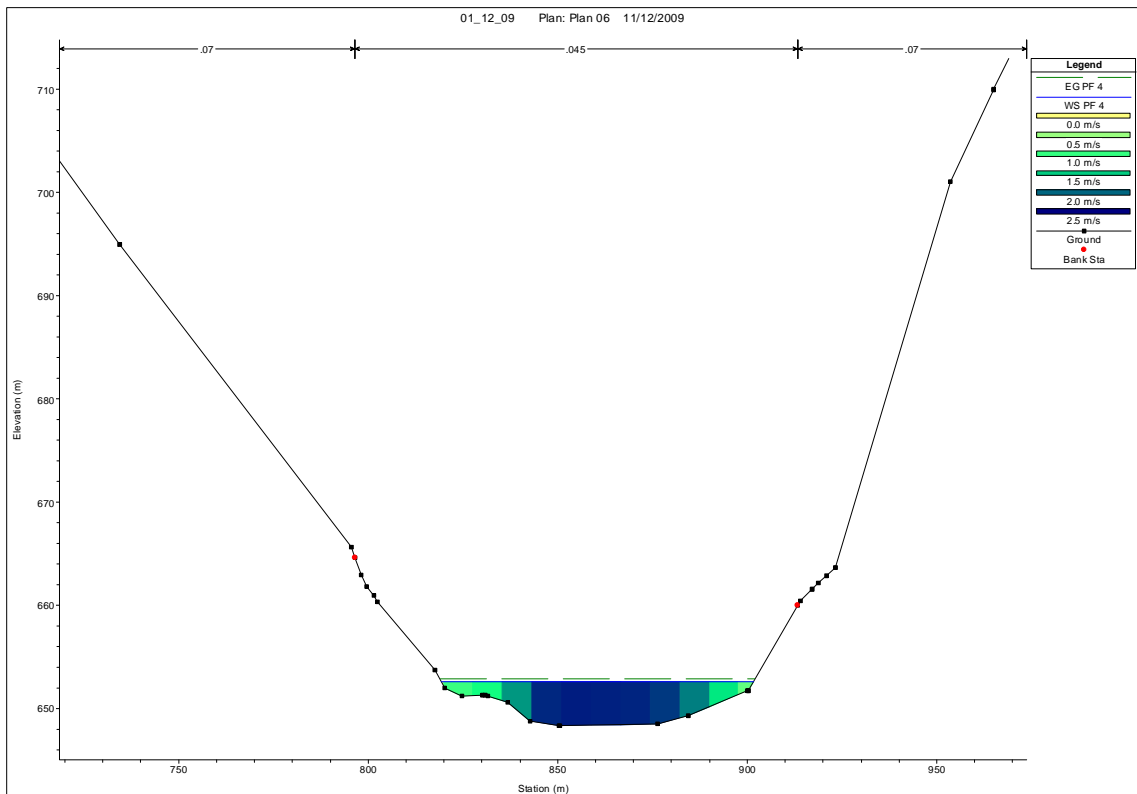


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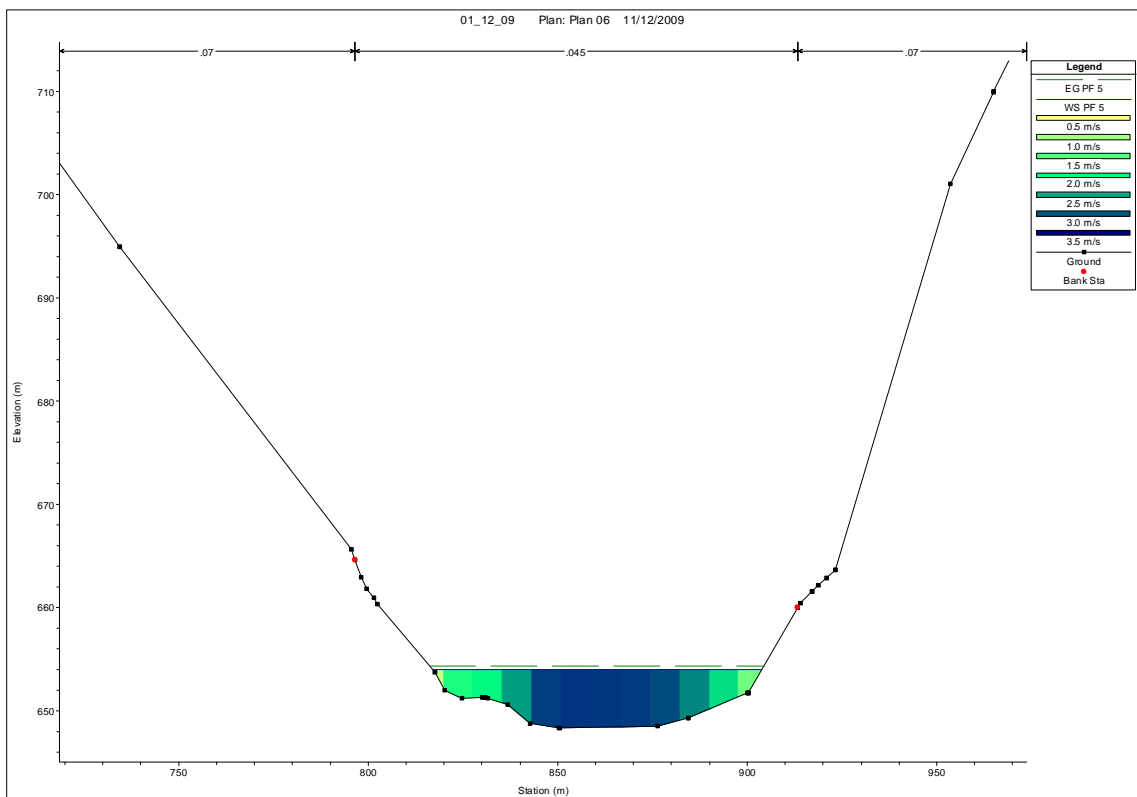


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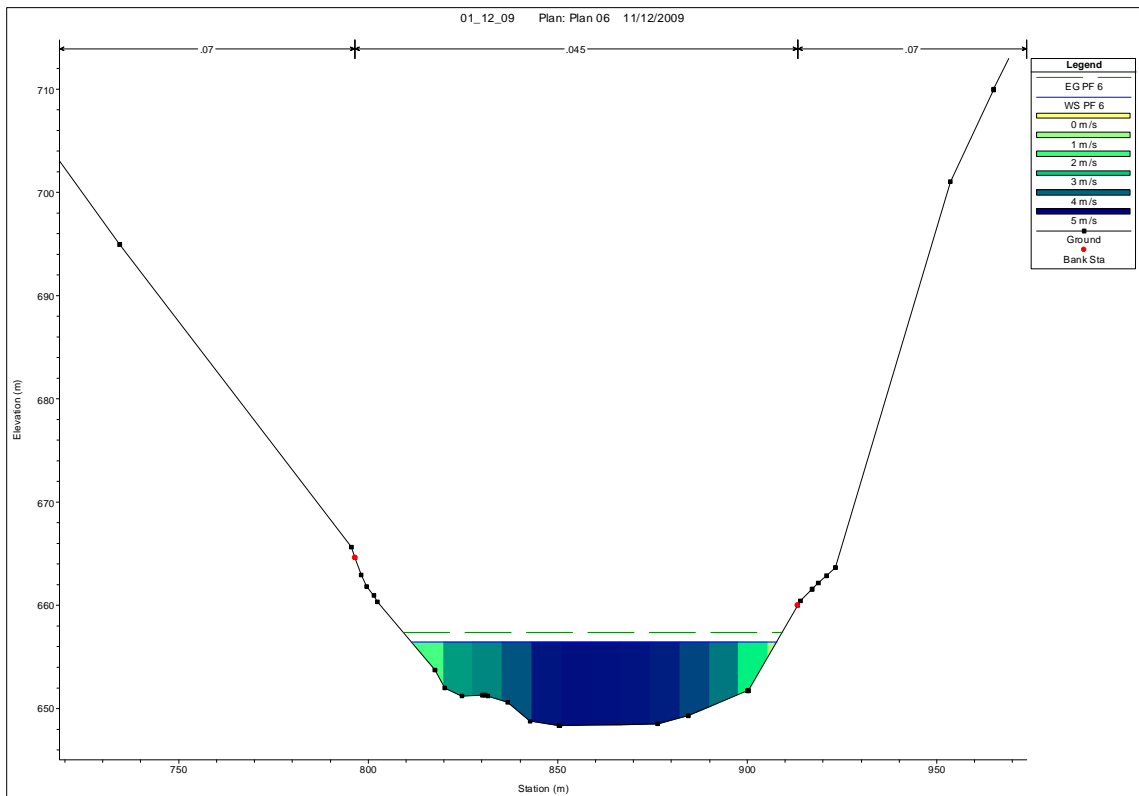




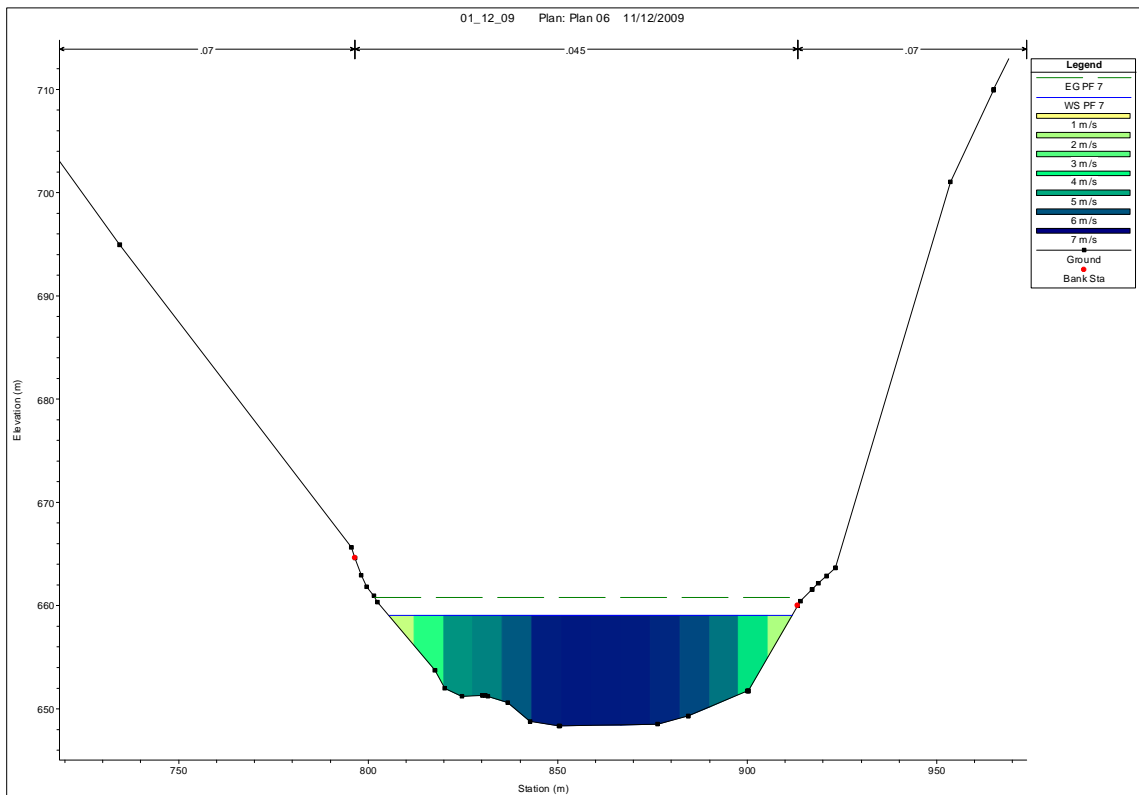
**Seção 6.8, Perfil 4.**



**Seção 6.8, Perfil 5.**

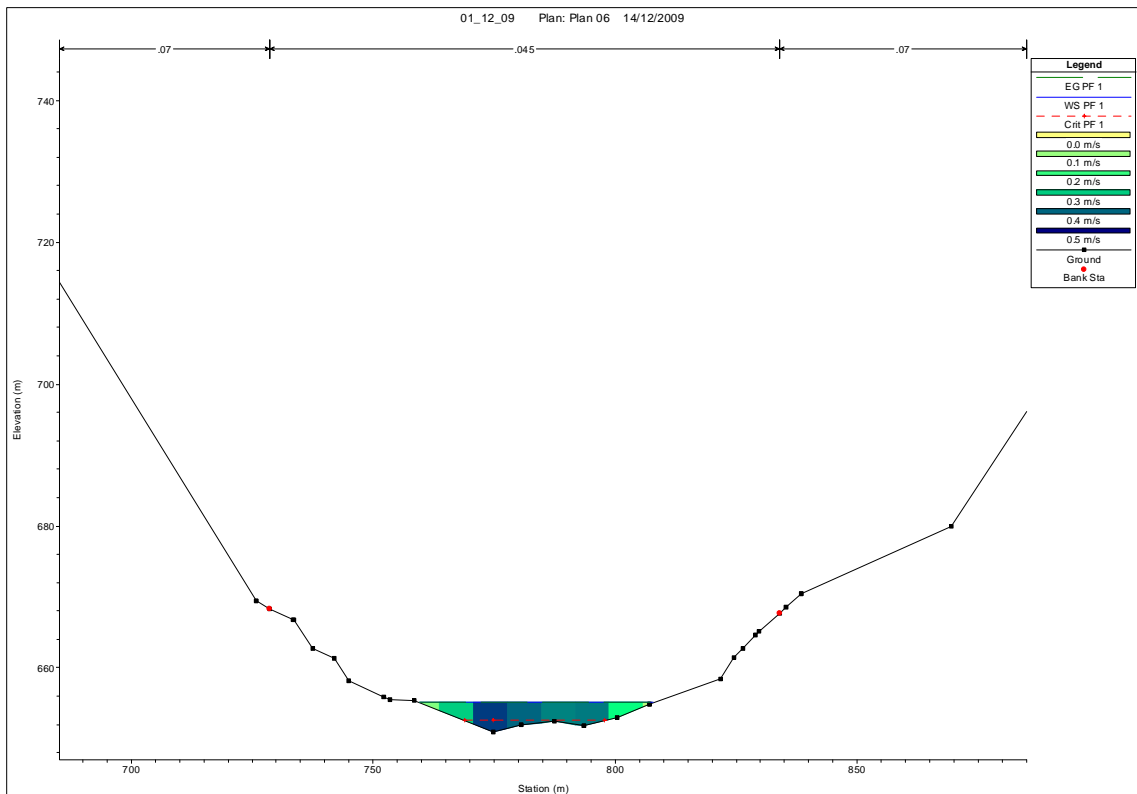


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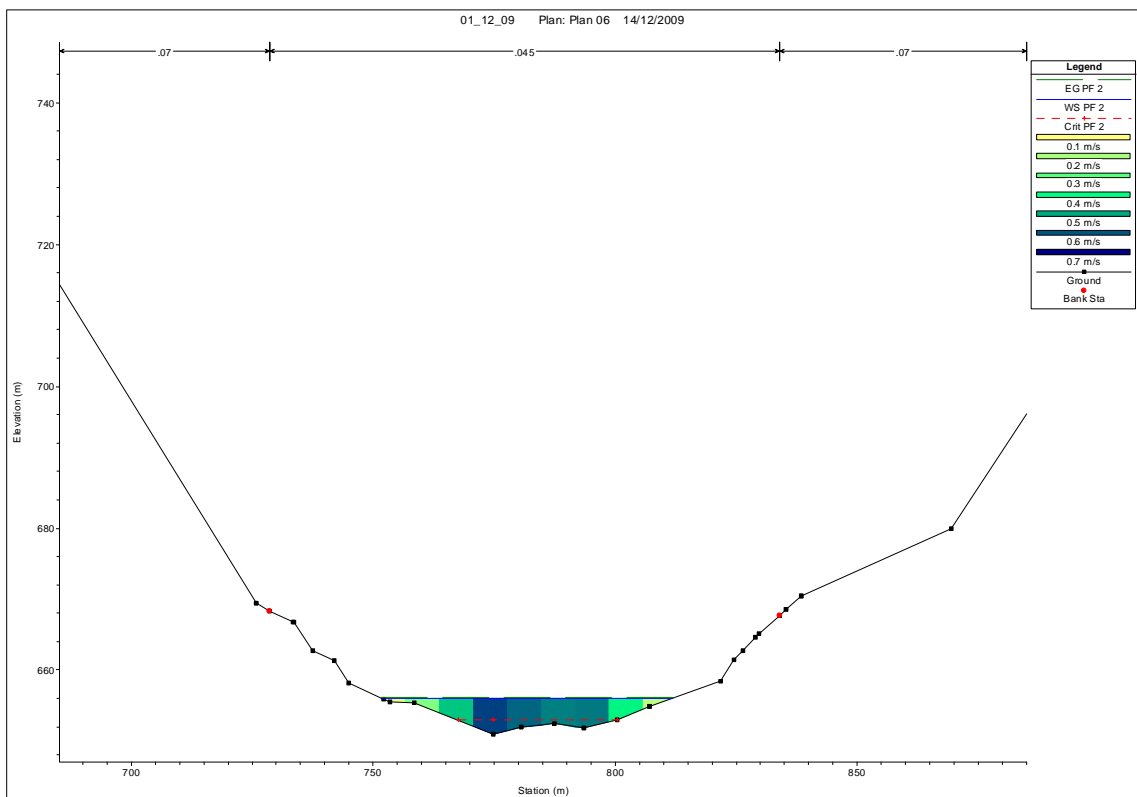


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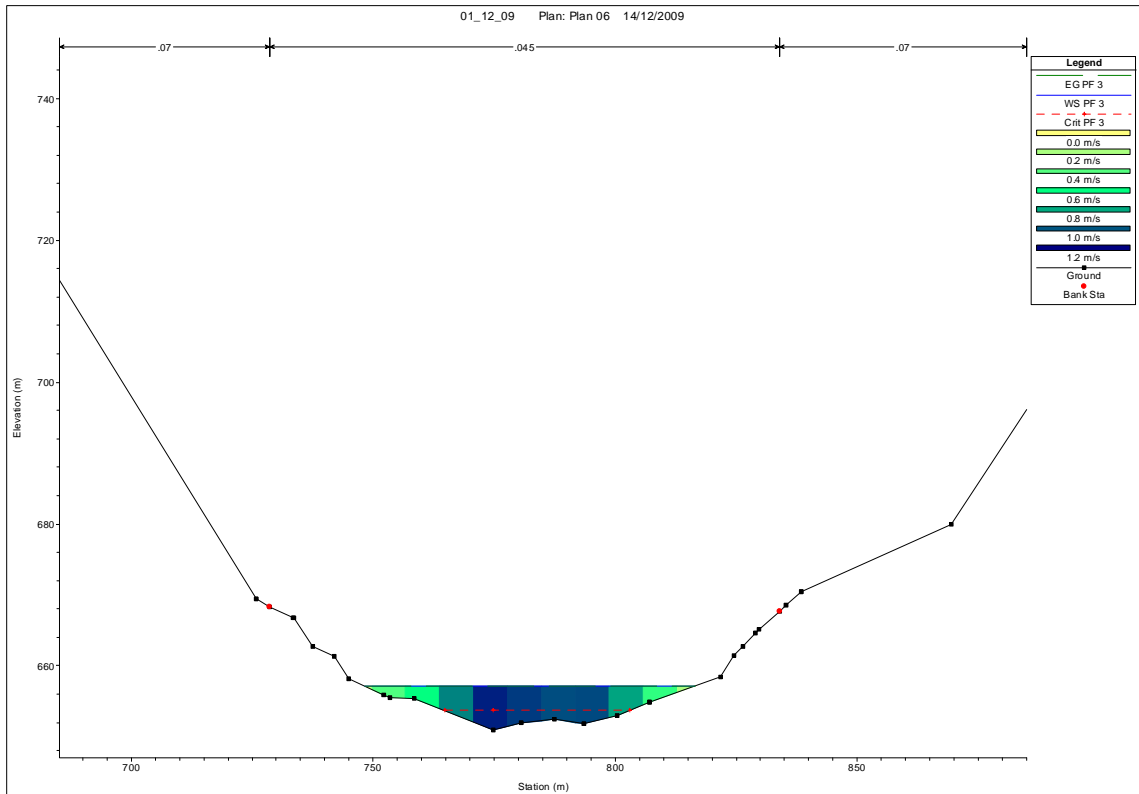




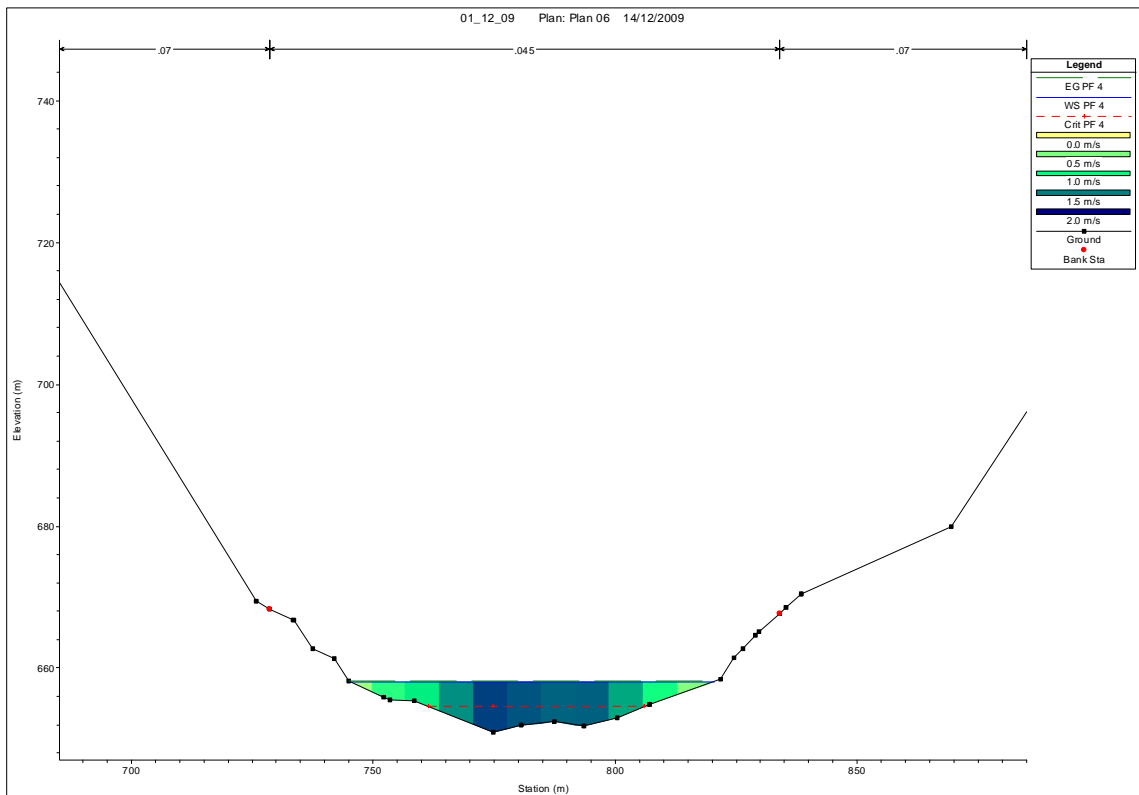
**Seção 11.8, Perfil 1.**



**Seção 11.8, Perfil 2.**

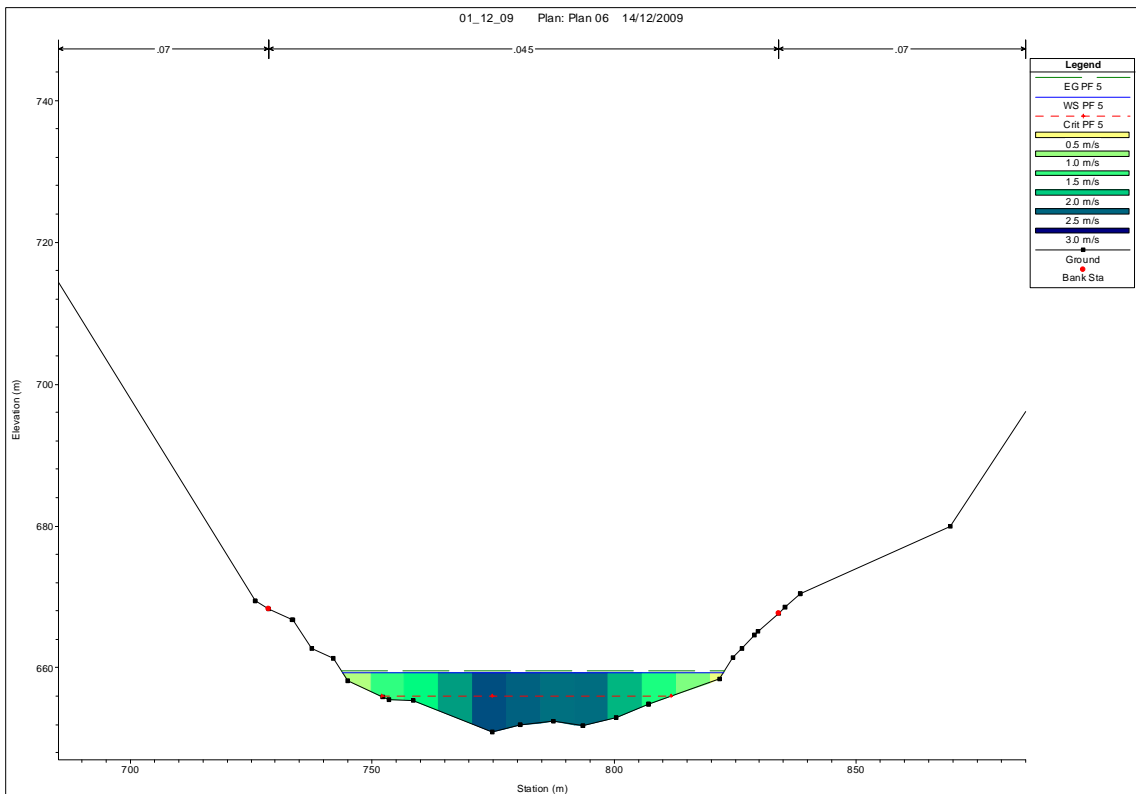


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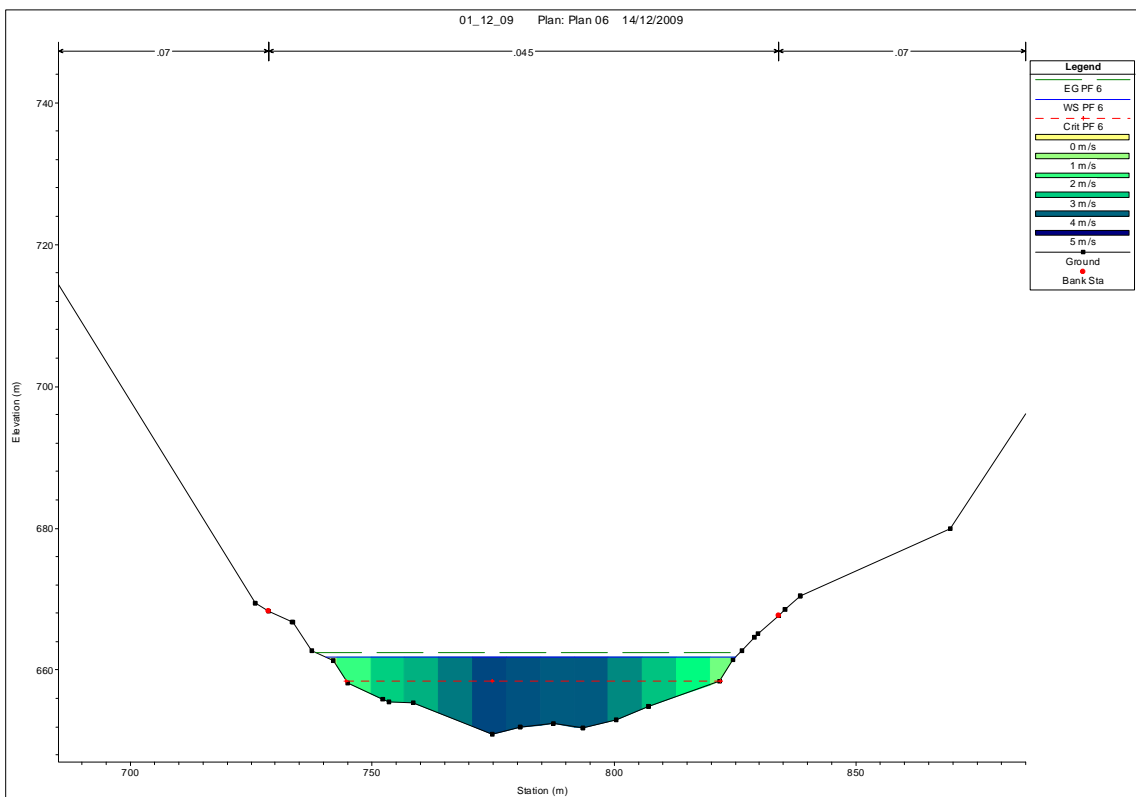


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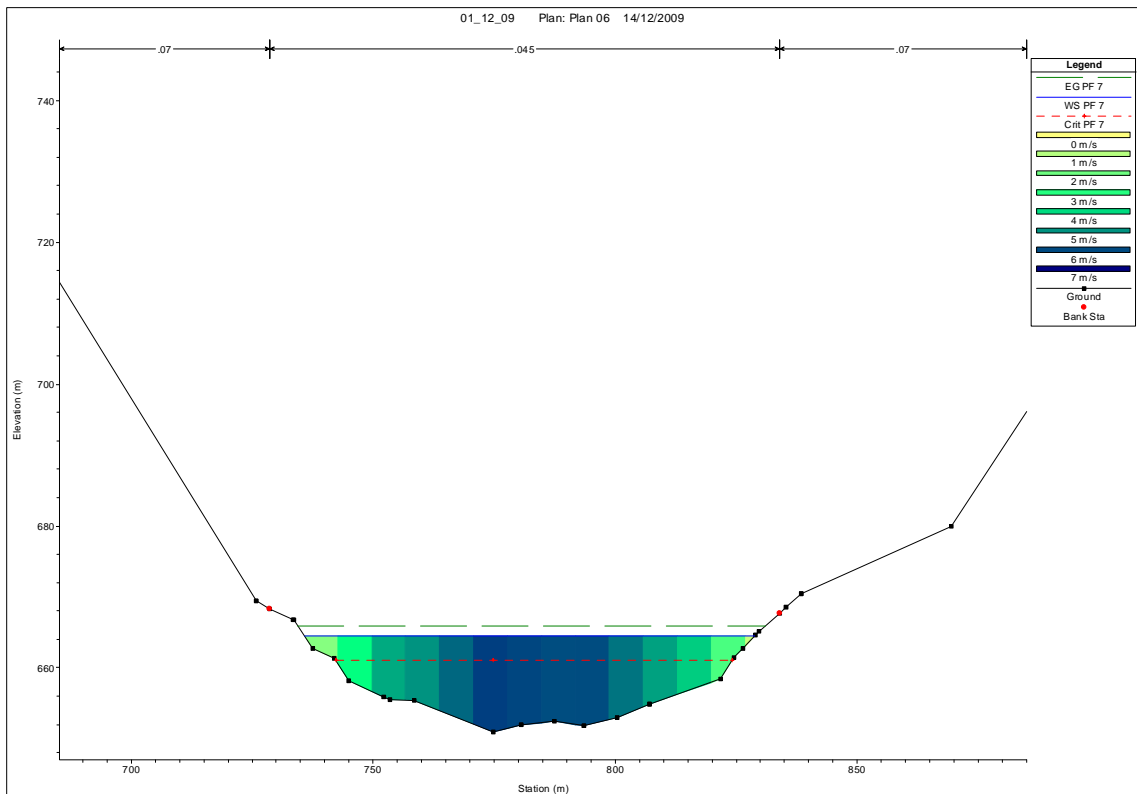




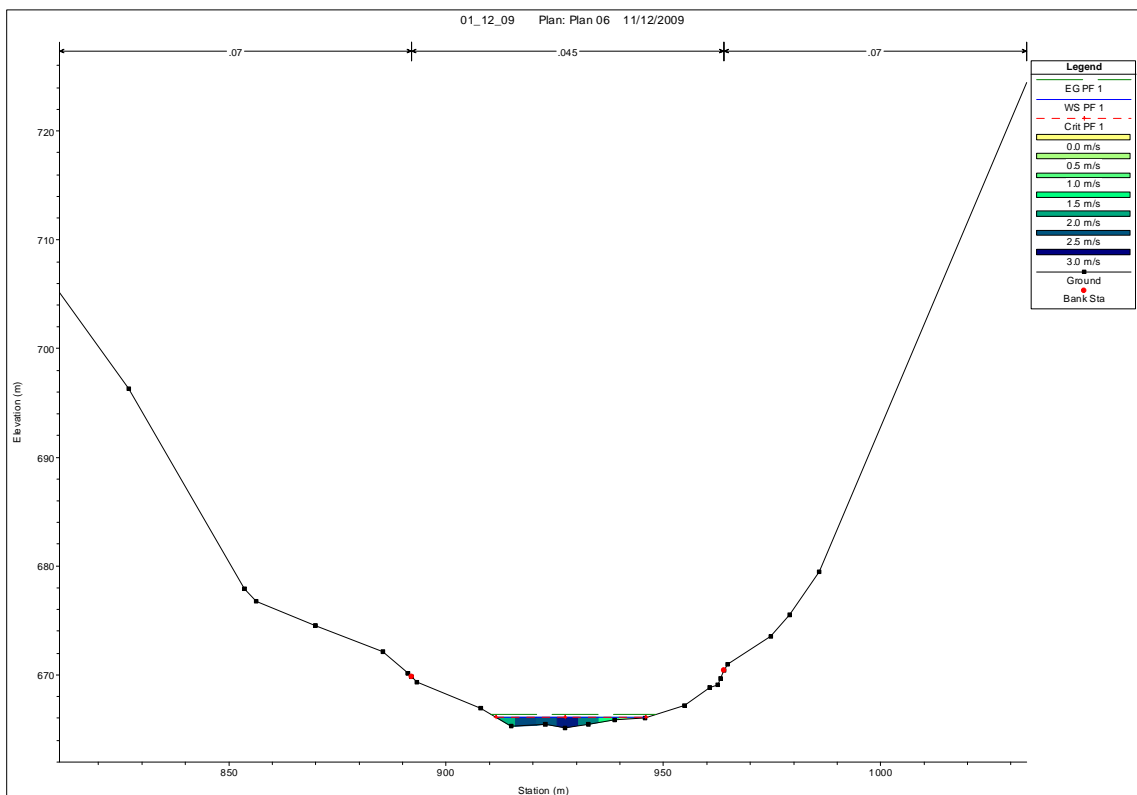
**Seção 11.8, Perfil 5.**



**Seção 11.8, Perfil 6.**

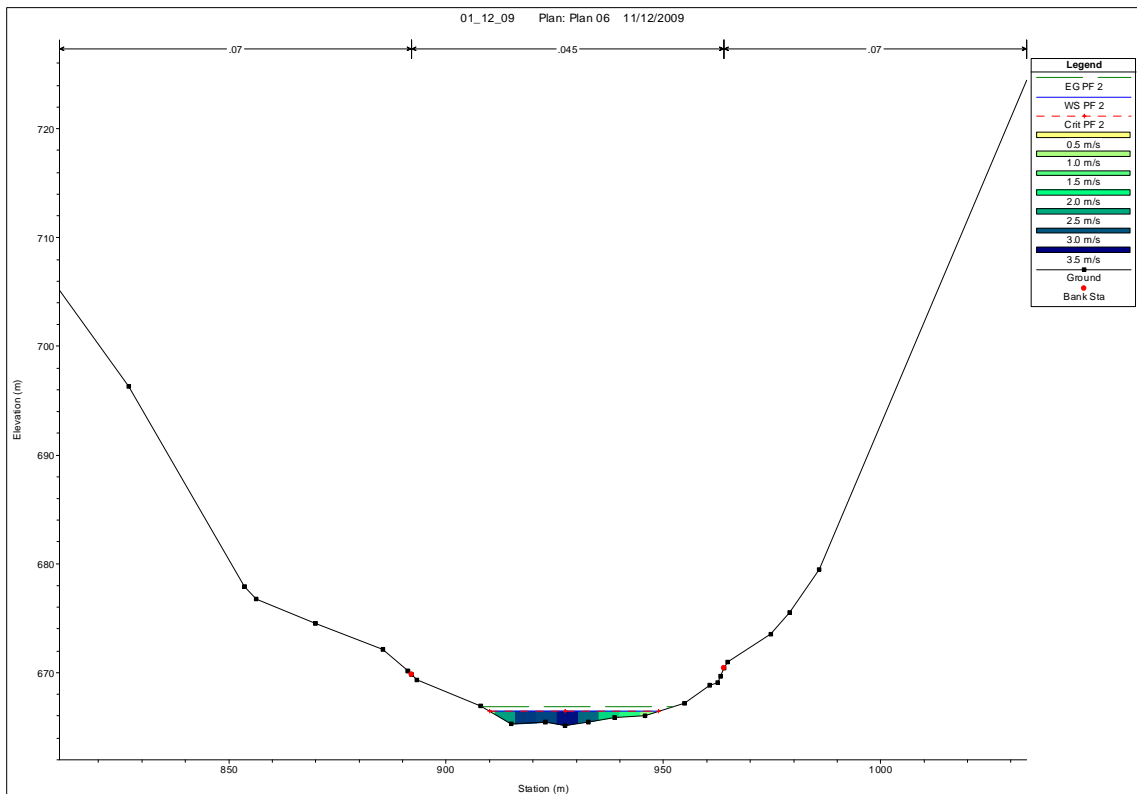


**Seção 11.8, Perfil 7.**

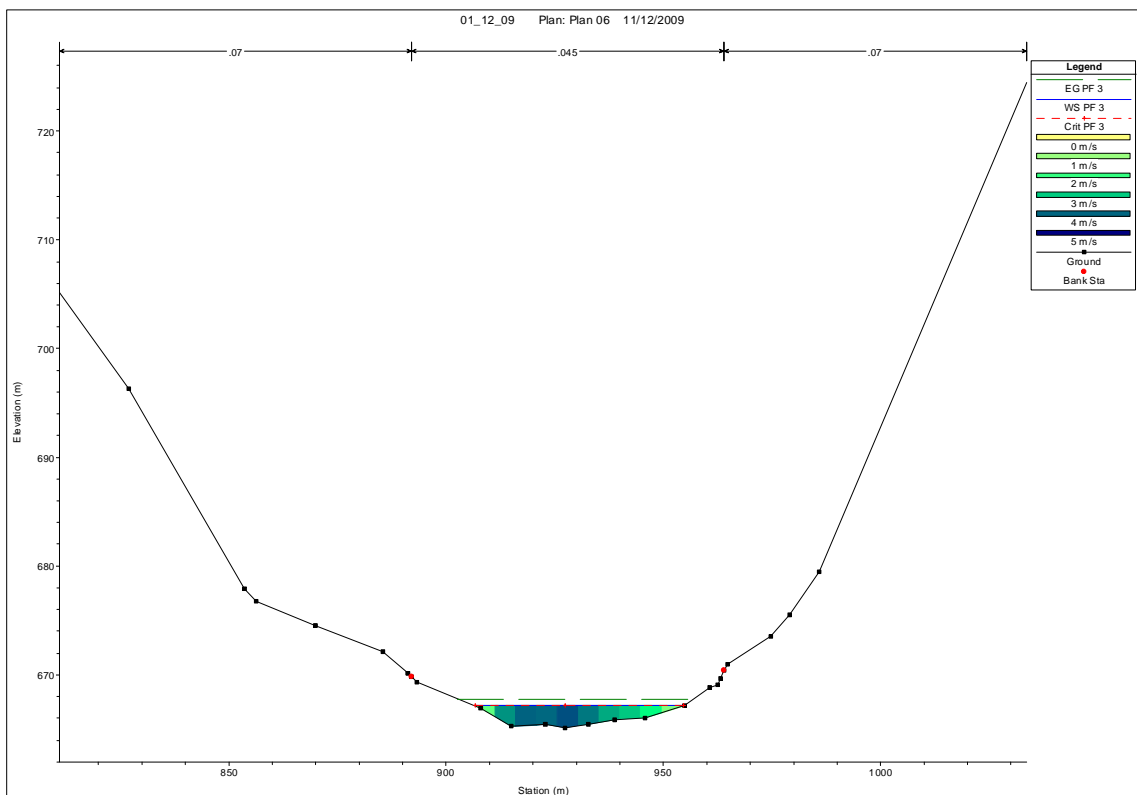


**Seção 17.1, Perfil 1.**

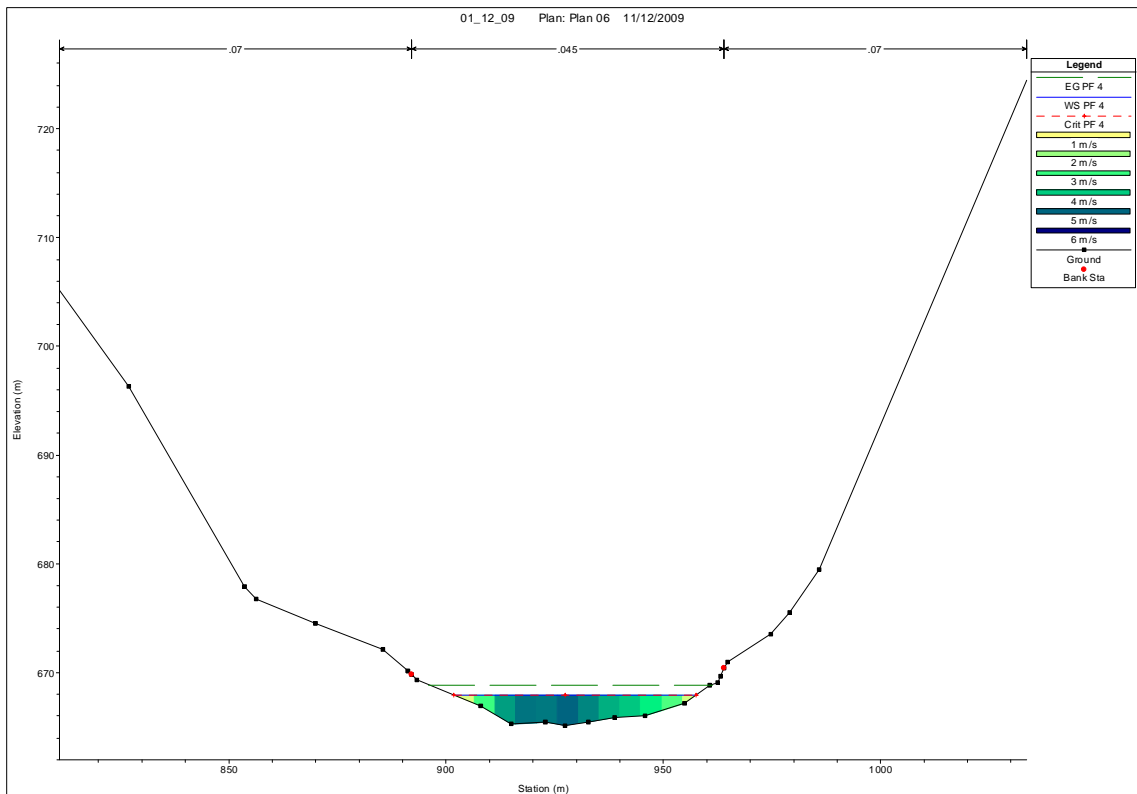




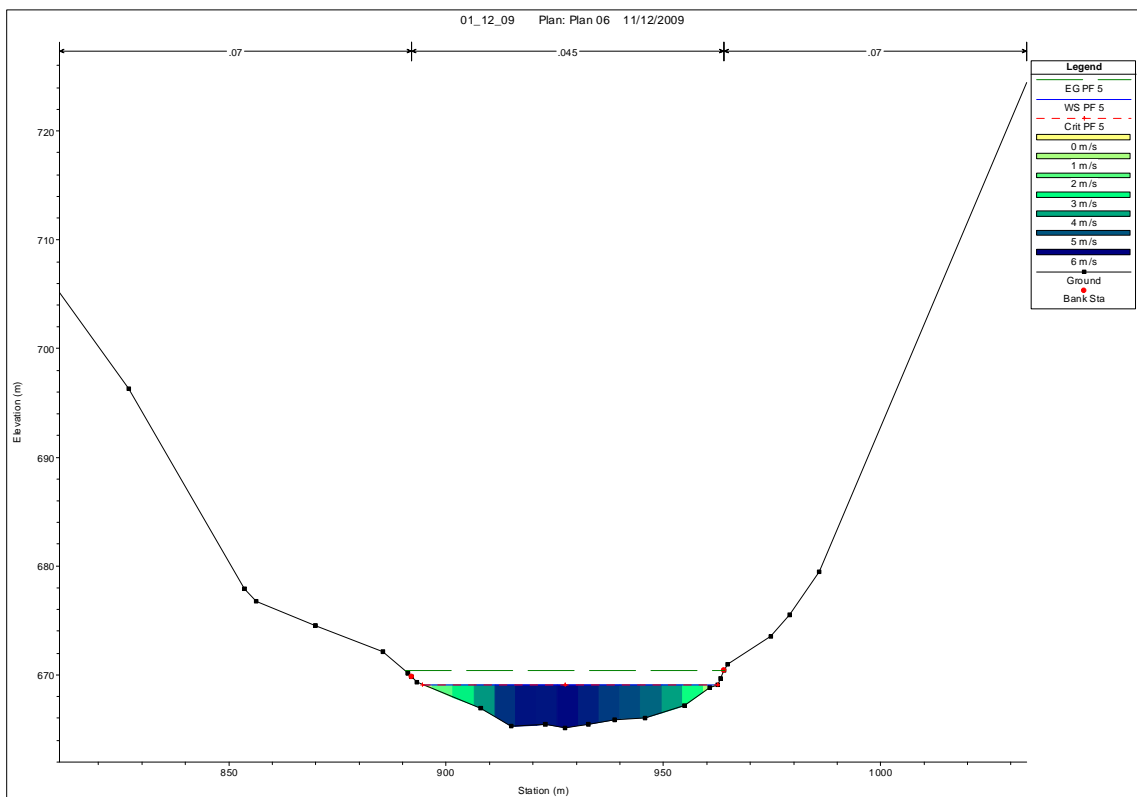
**Seção 17.1, Perfil 2.**



**Seção 17.1, Perfil 3.**

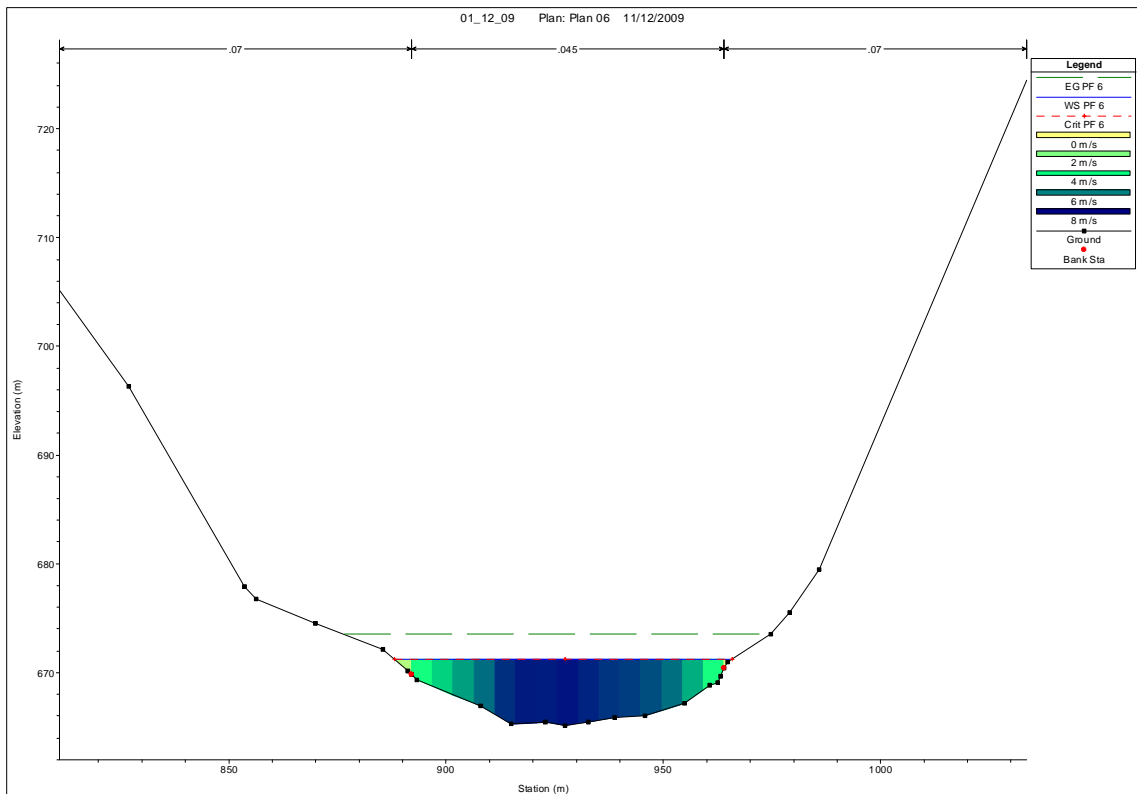


**Seção 17.1, Perfil 4.**

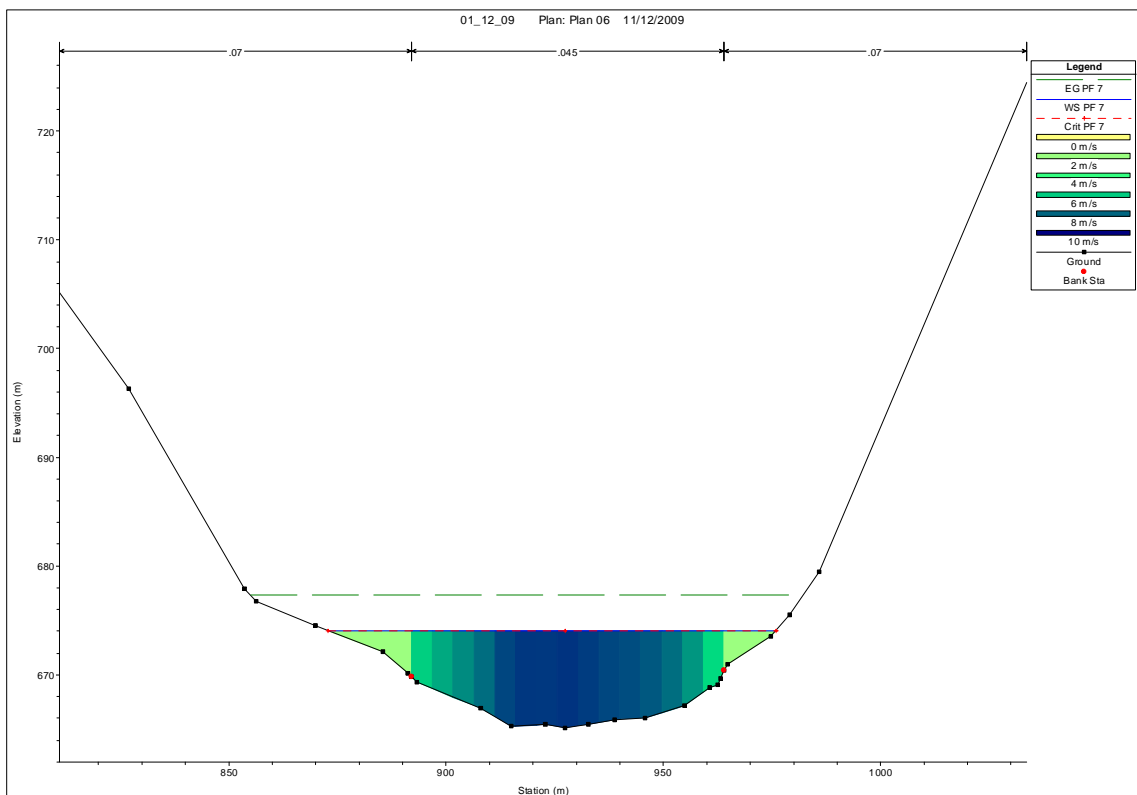


**Seção 17.1, Perfil 5.**

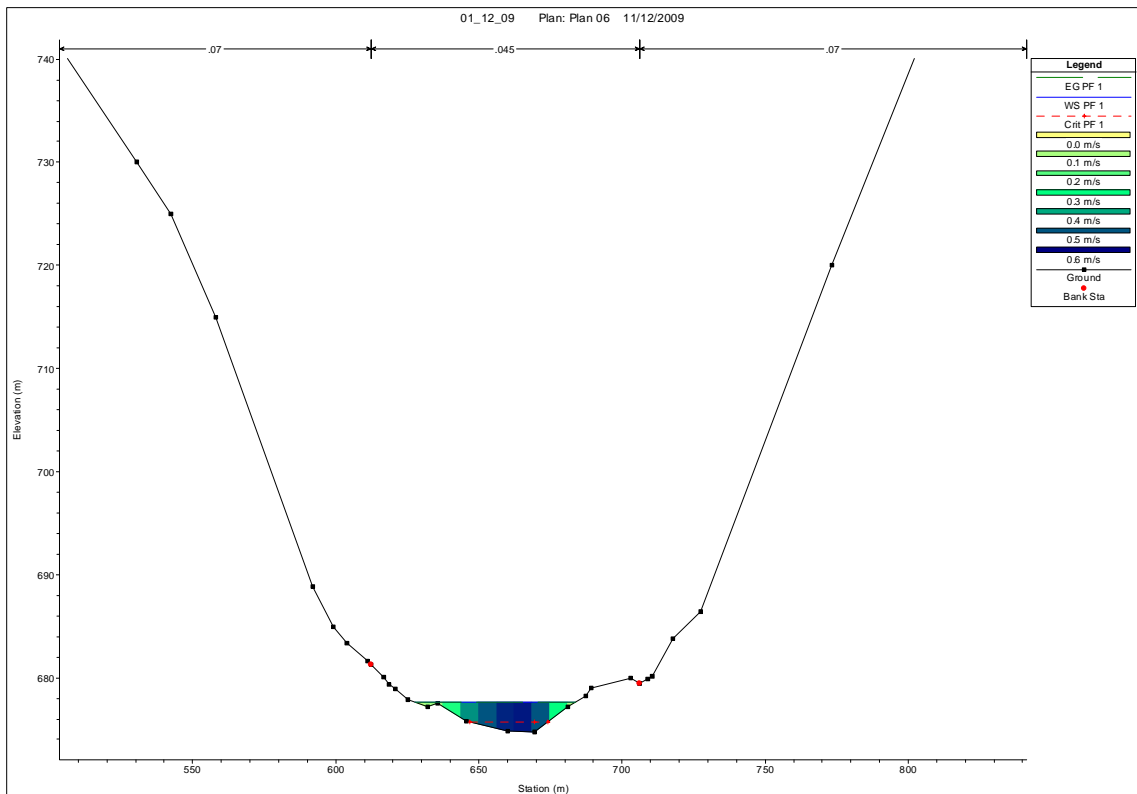




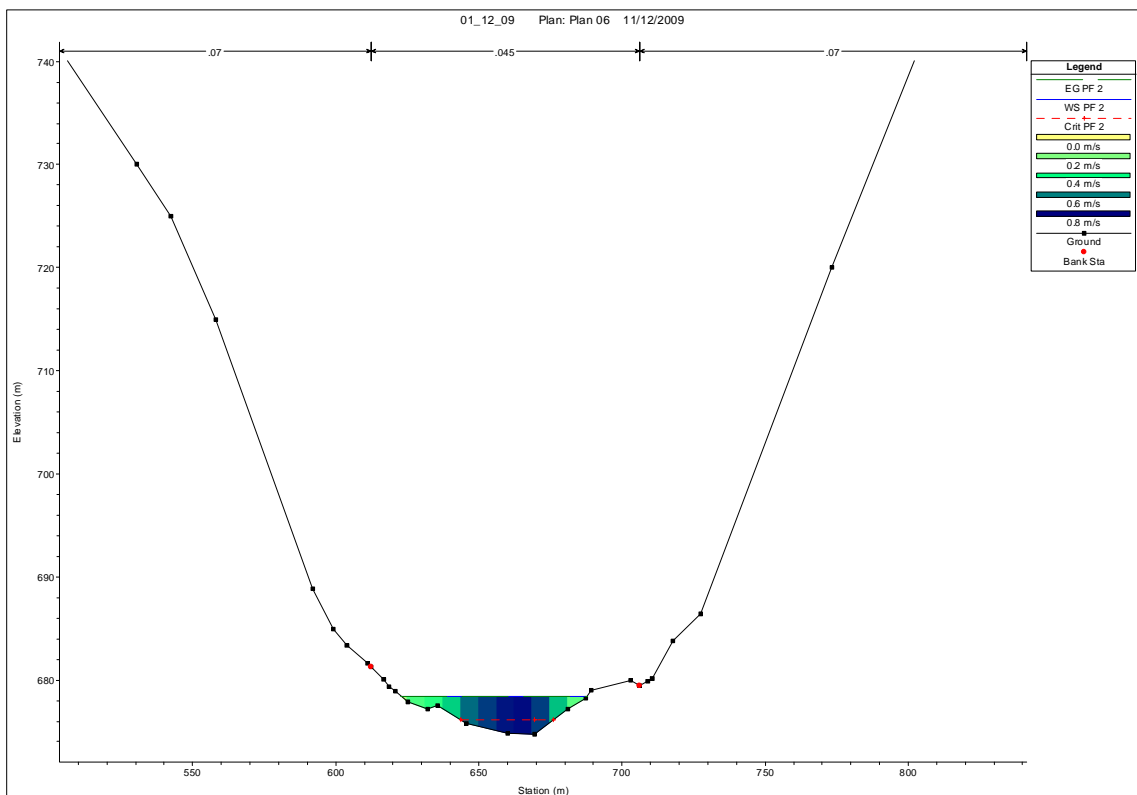
**Seção 17.1, Perfil 6.**



**Seção 17.1, Perfil 7.**

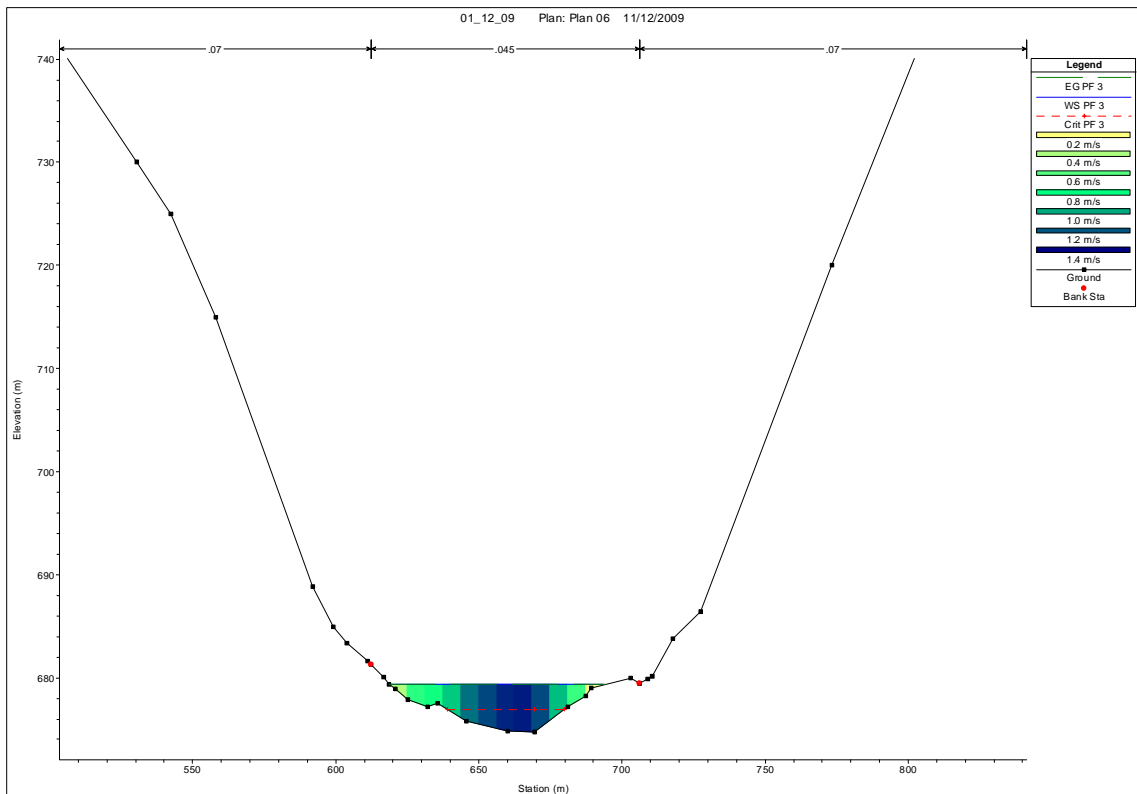


**Seção 21.3, Perfil 1.**

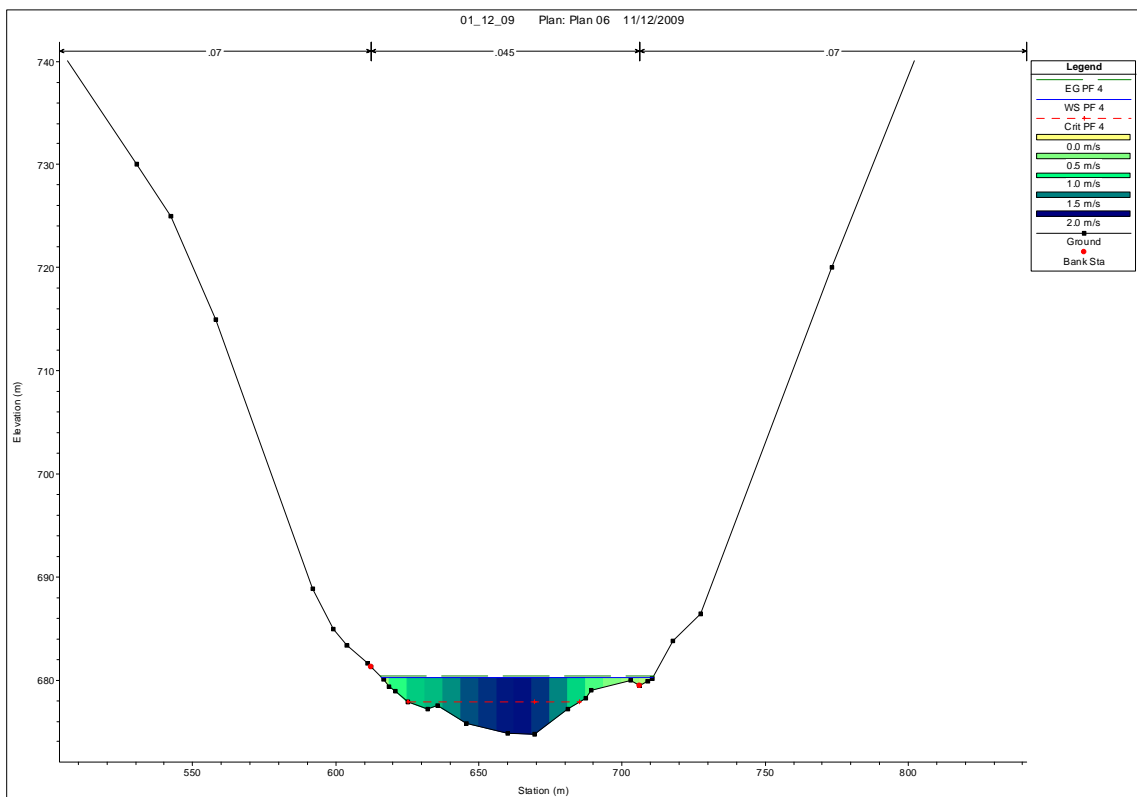


**Seção 21.3, Perfil 2.**

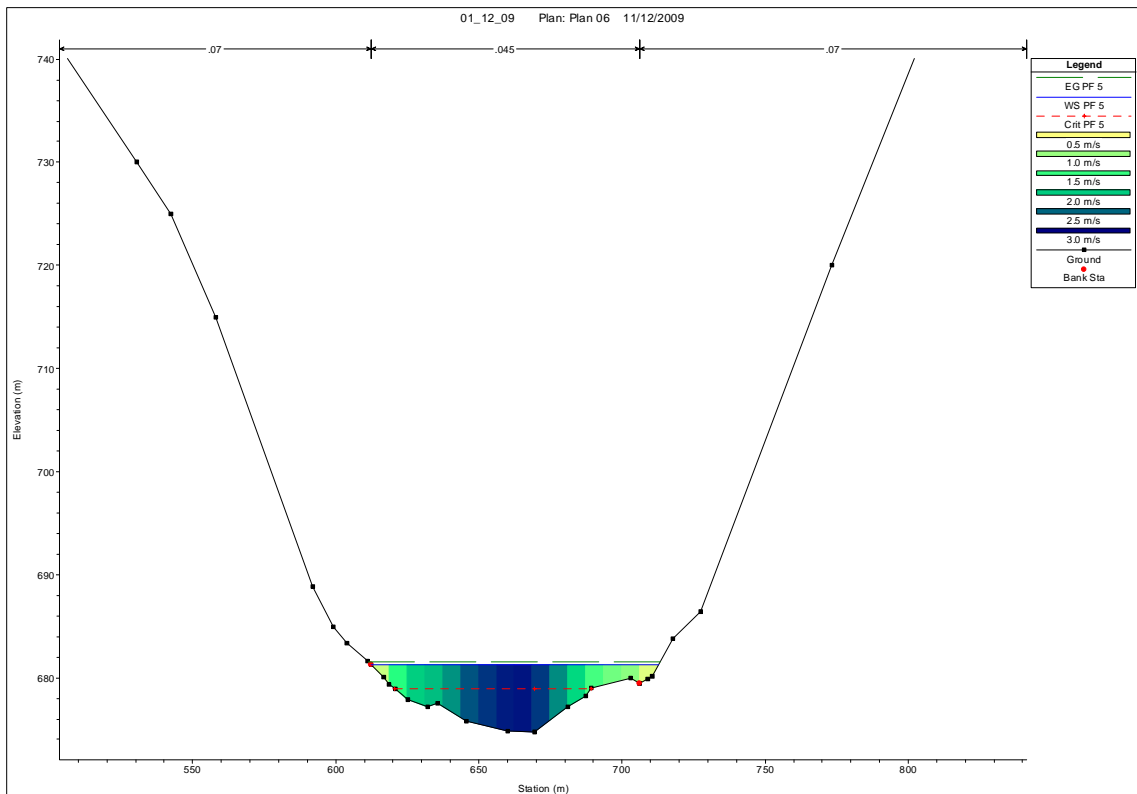




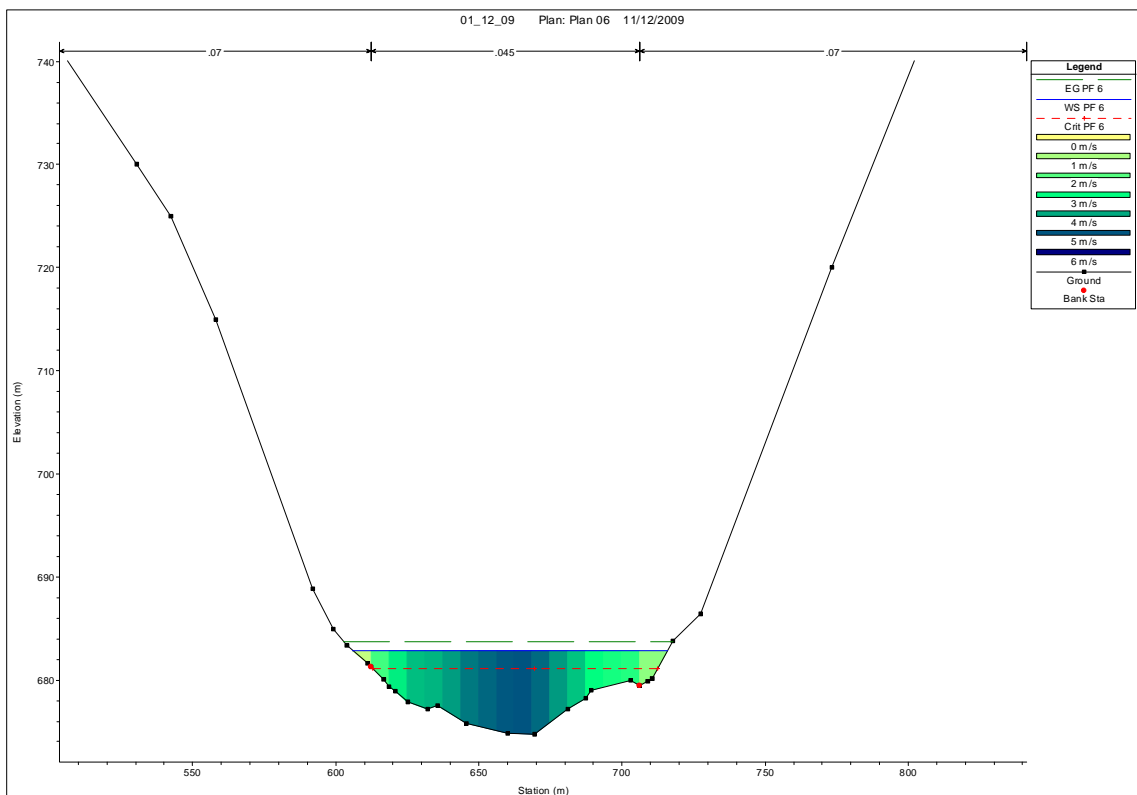
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**Seção 21.3, Perfil 4.**

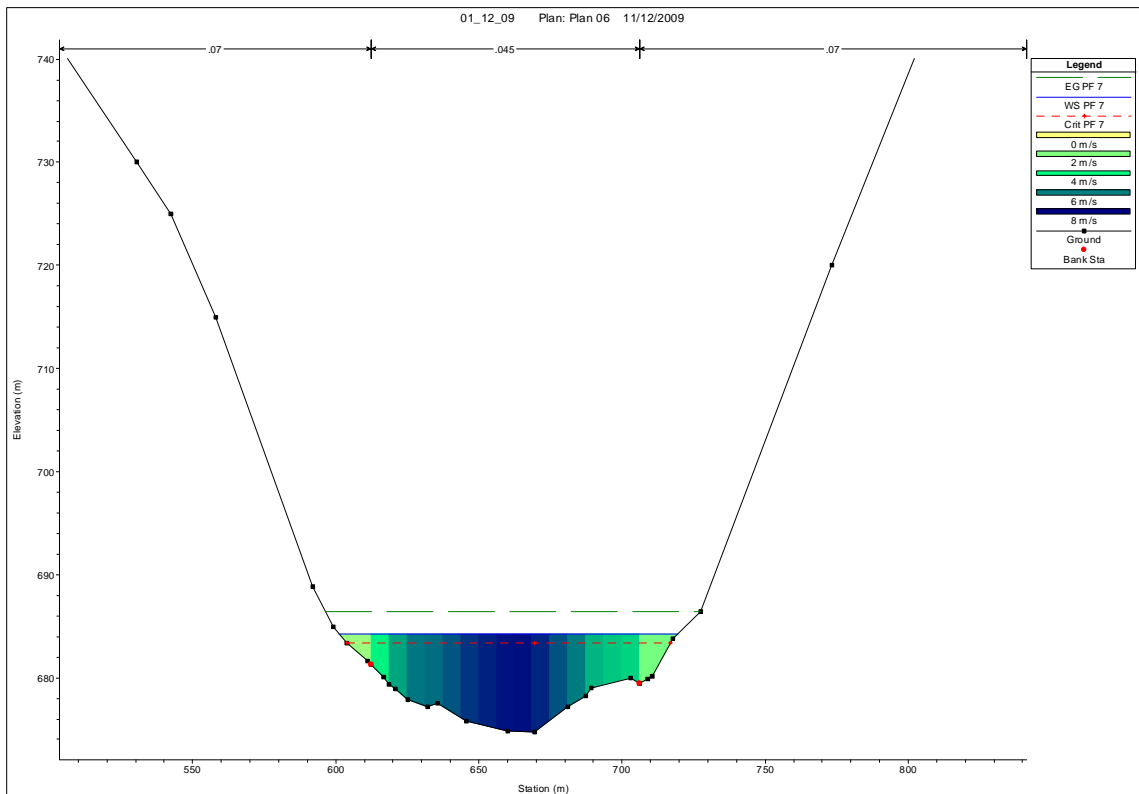


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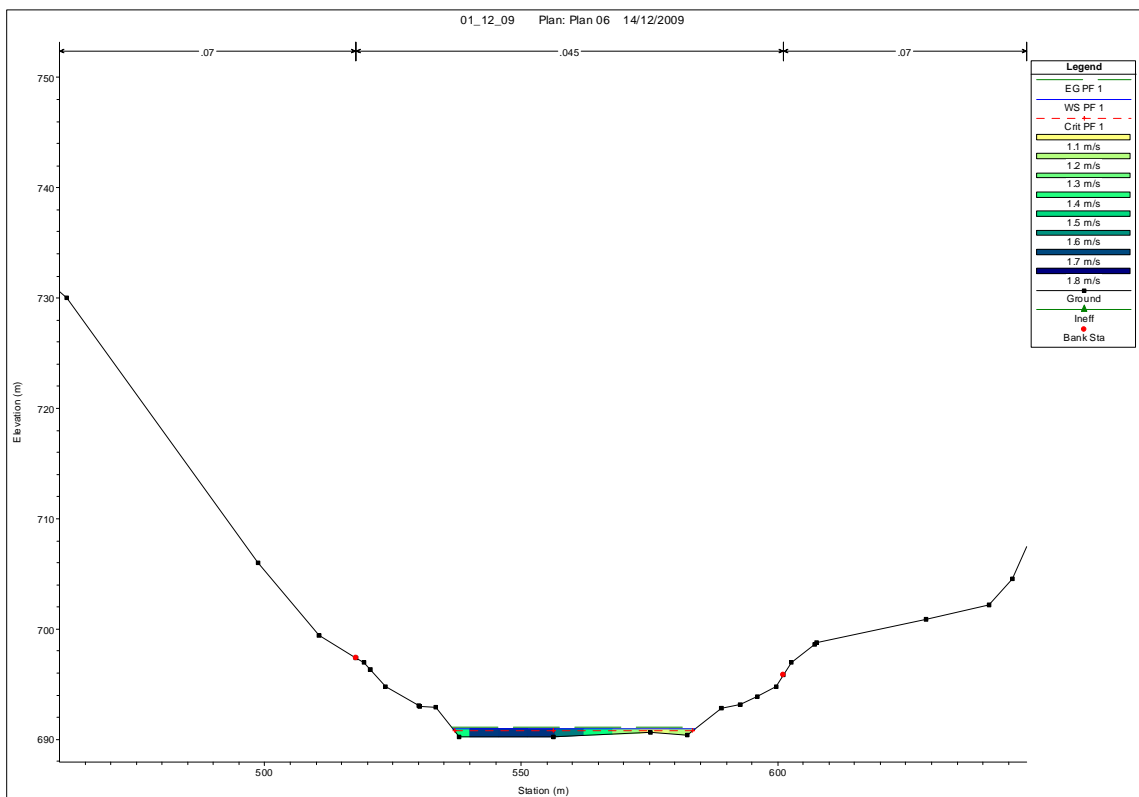


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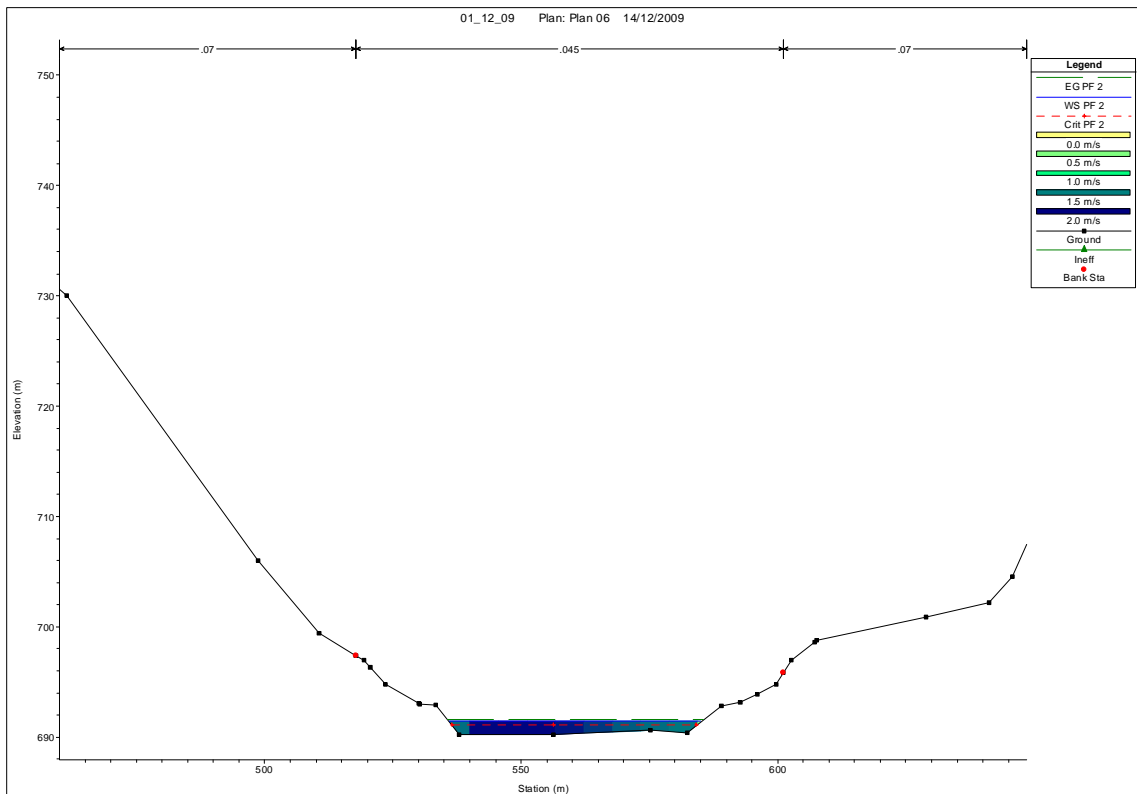




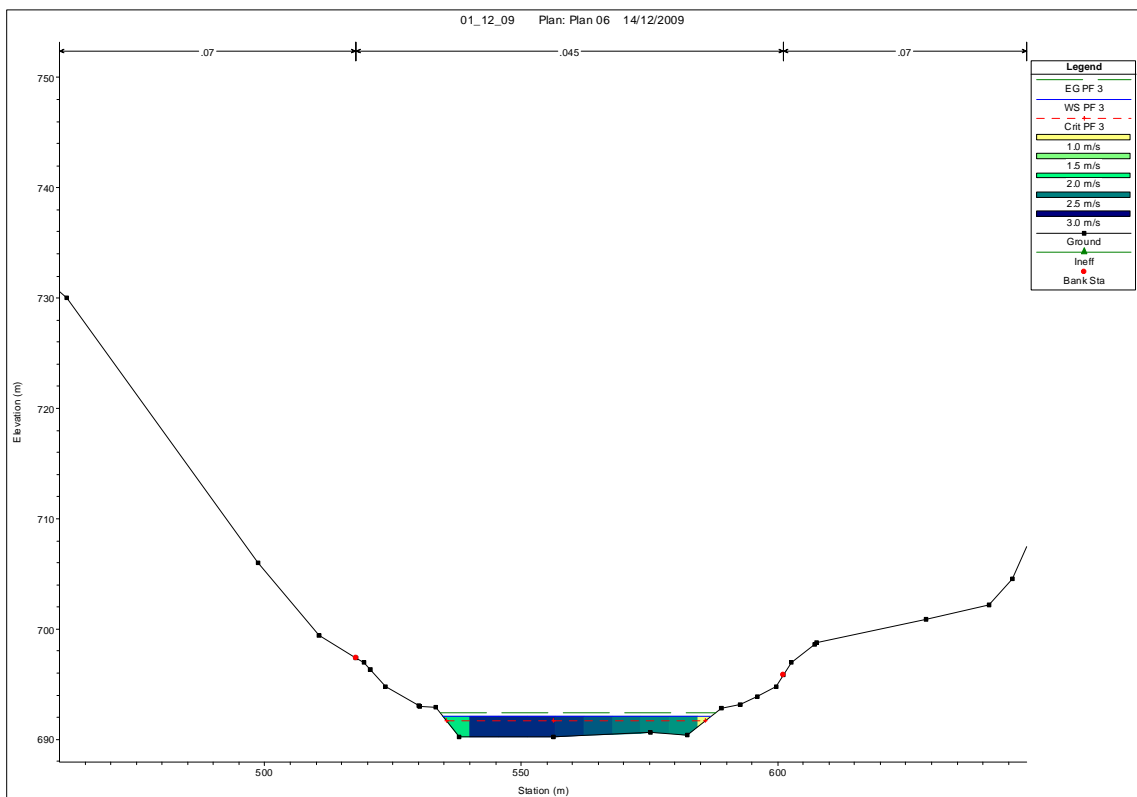
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**Seção 27.0, Perfil 1.**

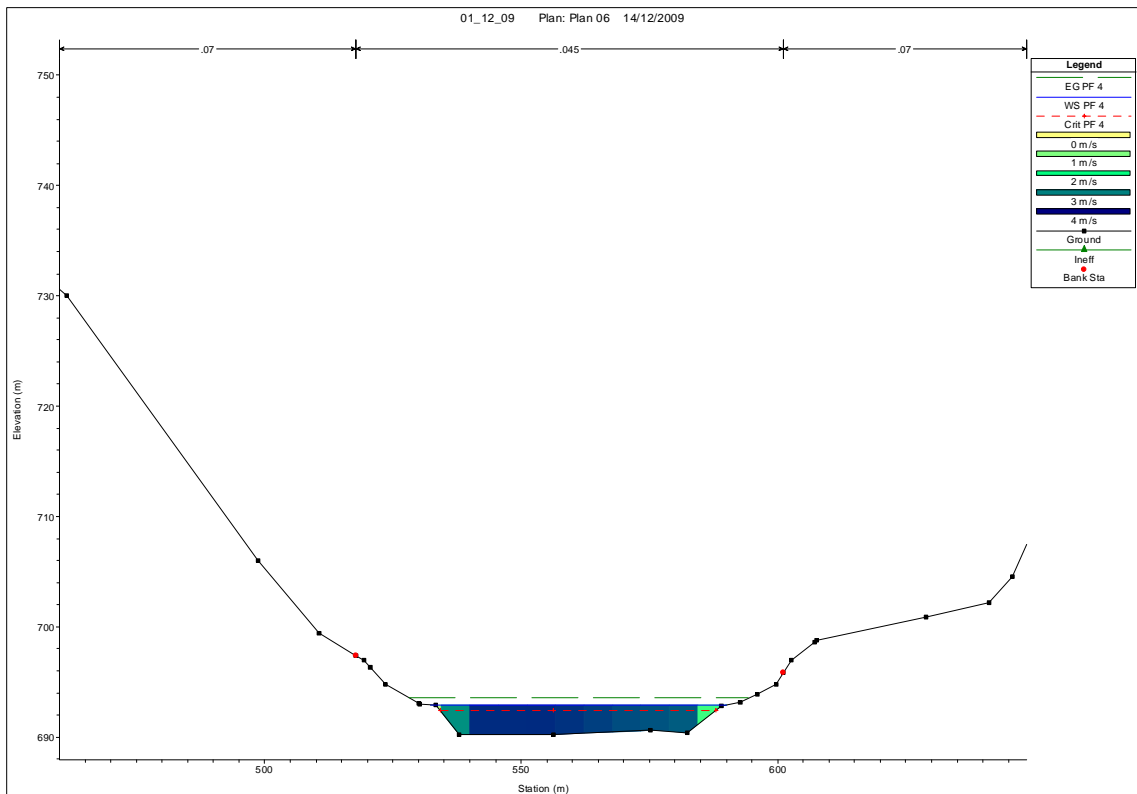


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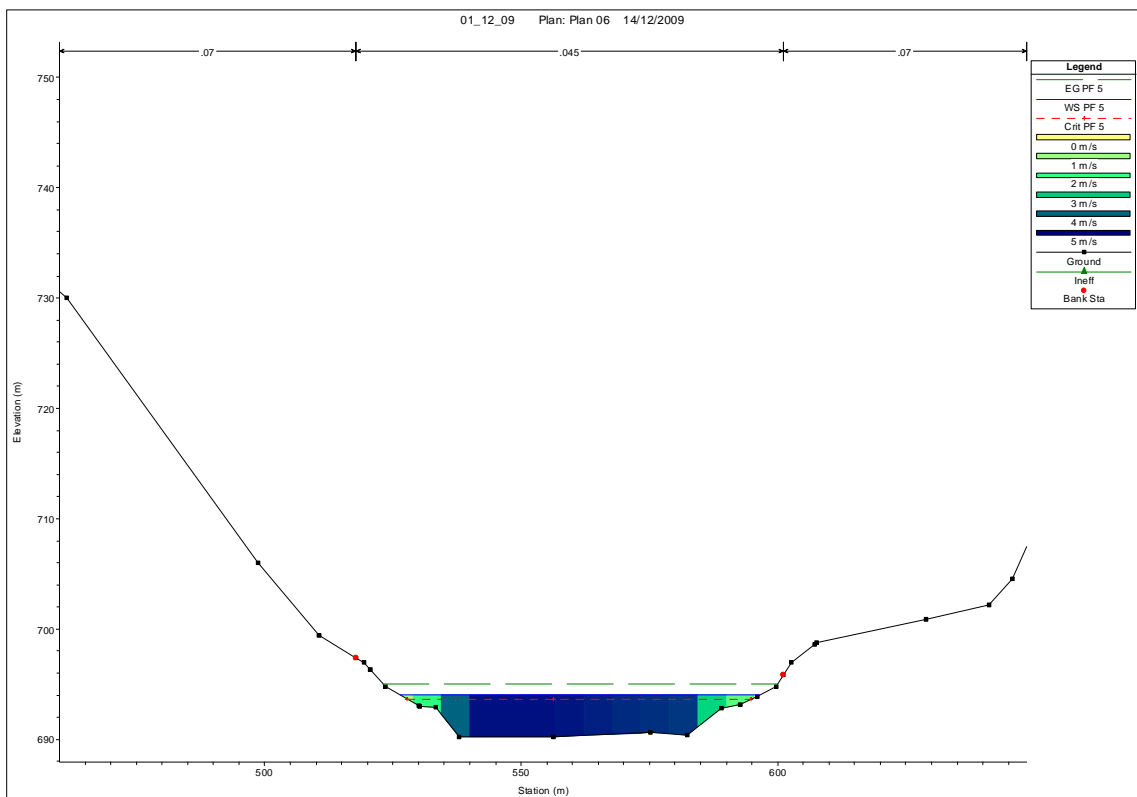


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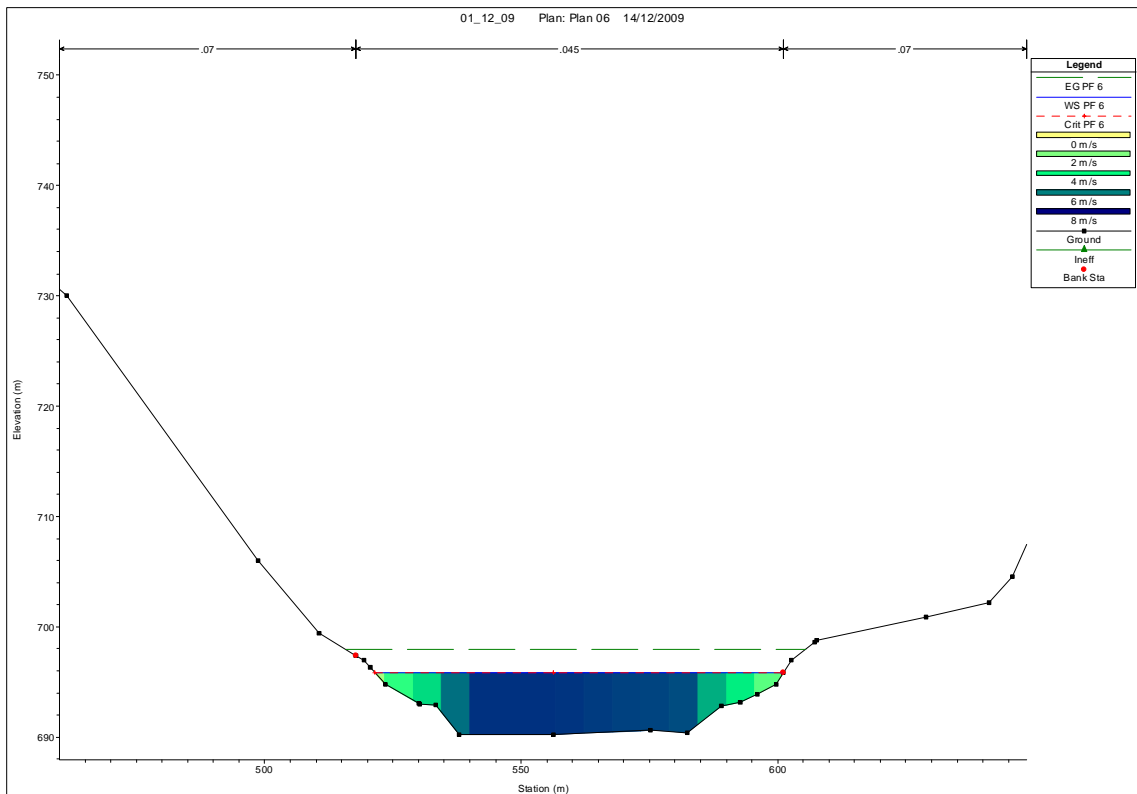




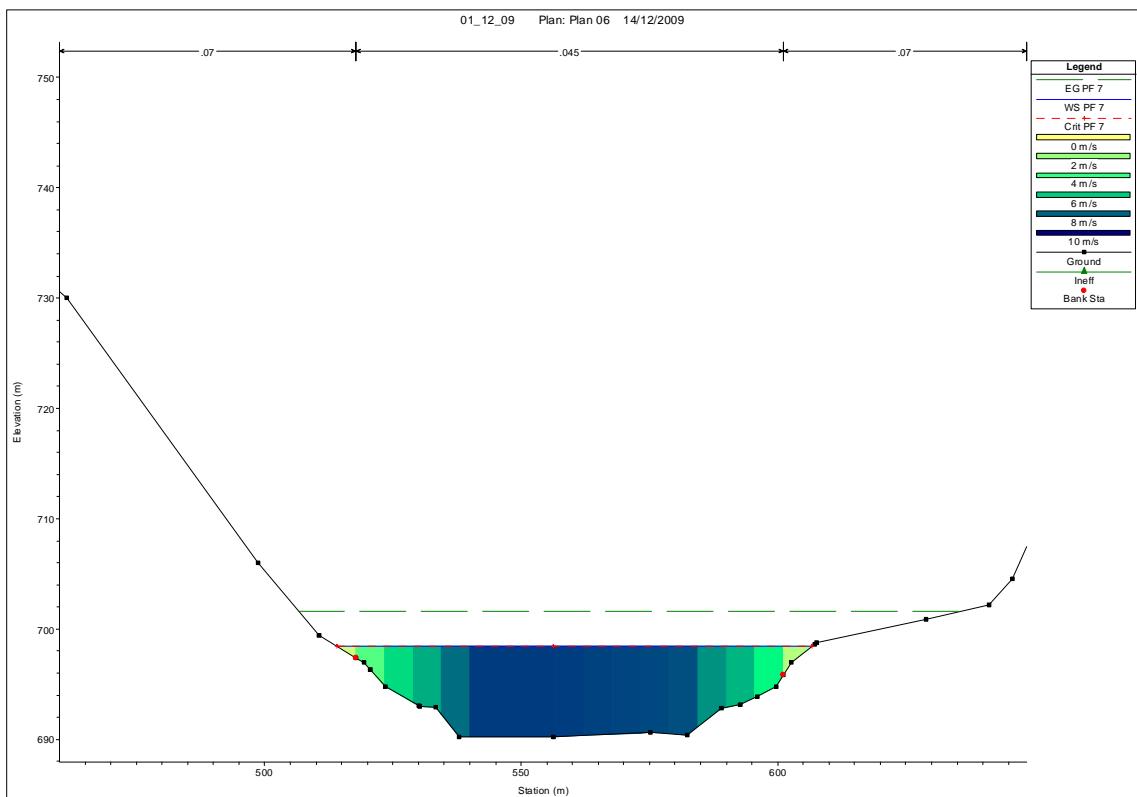
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**Seção 27.0, Perfil 5.**

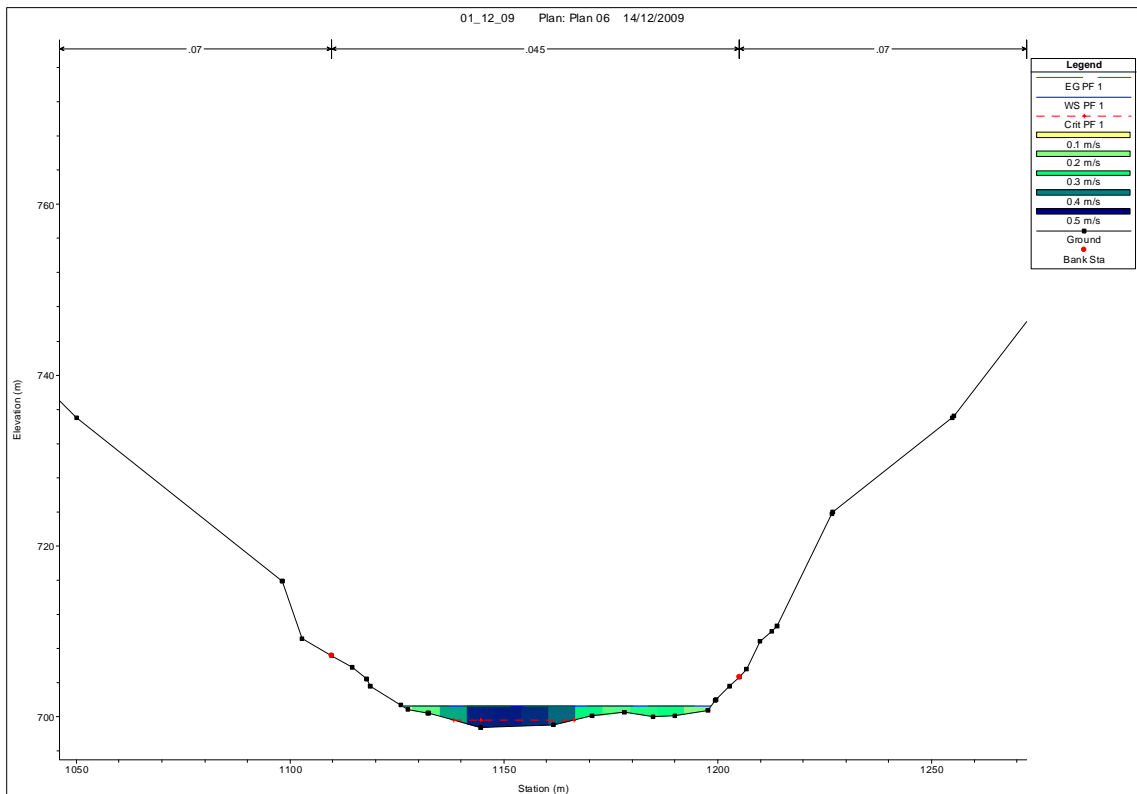


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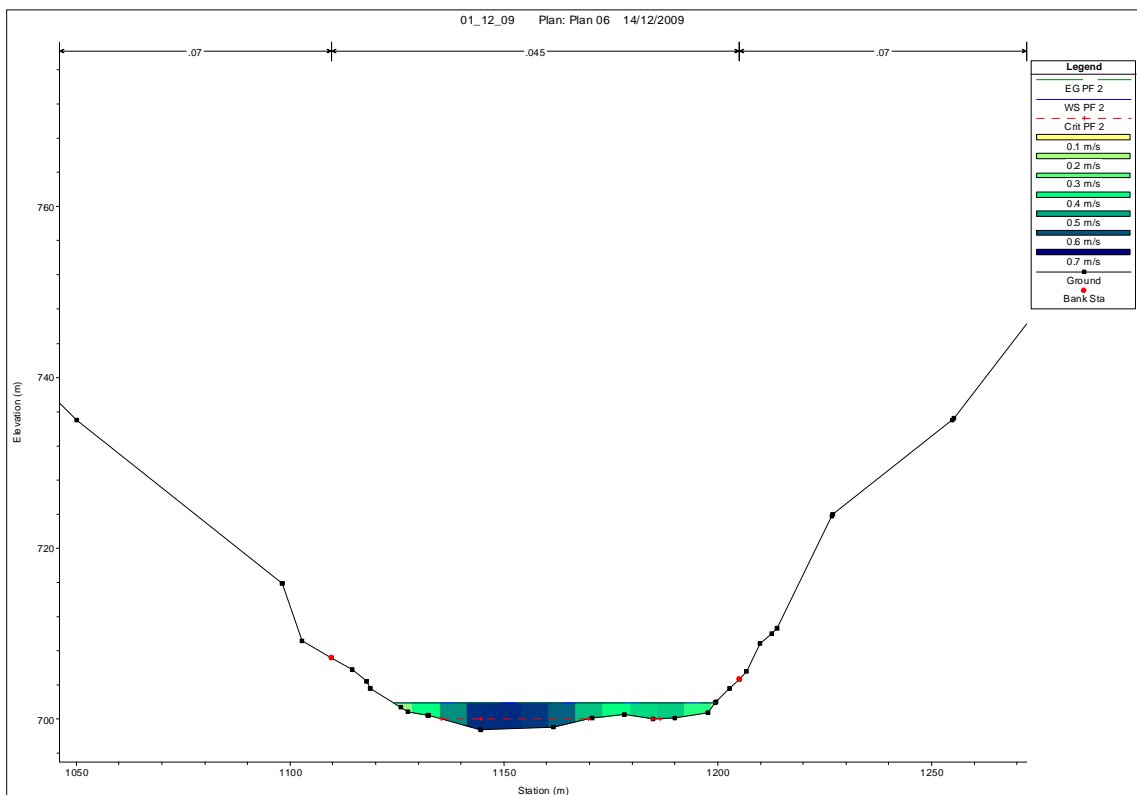


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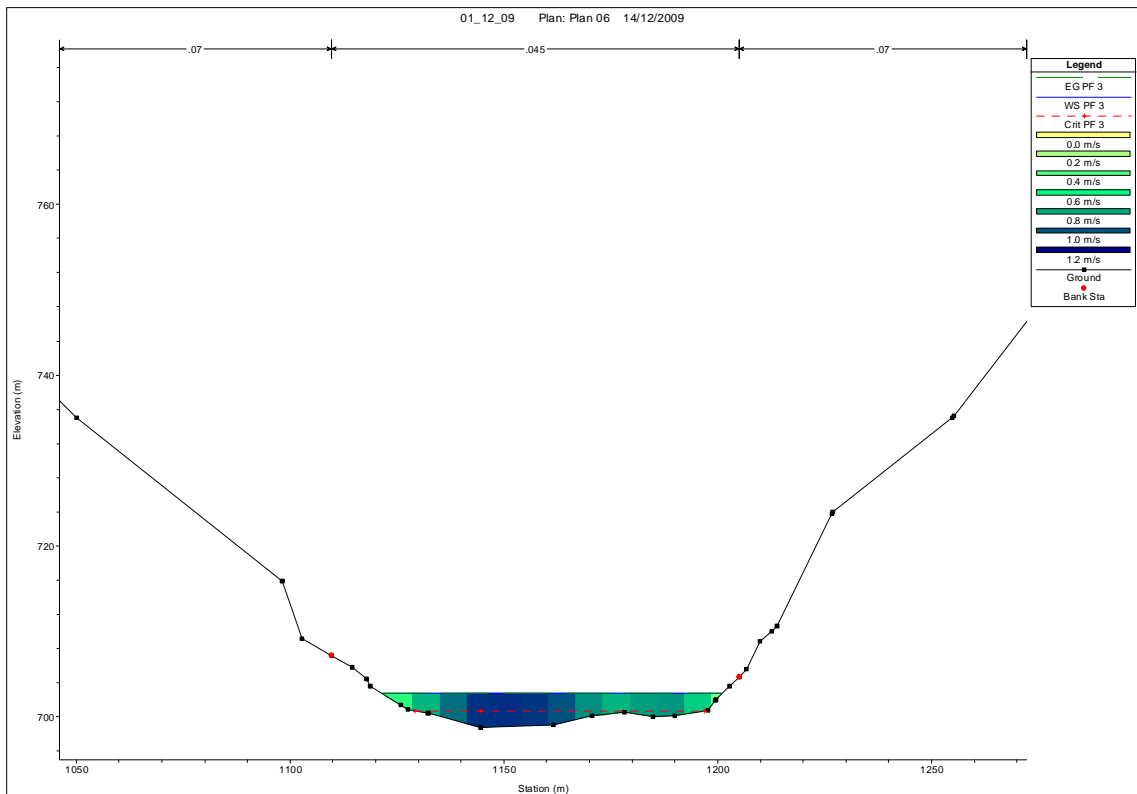




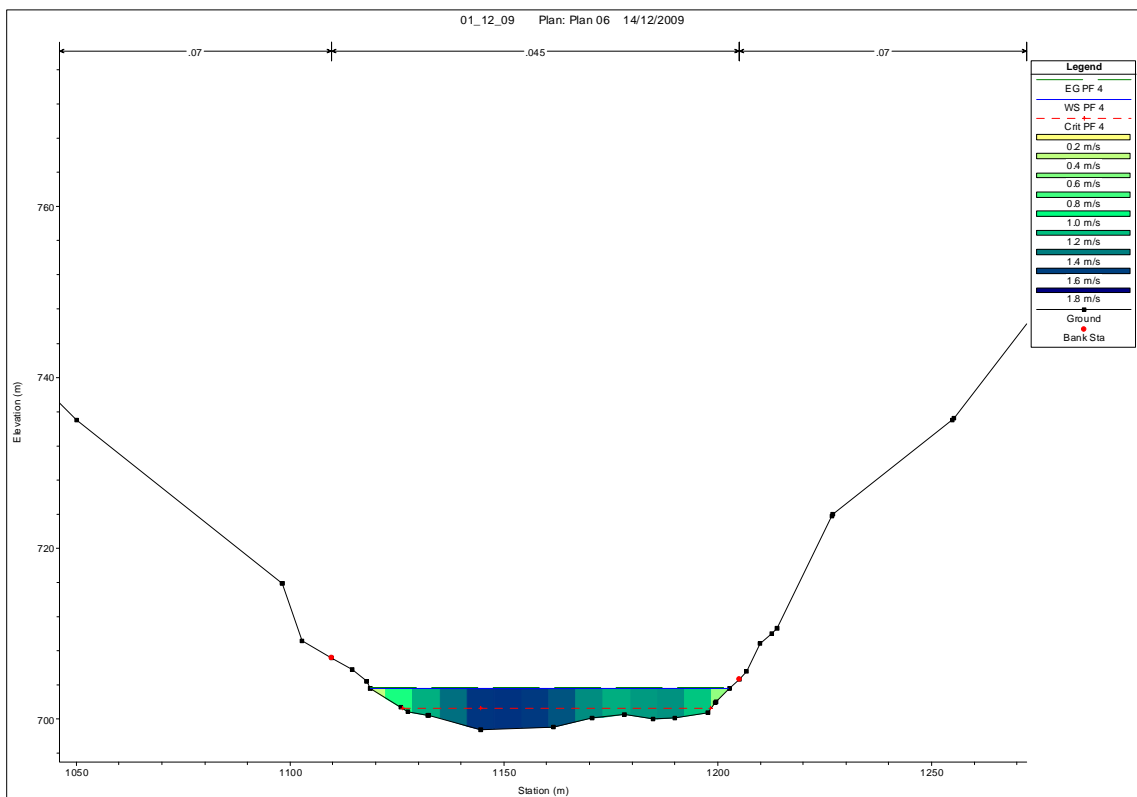
**Seção 32.0, Perfil 1.**



**Seção 32.0, Perfil 2.**

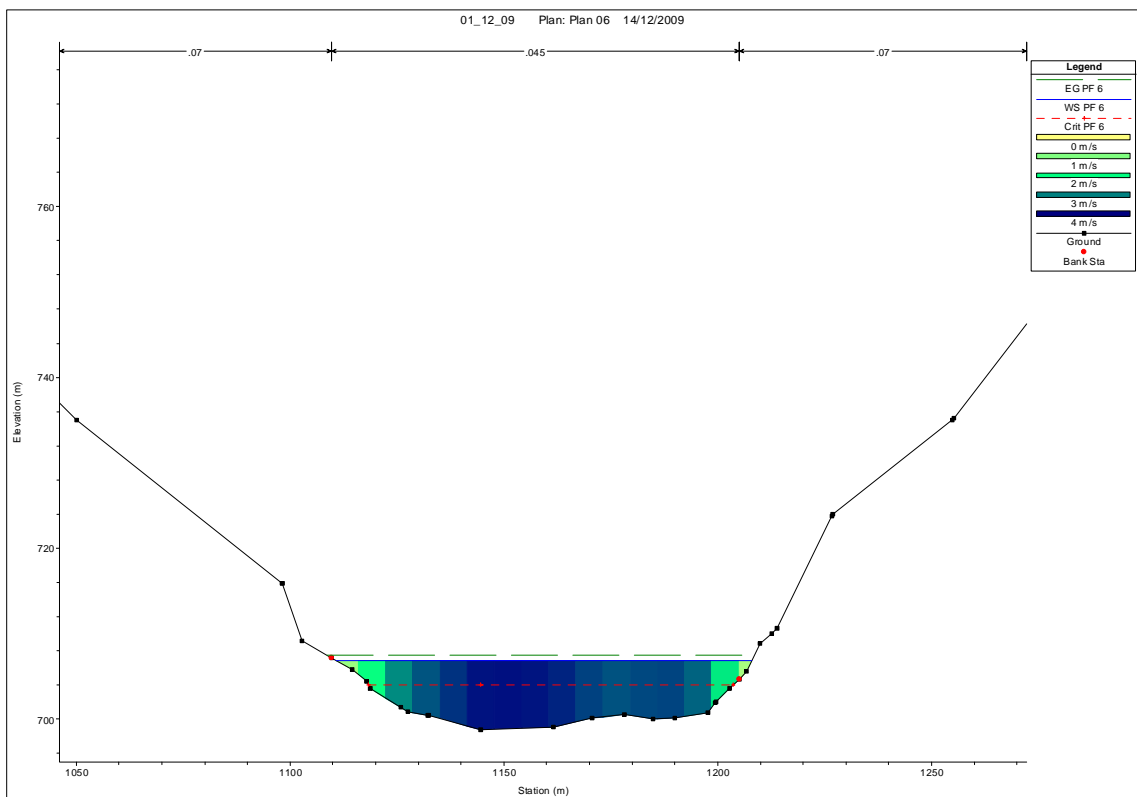
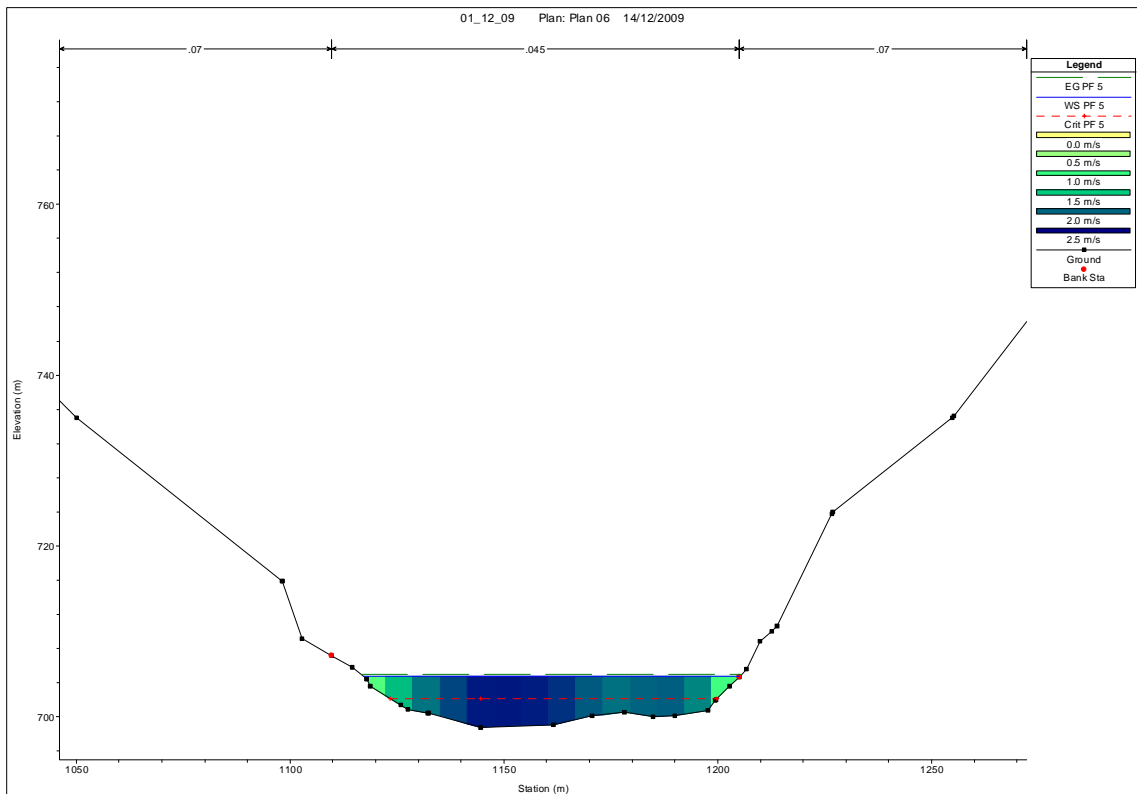


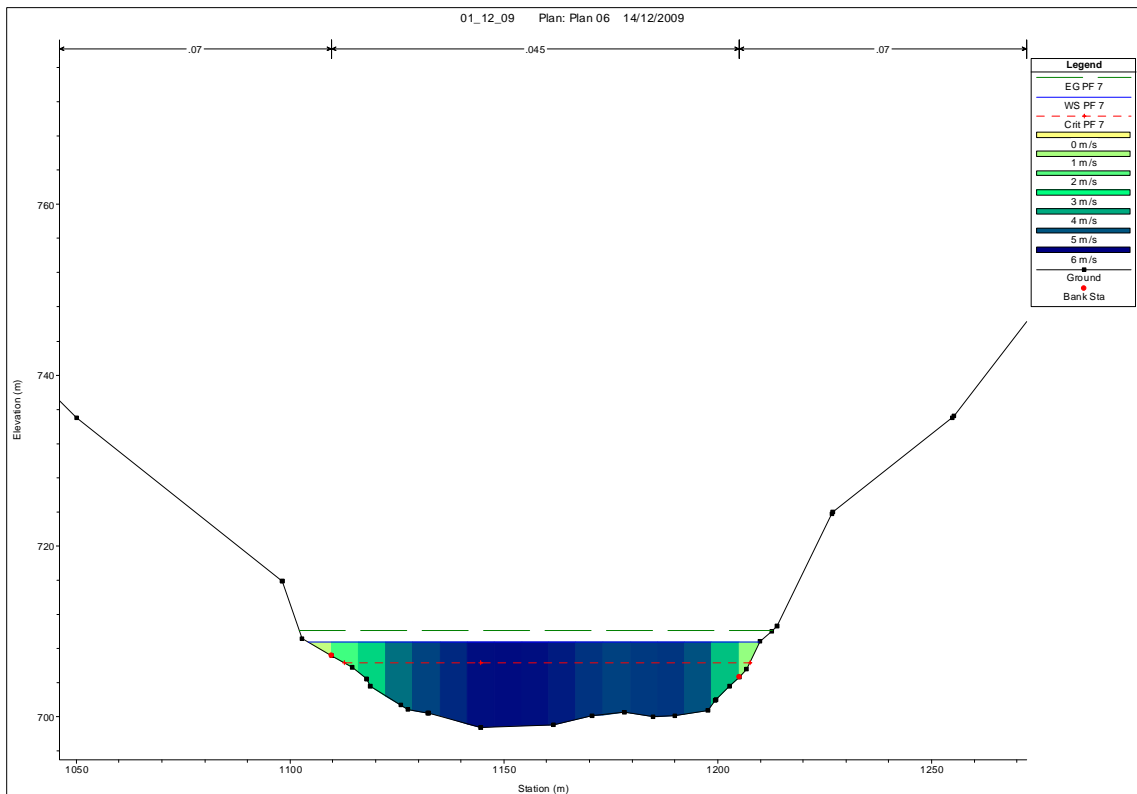
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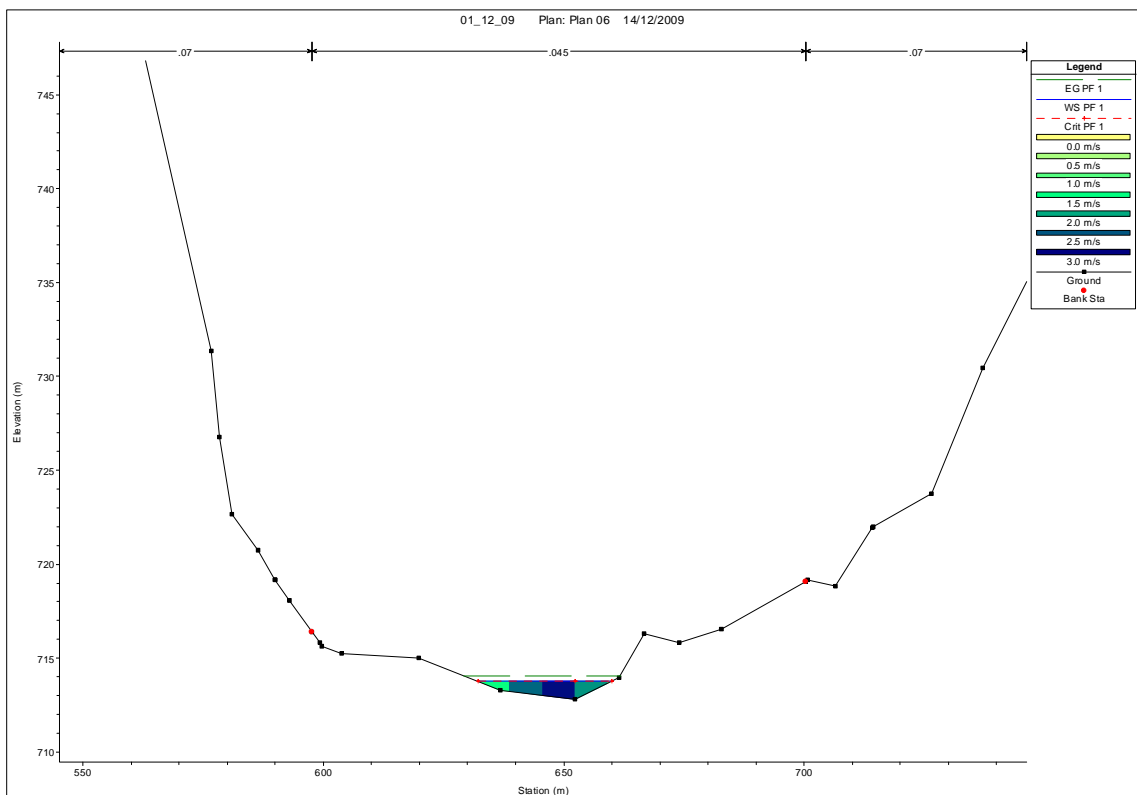
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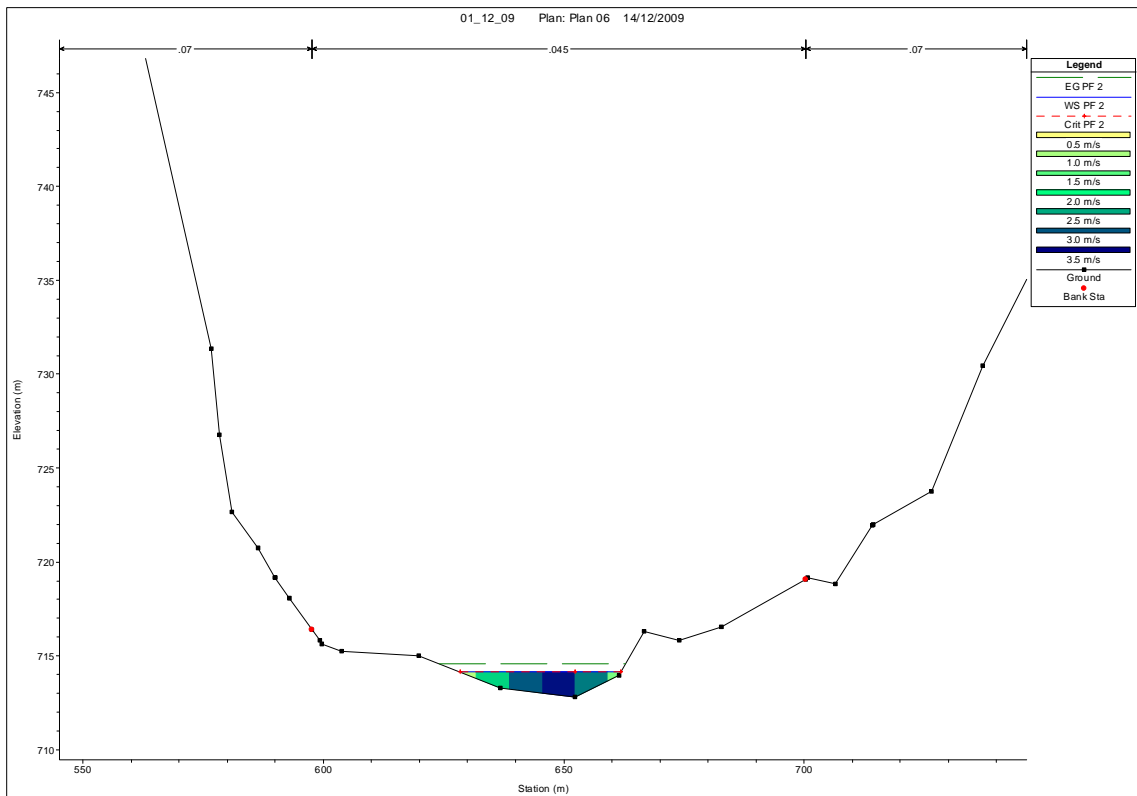


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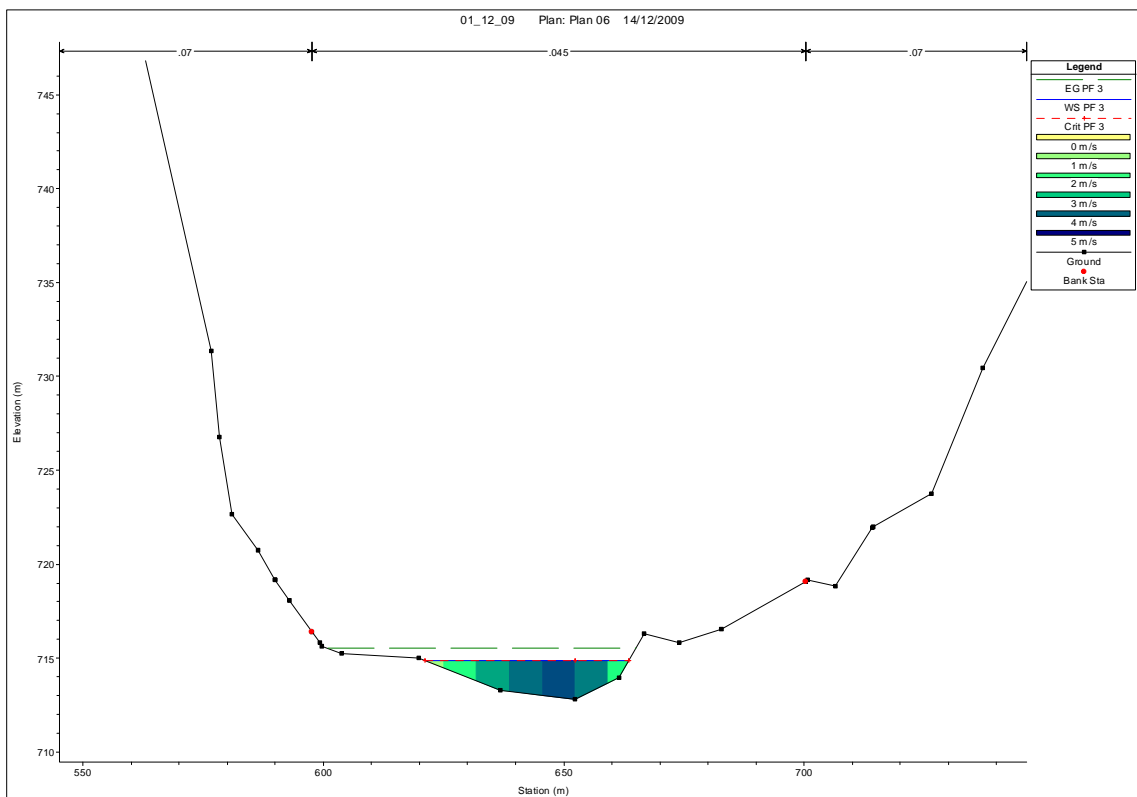


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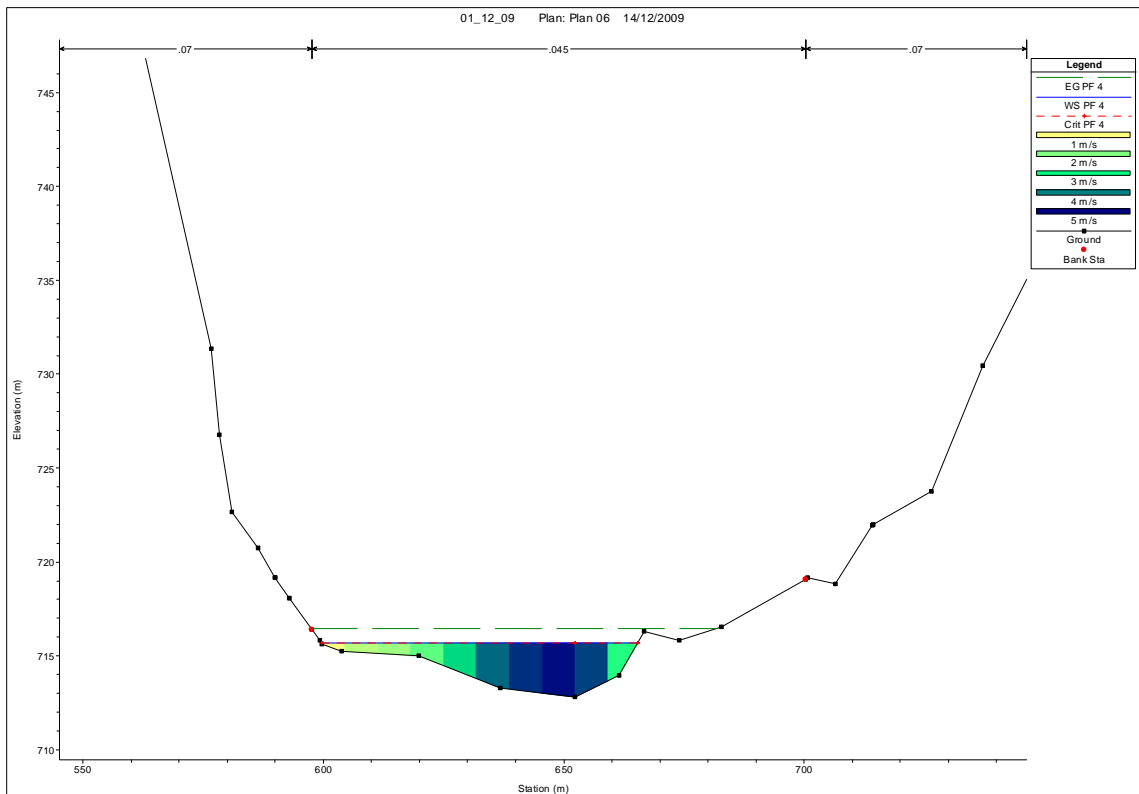




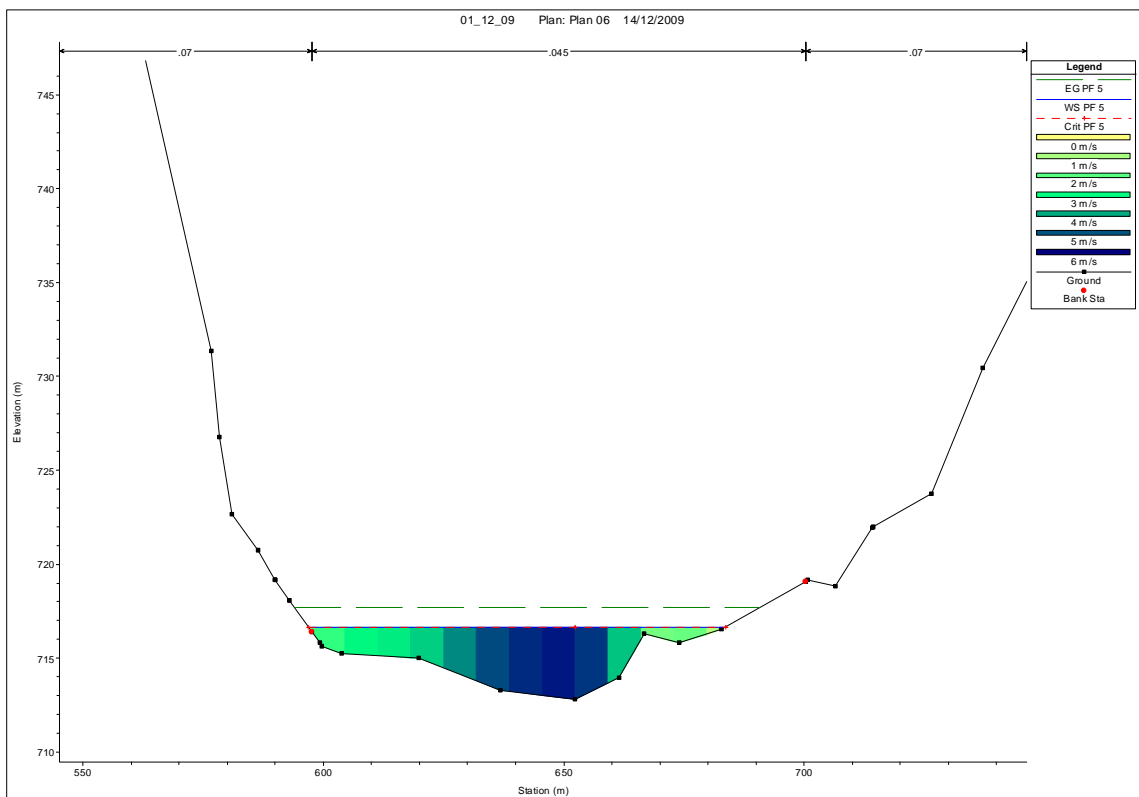
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**Seção 37.0, Perfil 3.**

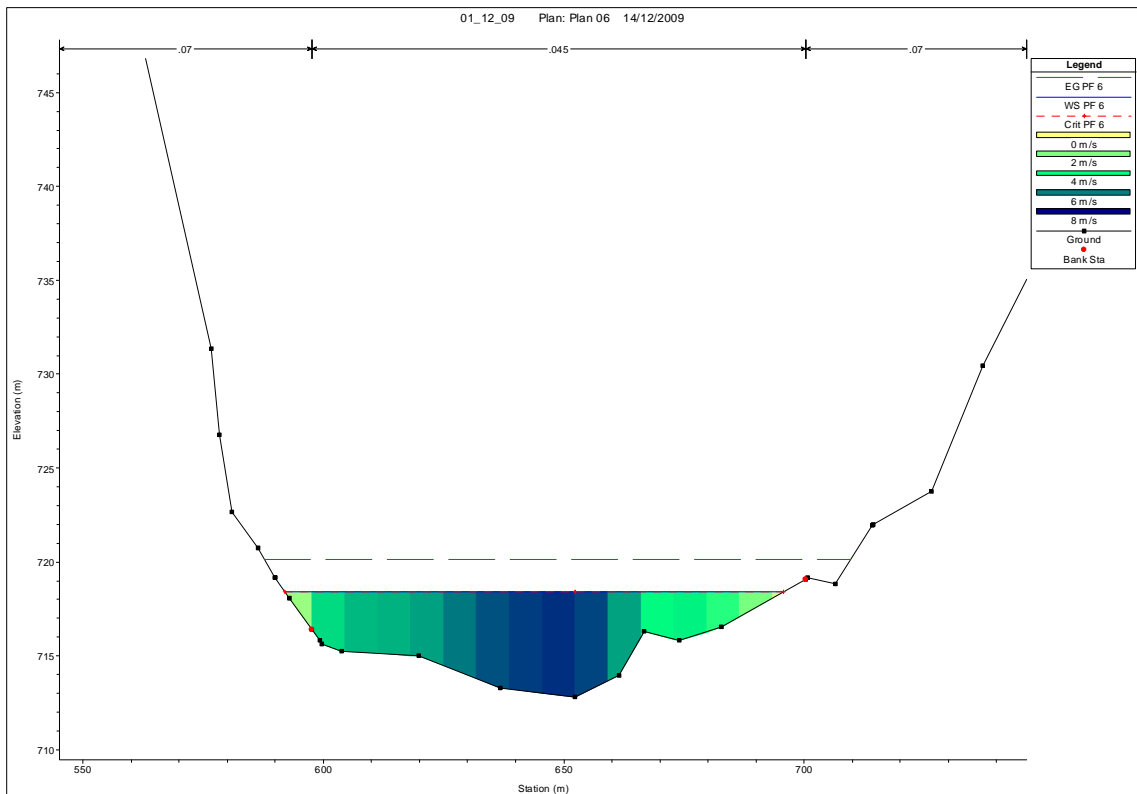


**Seção 37.0, Perfil 4.**

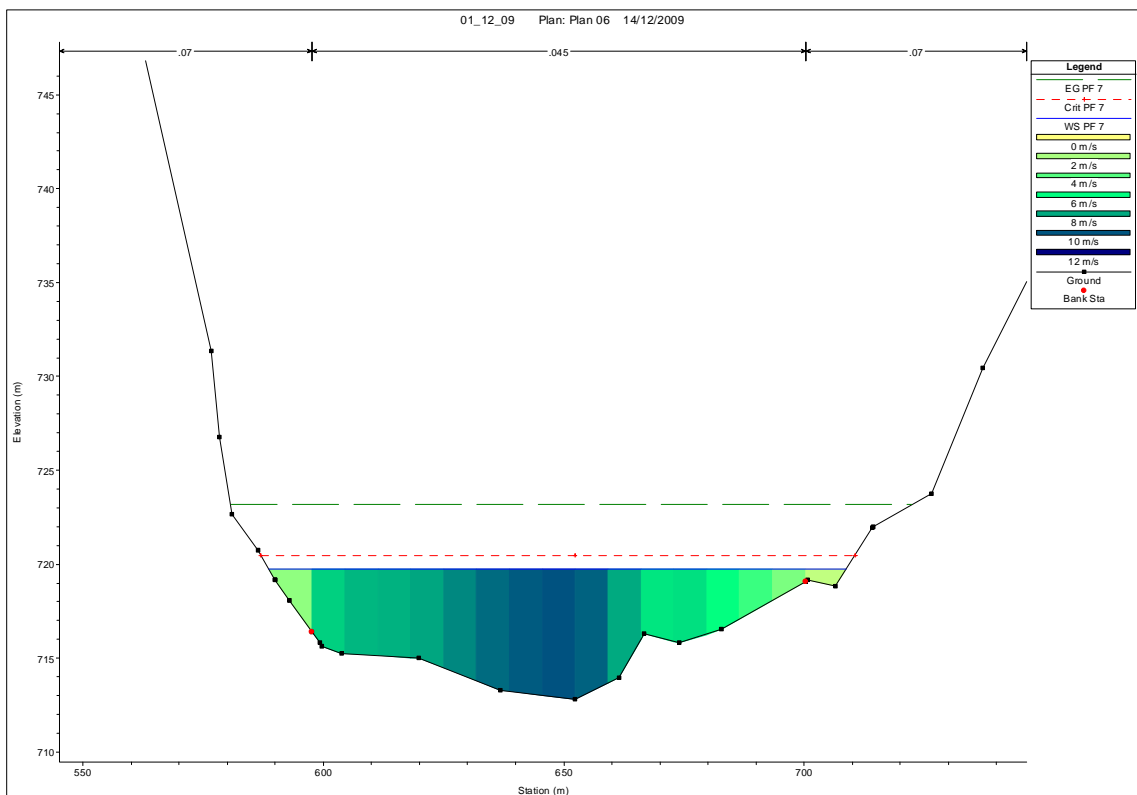


**Seção 37.0, Perfil 5.**

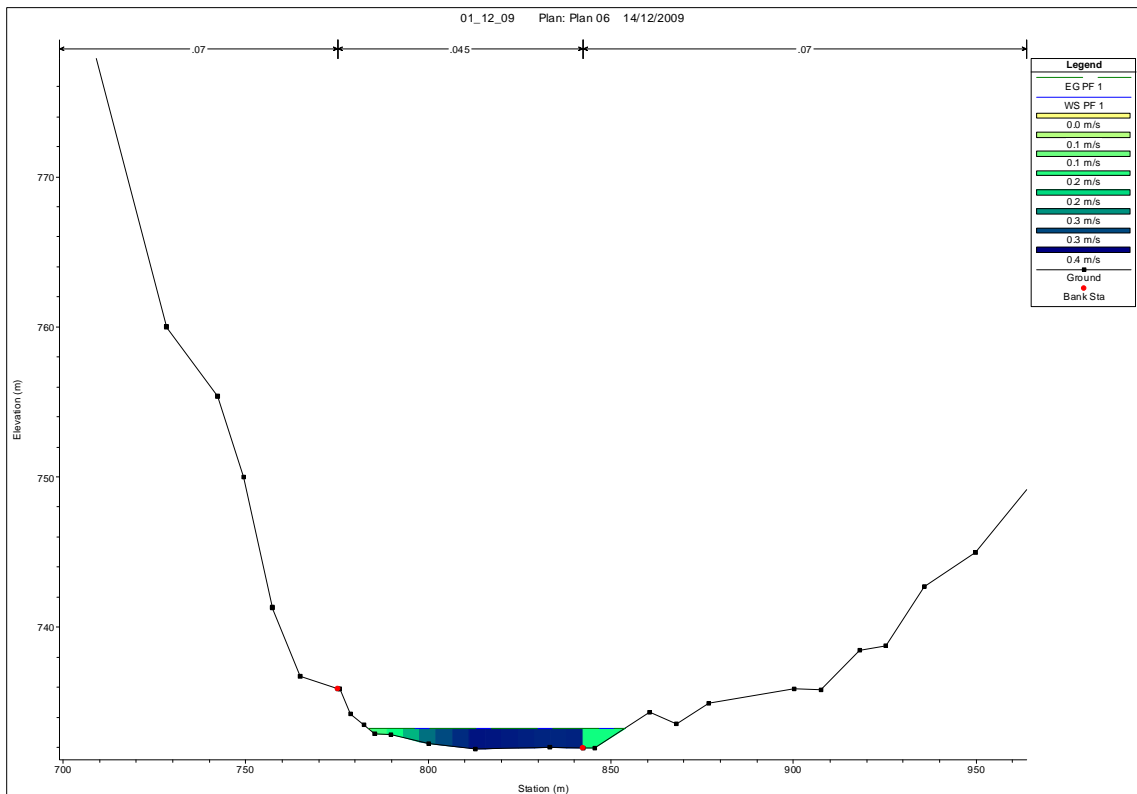




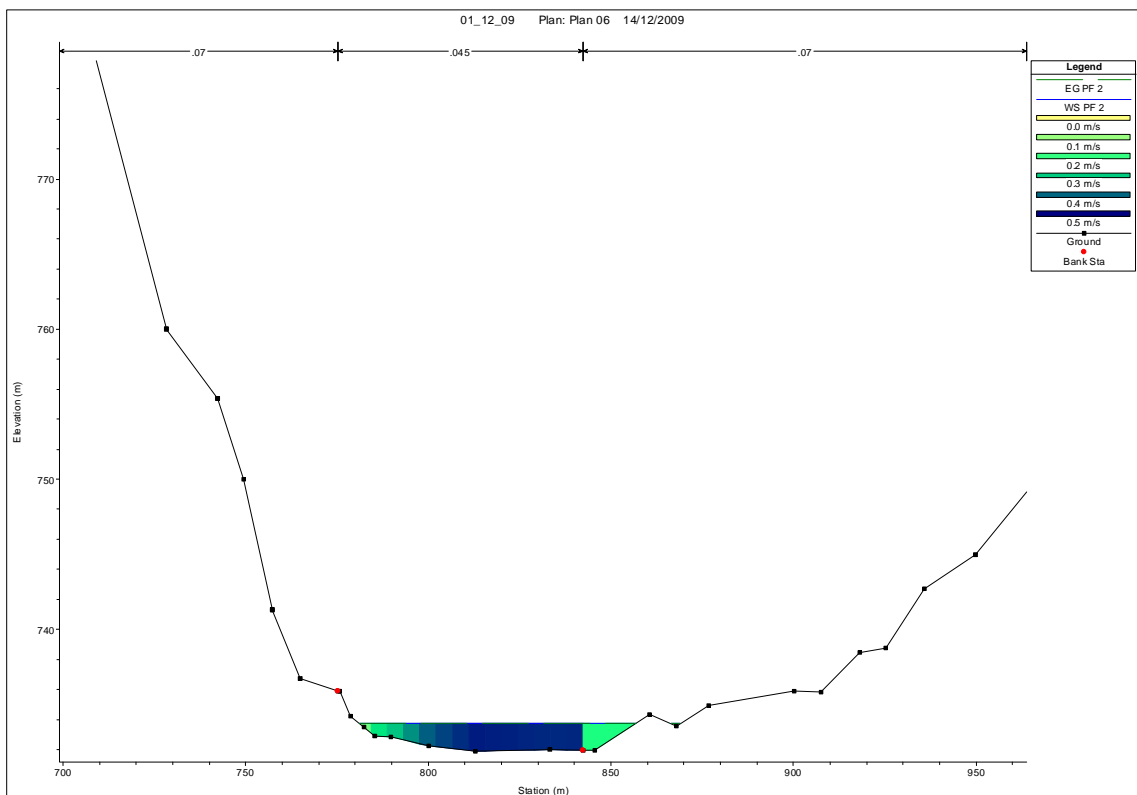
**Seção 37.0, Perfil 6.**



**Seção 37.0, Perfil 7.**

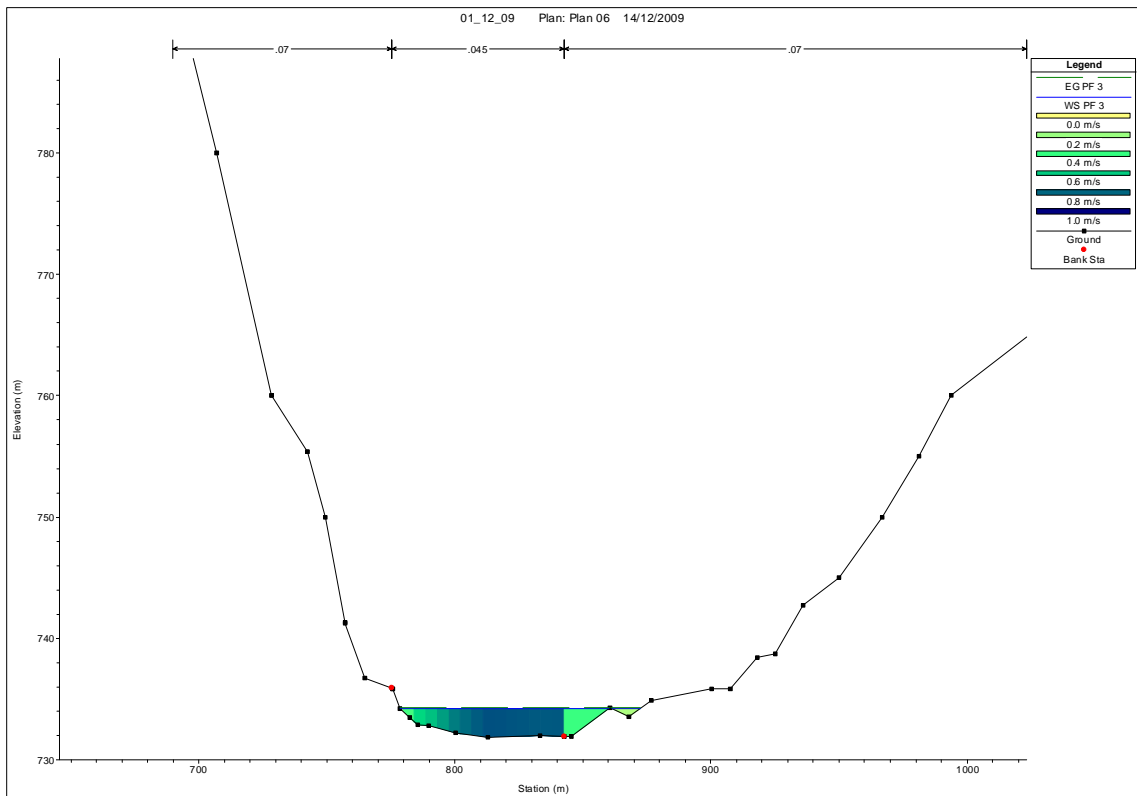


**Seção 42.5, Perfil 1.**

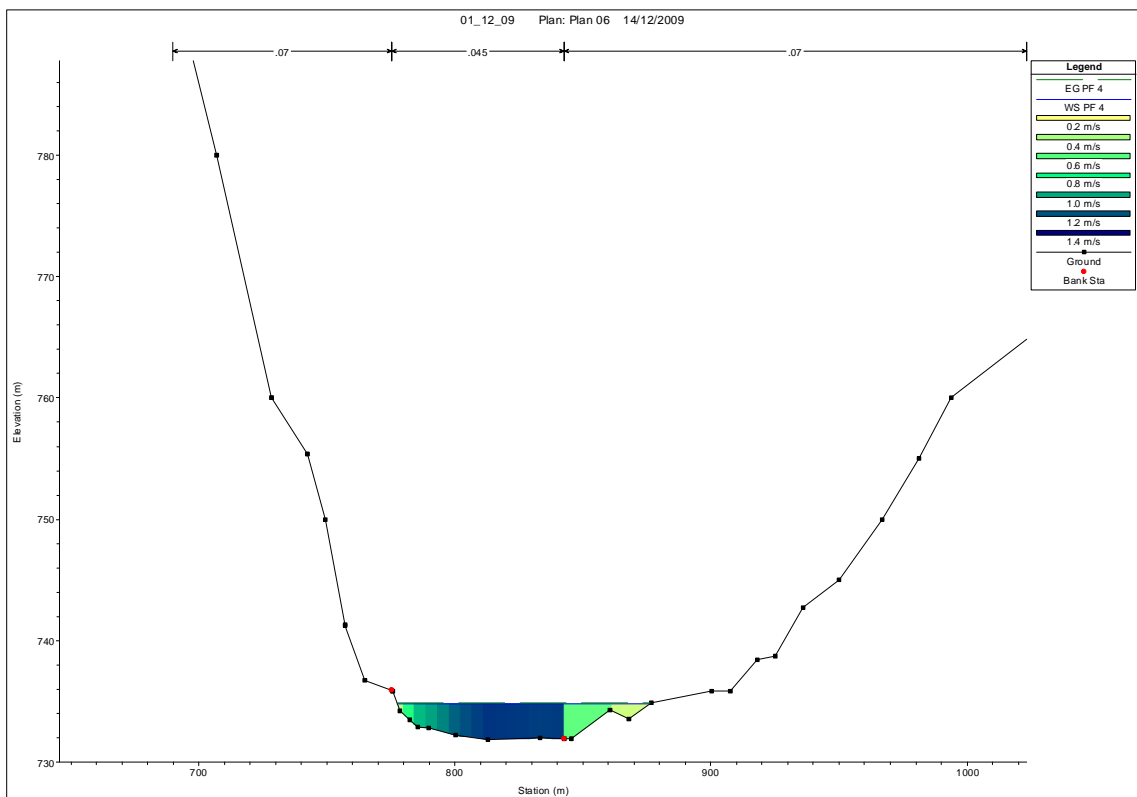


**Seção 42.5, Perfil 2.**

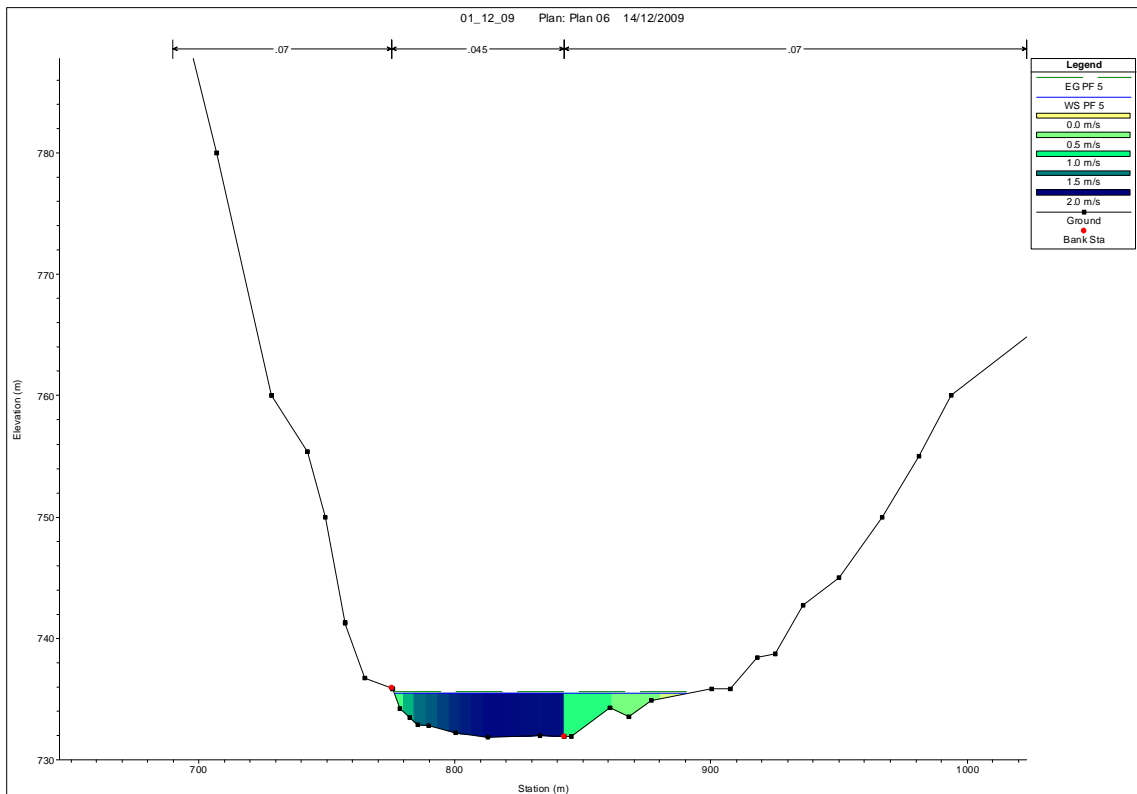




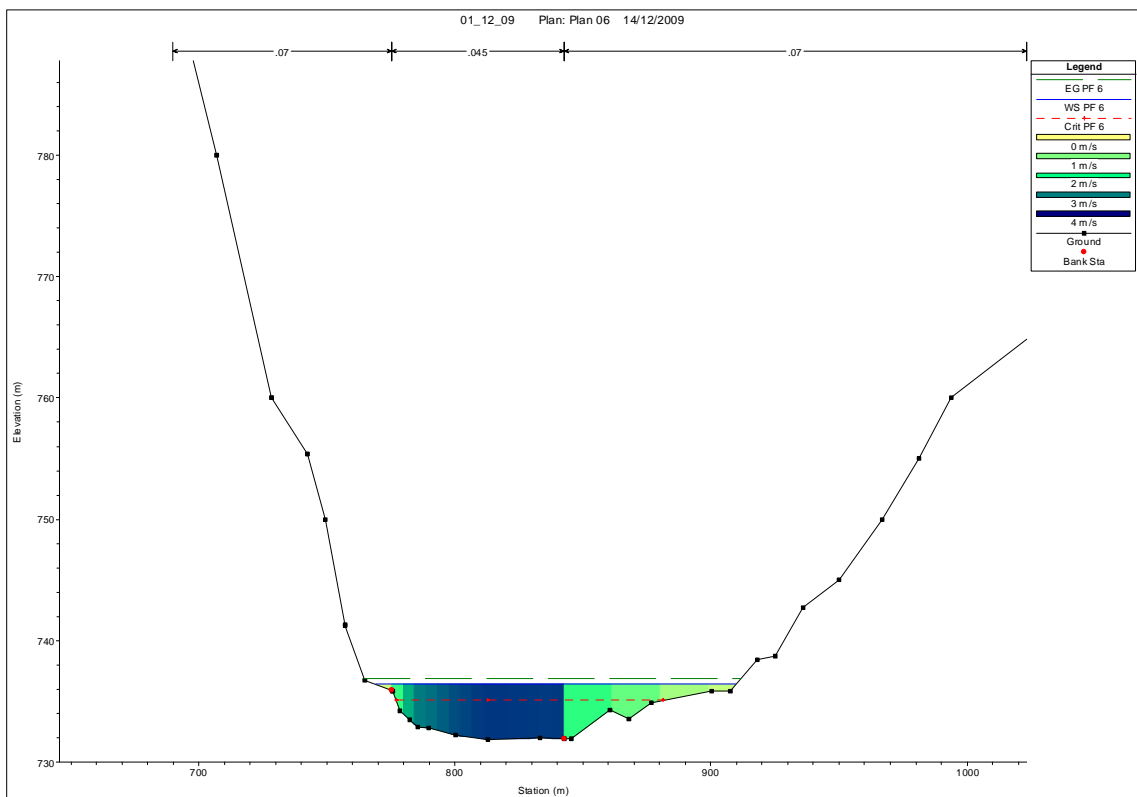
**Seção 42.5, Perfil 3.**



**Seção 42.5, Perfil 4.**

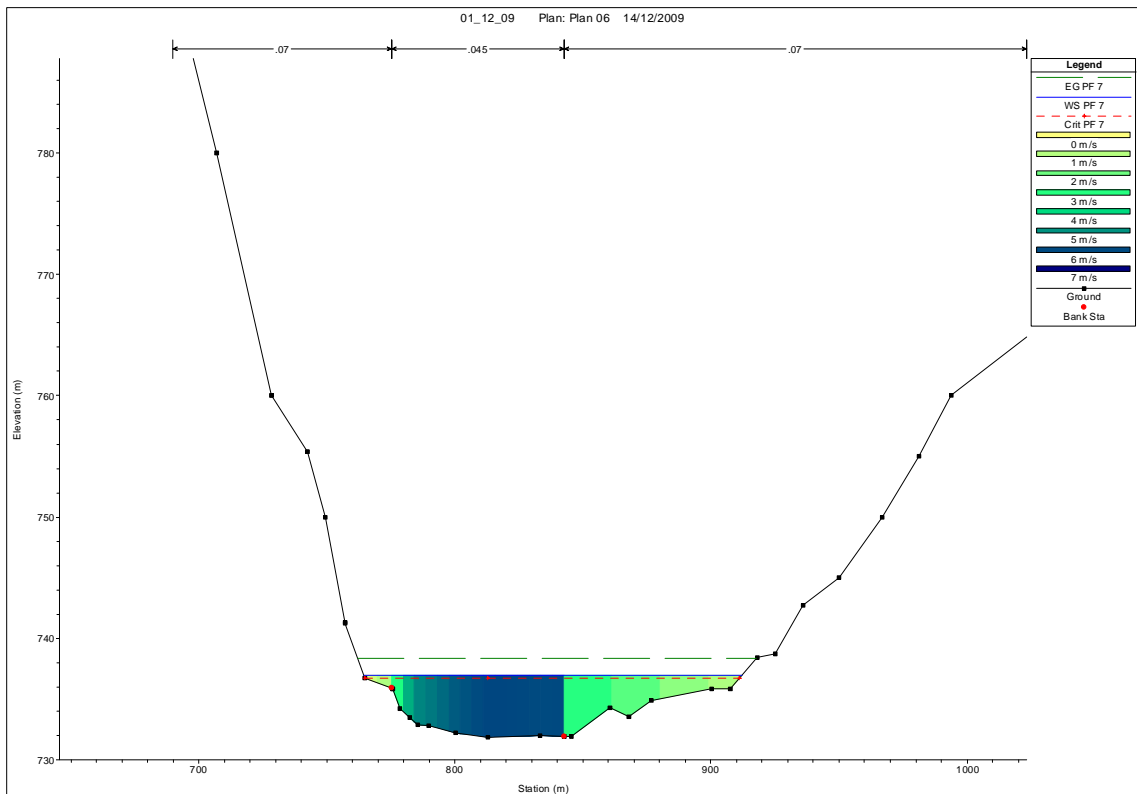


**Seção 42.5, Perfil 5.**

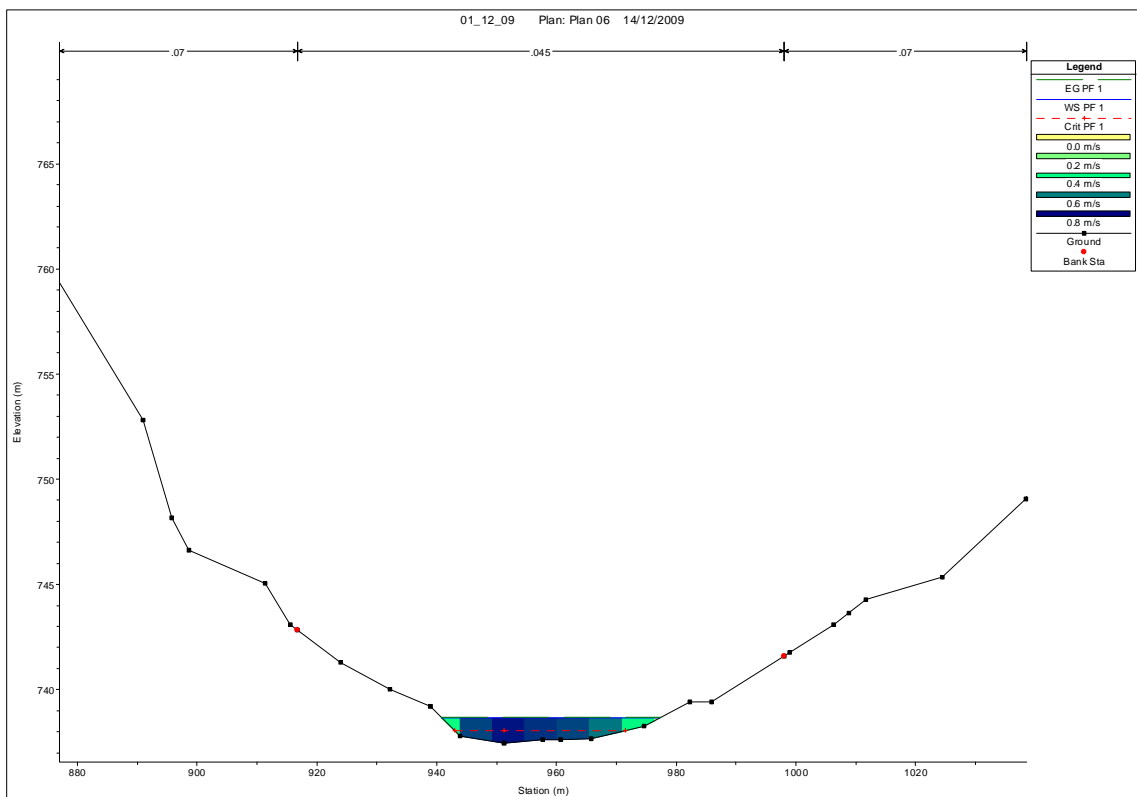


**Seção 42.5, Perfil 6.**

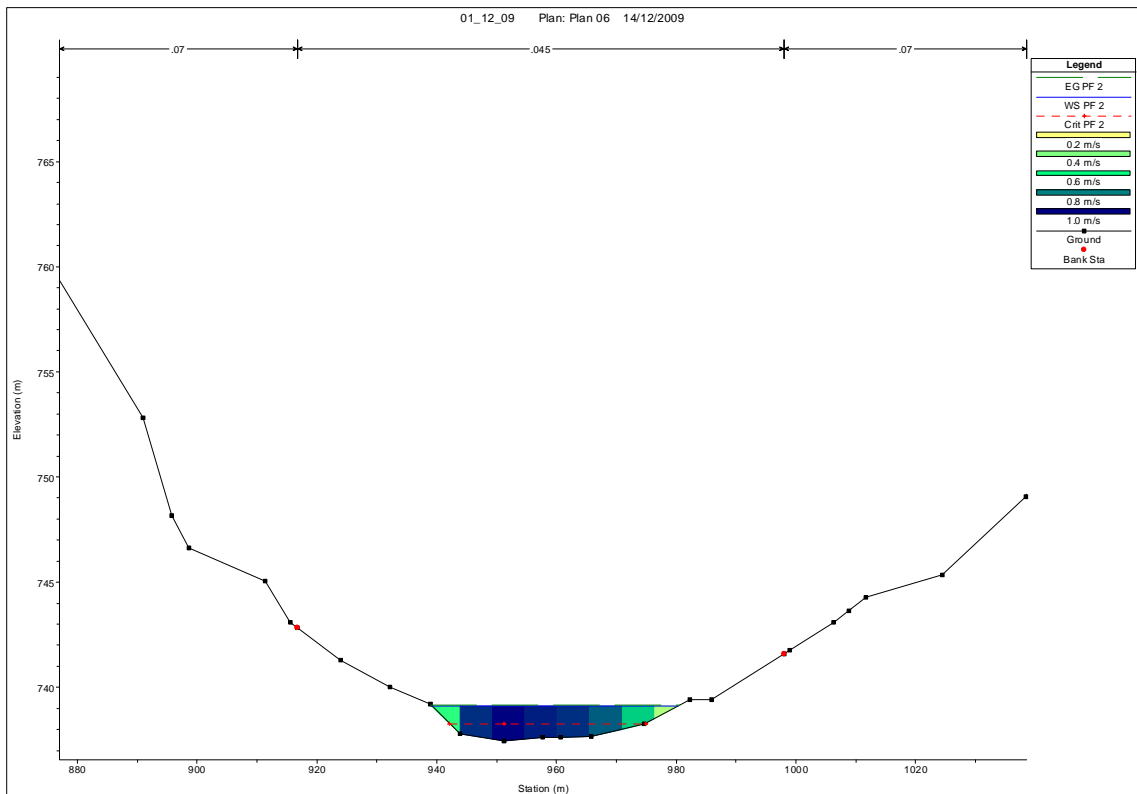




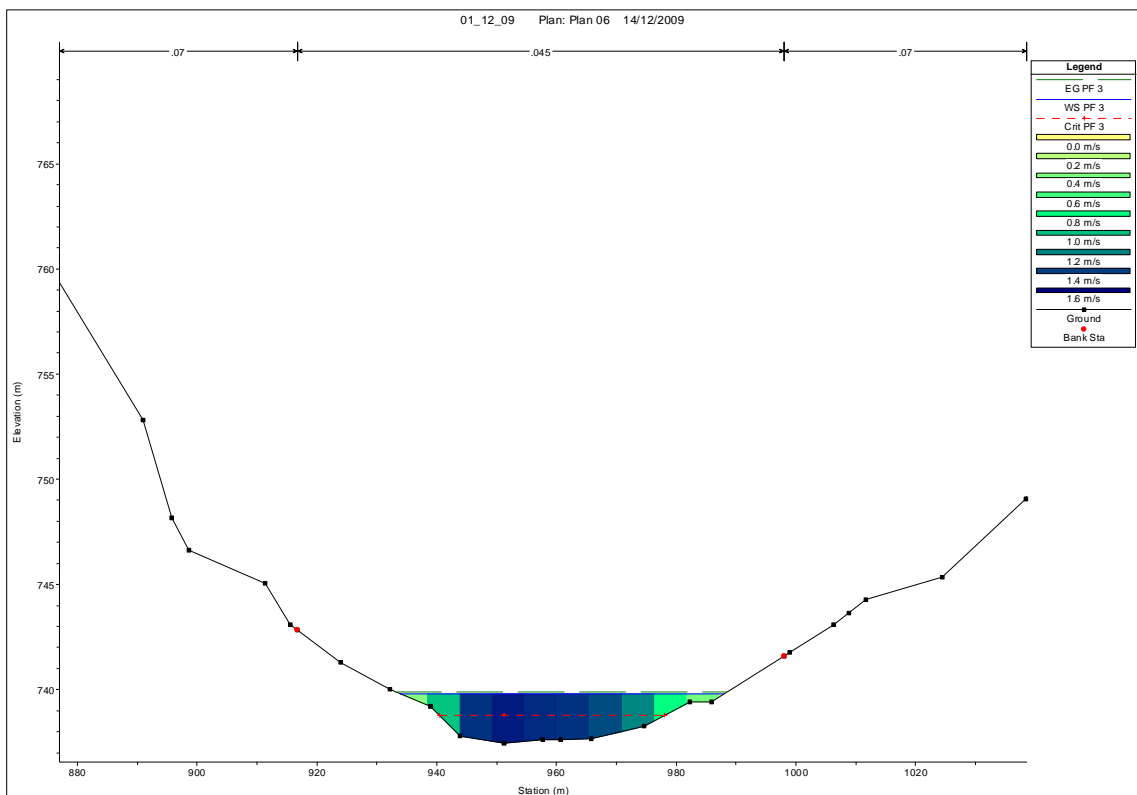
**Seção 42.5, Perfil 7.**



**Seção 47.1, Perfil 1.**

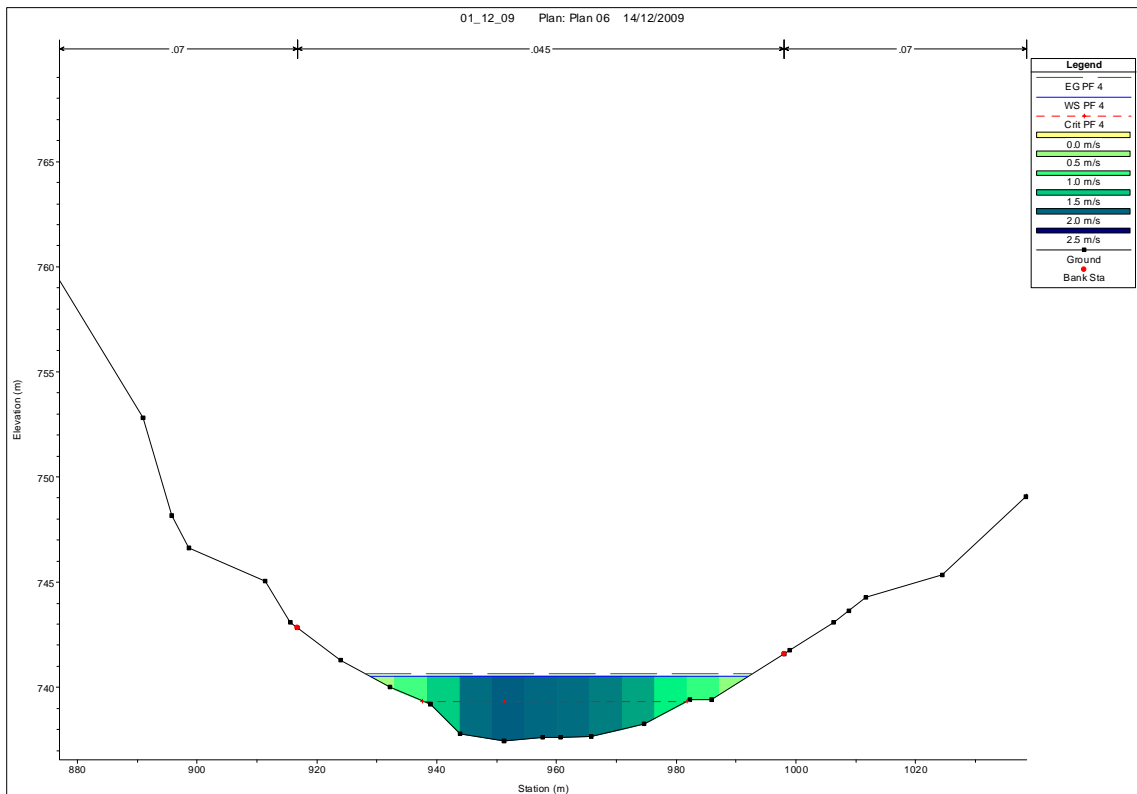


**Seção 47.1, Perfil 2.**

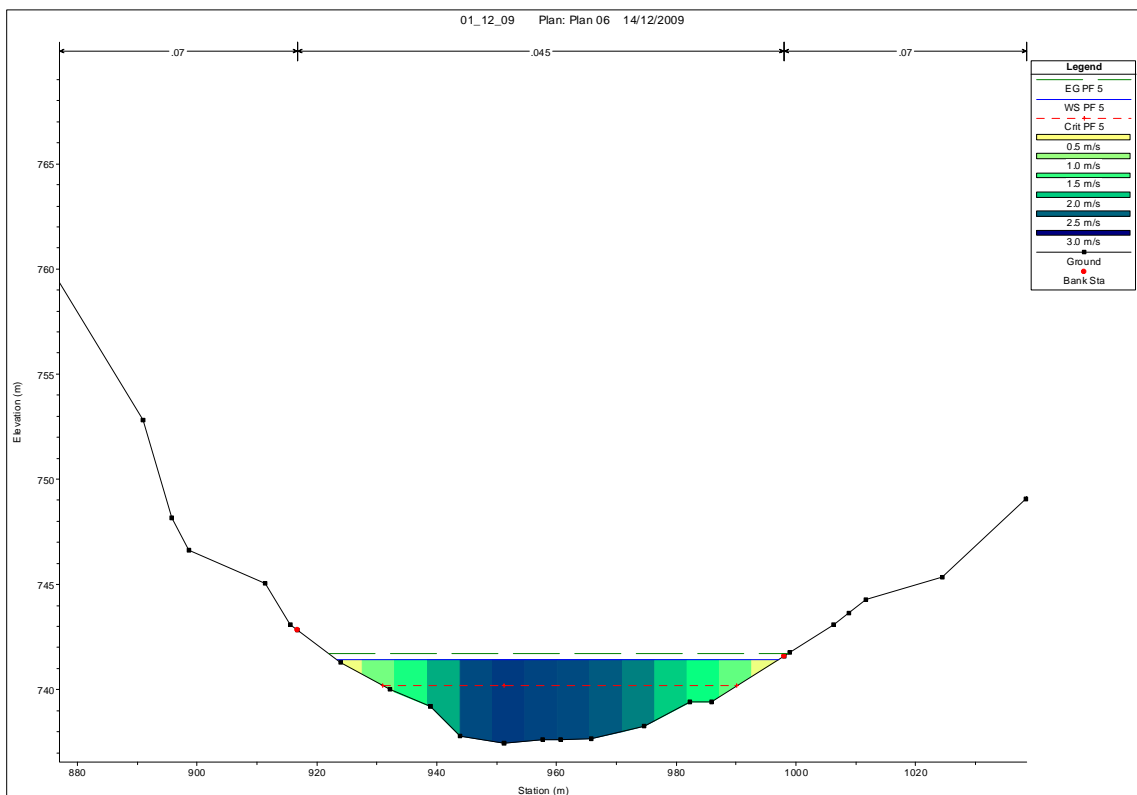


**Seção 47.1, Perfil 3.**

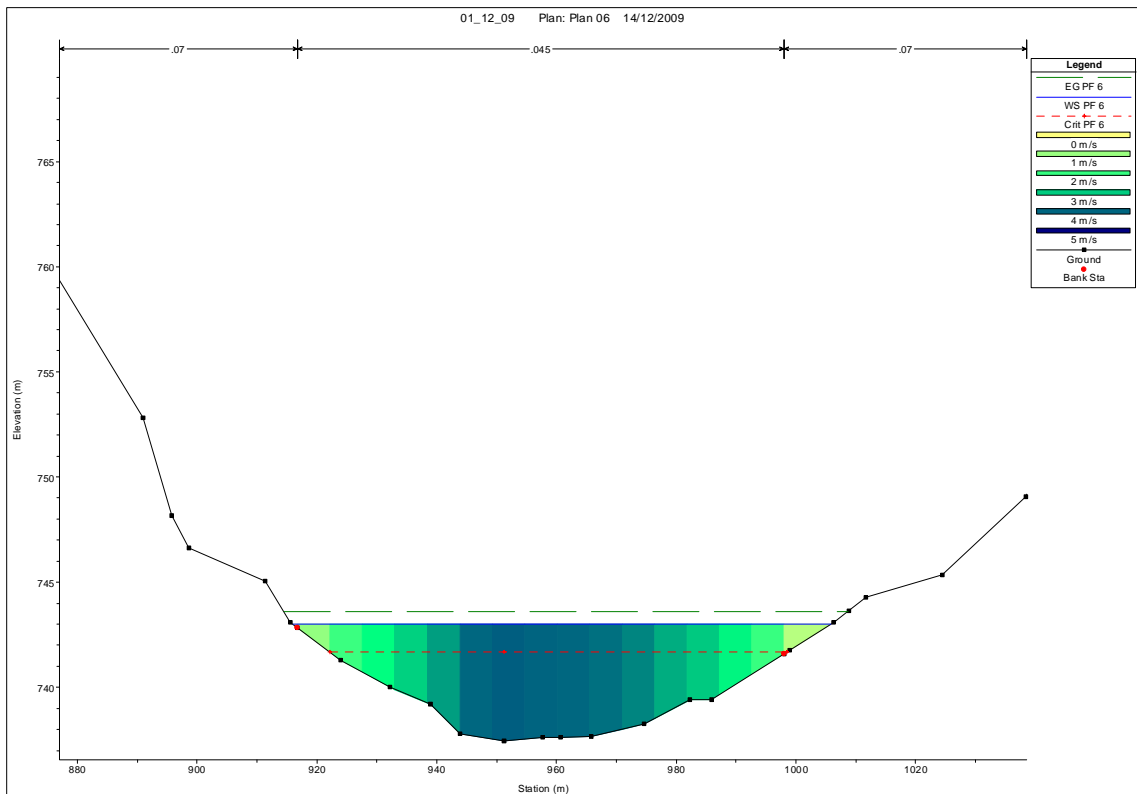




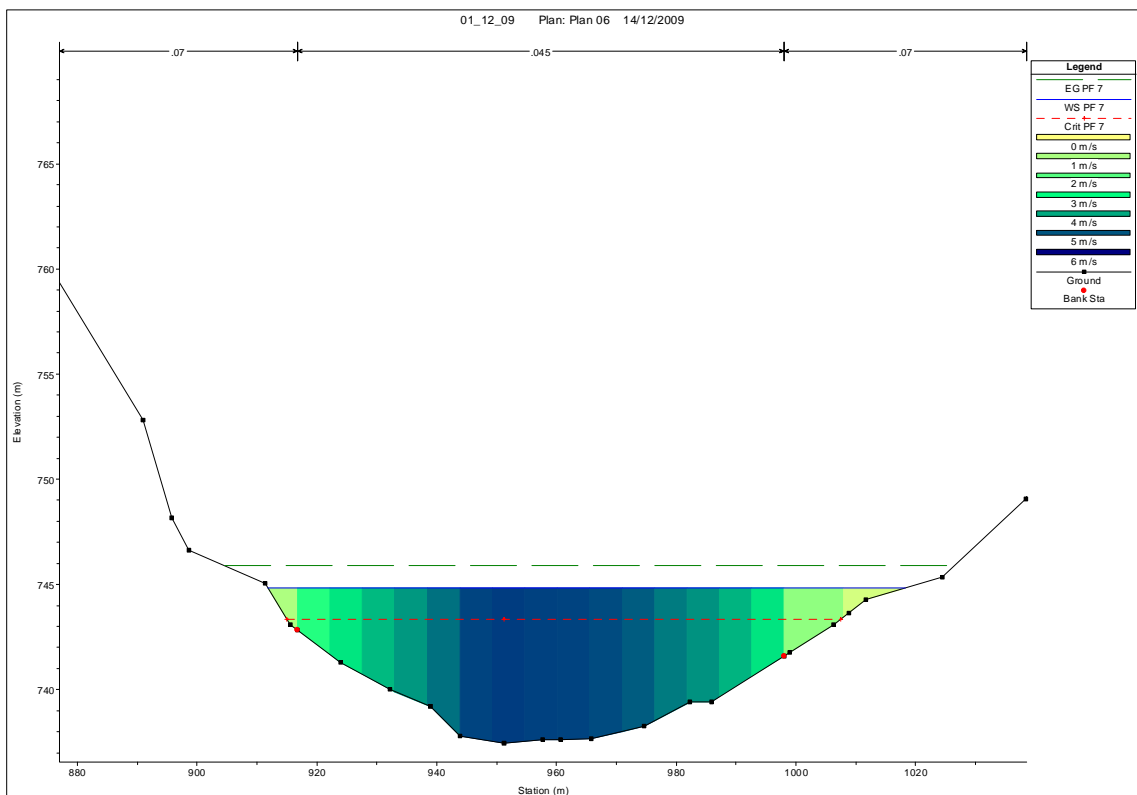
**Seção 47.1, Perfil 4.**



**Seção 47.1, Perfil 5.**

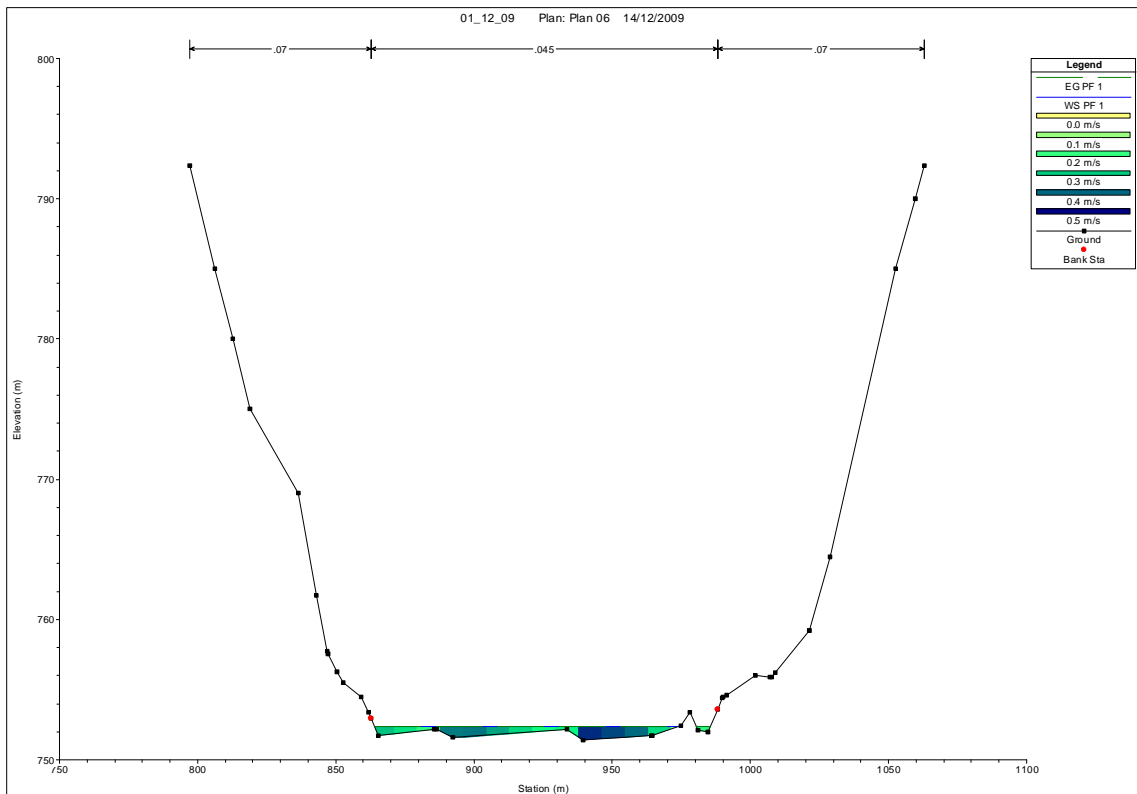


**Seção 47.1, Perfil 6.**

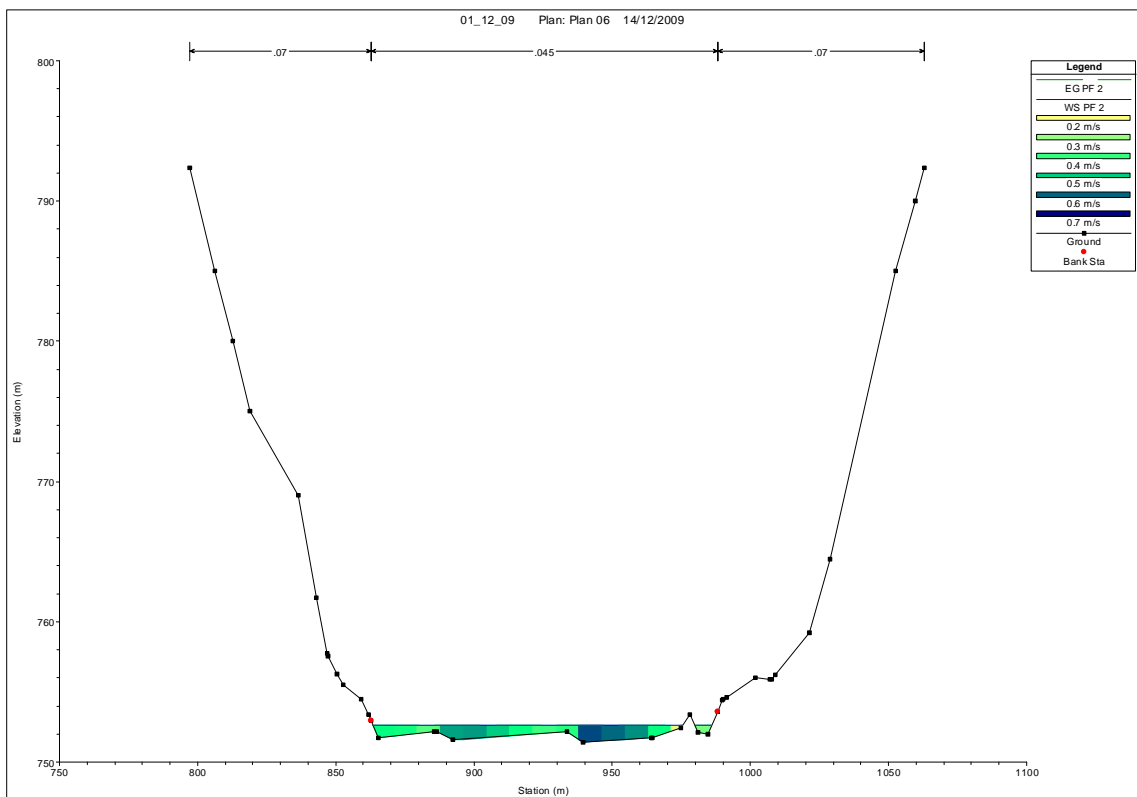


**Seção 47.1, Perfil 7.**

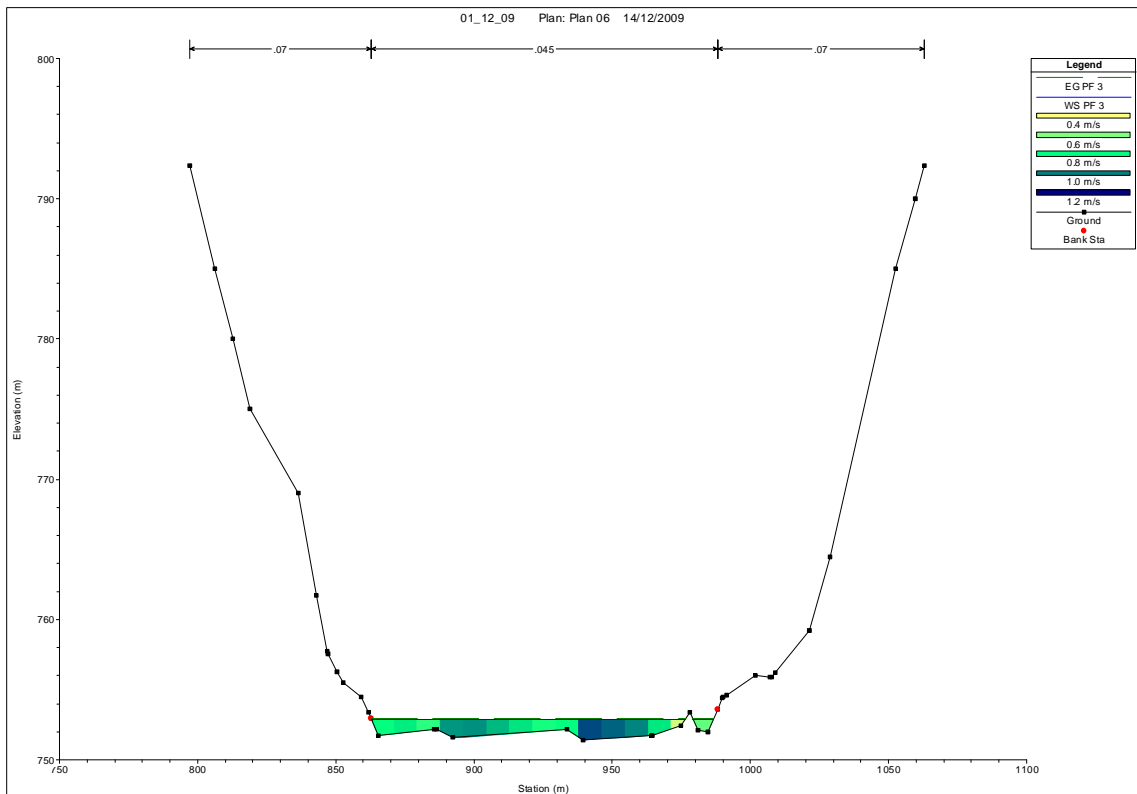




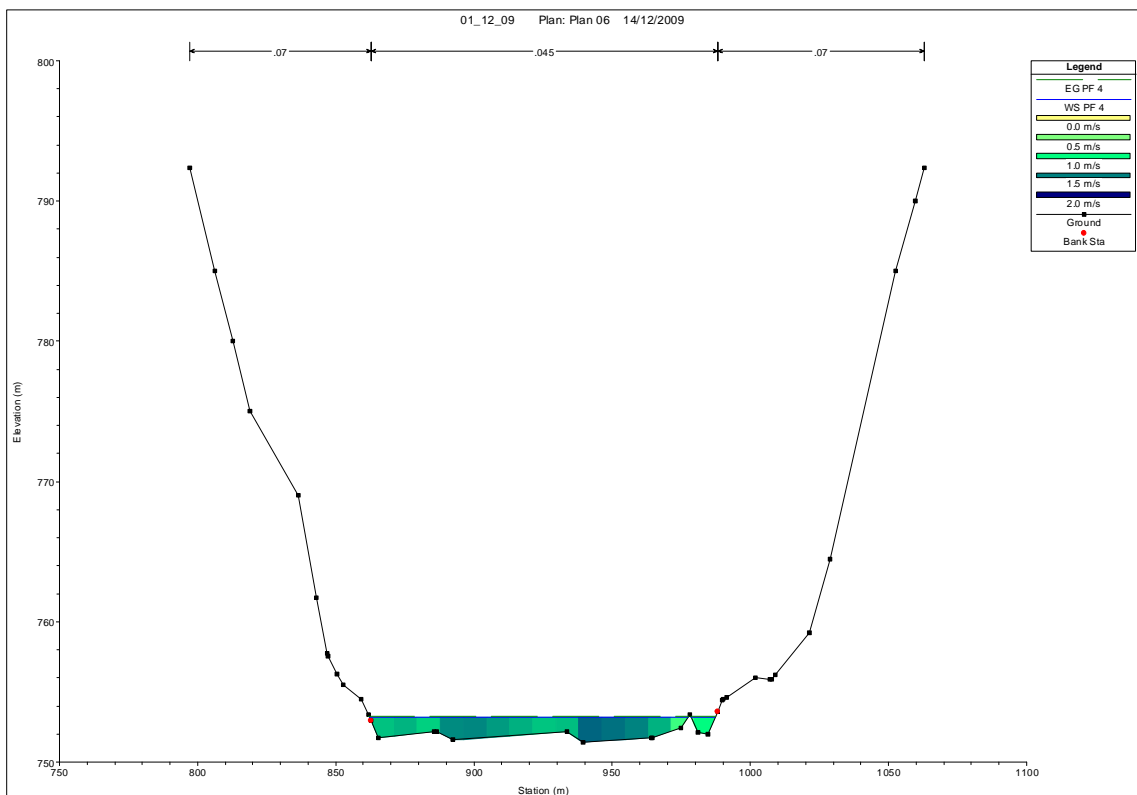
**Seção 52.4, Perfil 1.**



**Seção 52.4, Perfil 2.**

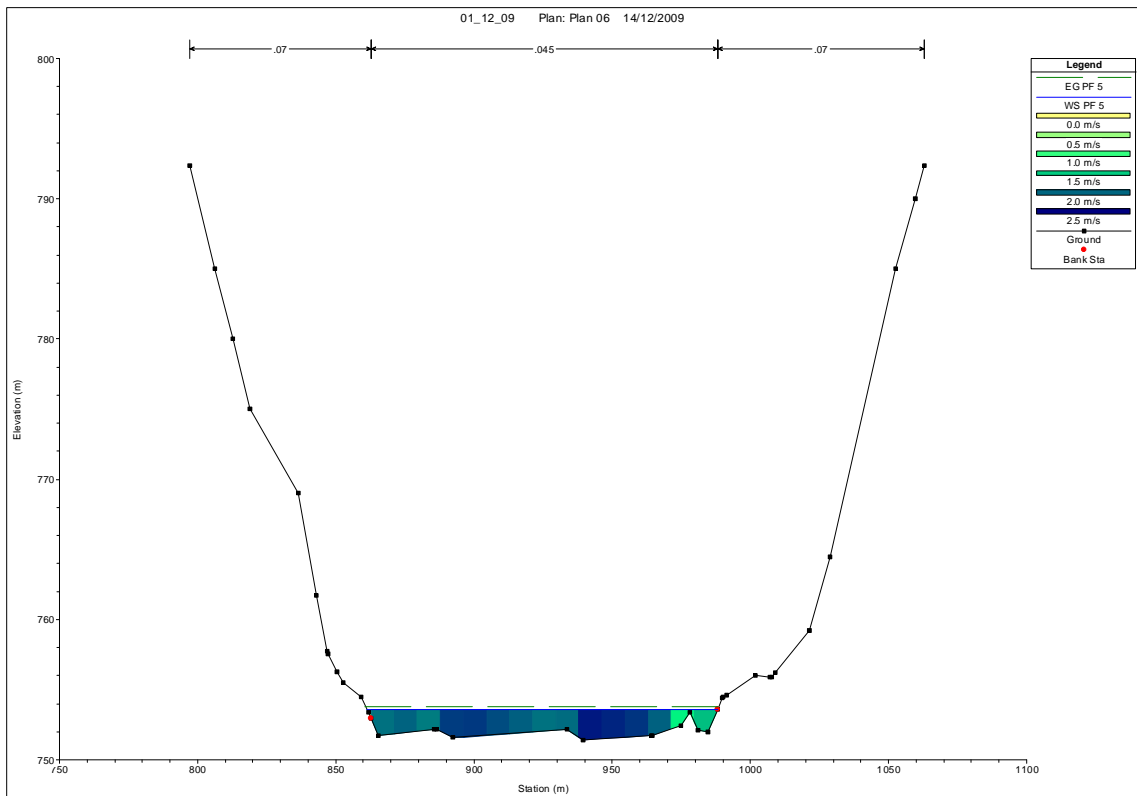


**Seção 52.4, Perfil 3.**

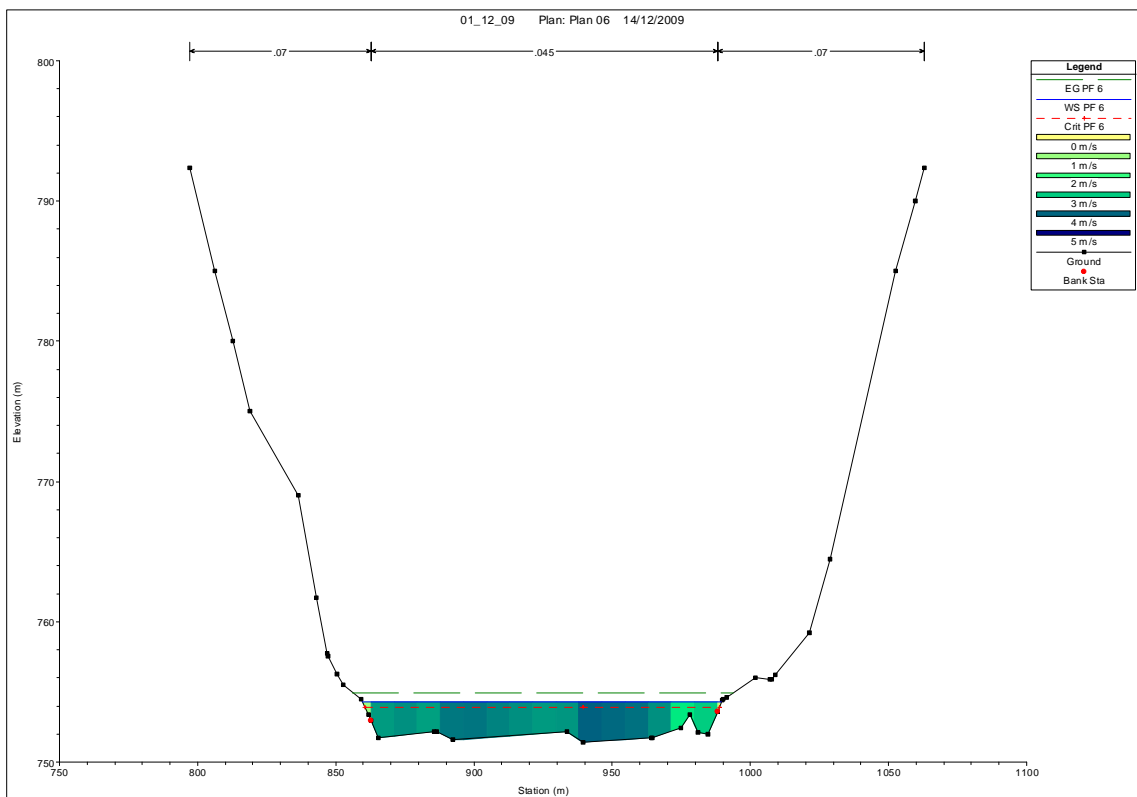


**Seção 52.4, Perfil 4.**

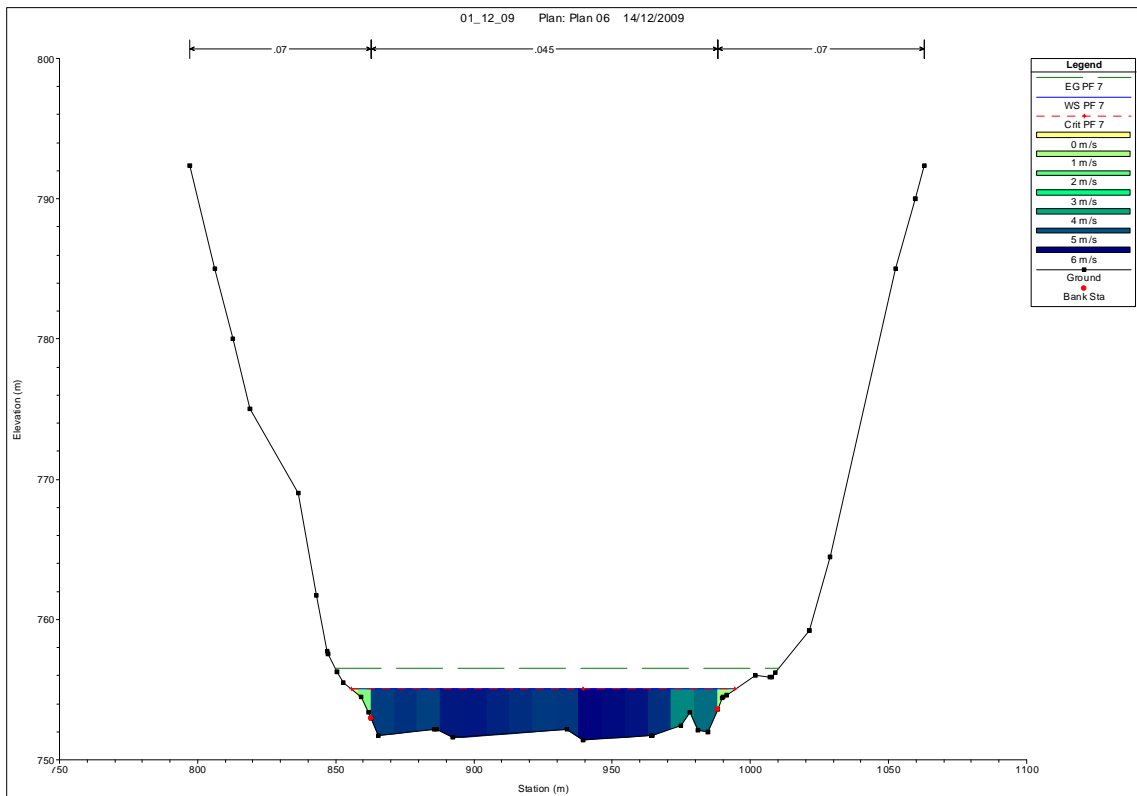




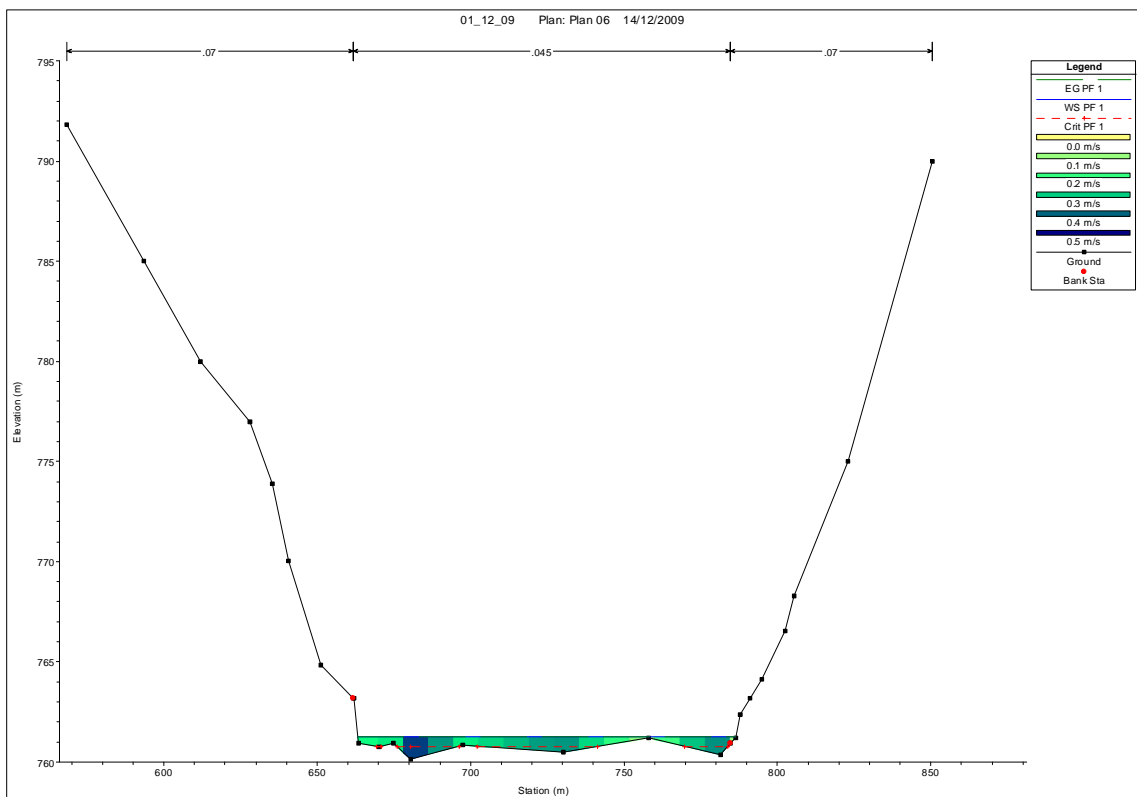
**Seção 52.4, Perfil 5.**



**Seção 52.4, Perfil 6.**

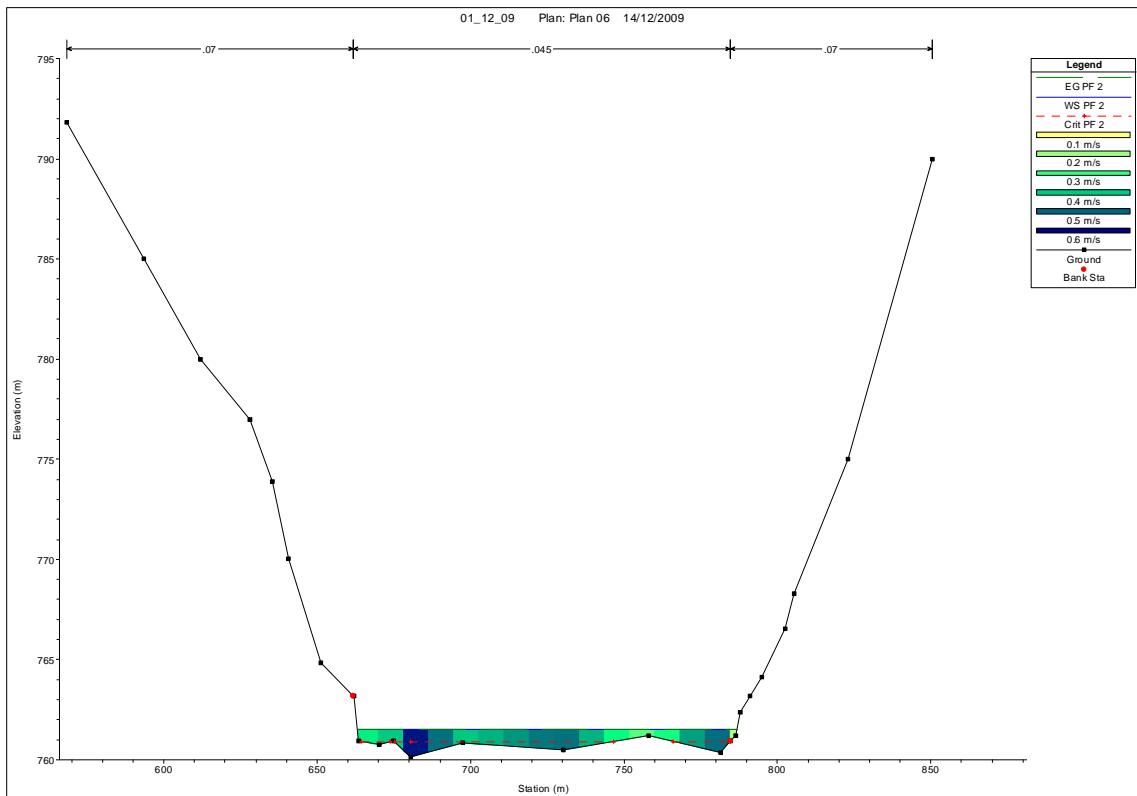


**Seção 52.4, Perfil 7.**

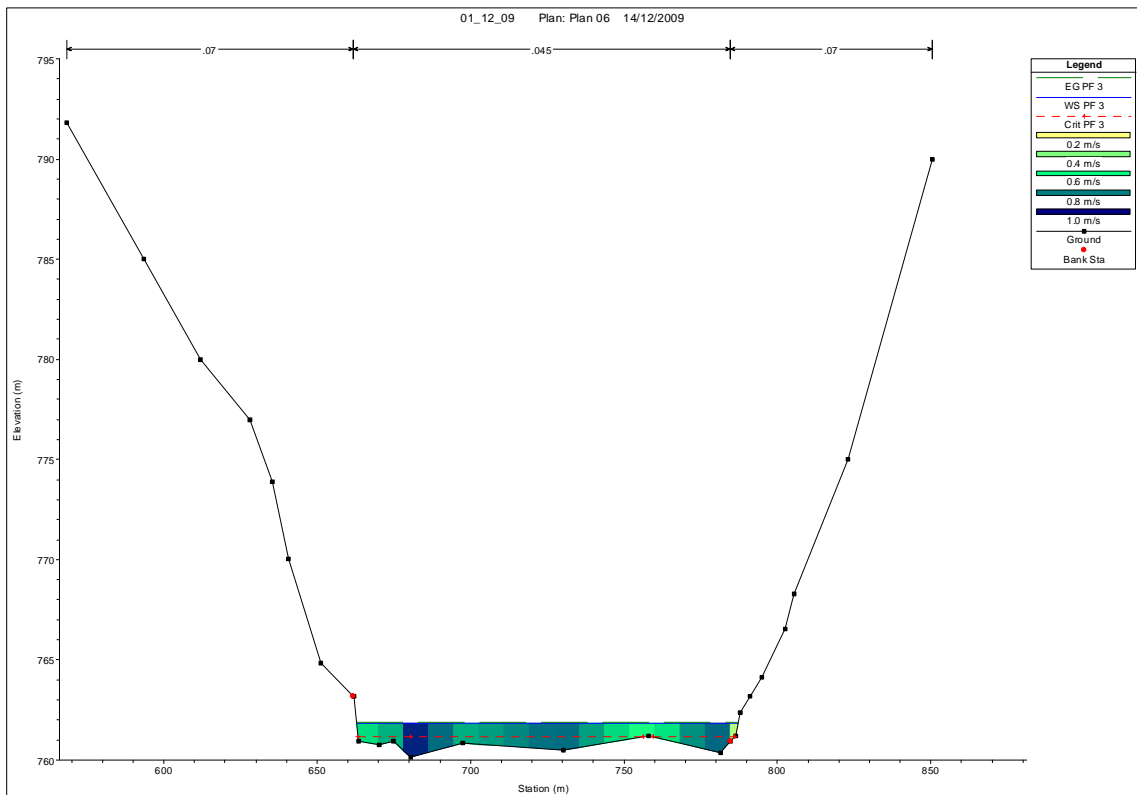


**Seção 57.6, Perfil 1.**

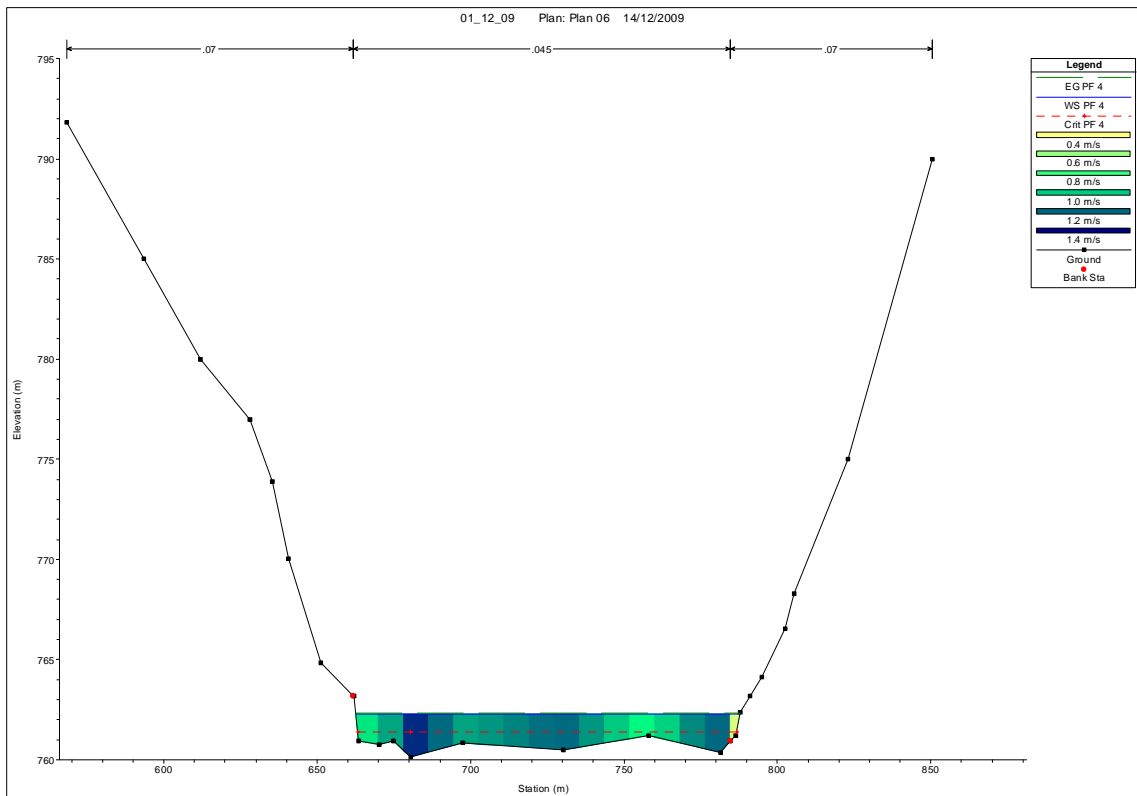




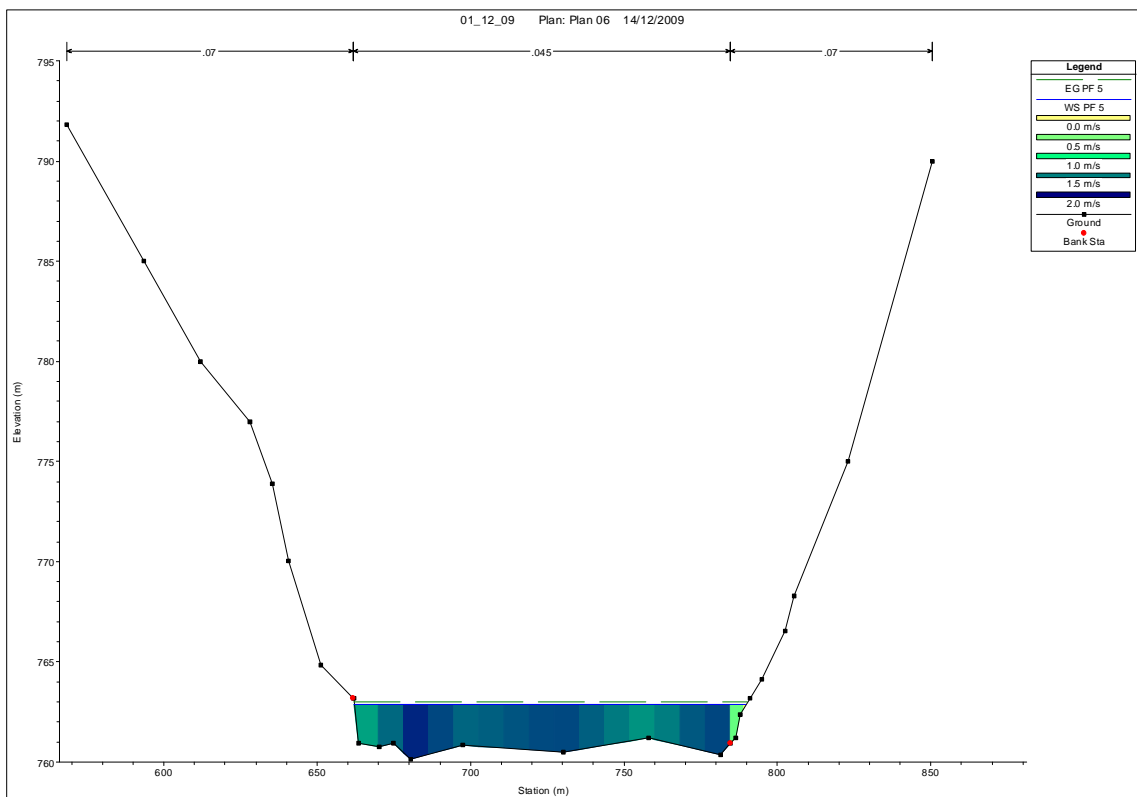
**Seção 57.6, Perfil 2.**



**Seção 57.6, Perfil 3.**

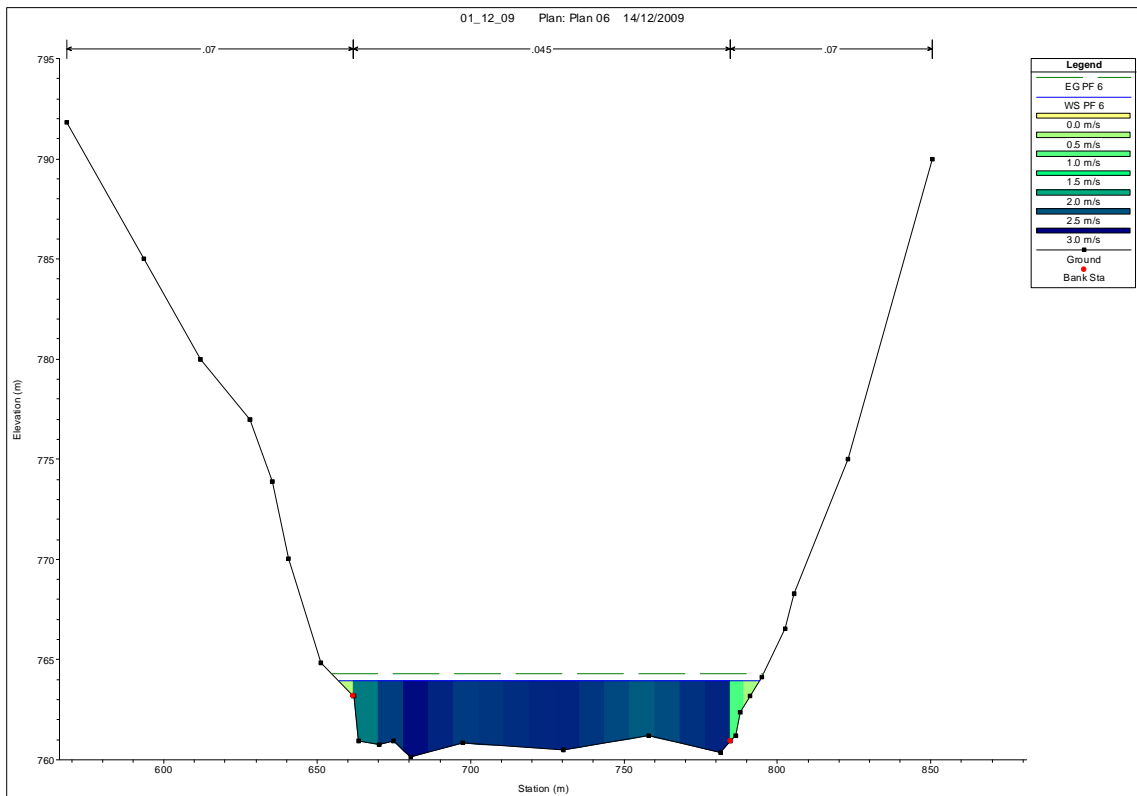


**Seção 57.6, Perfil 4.**

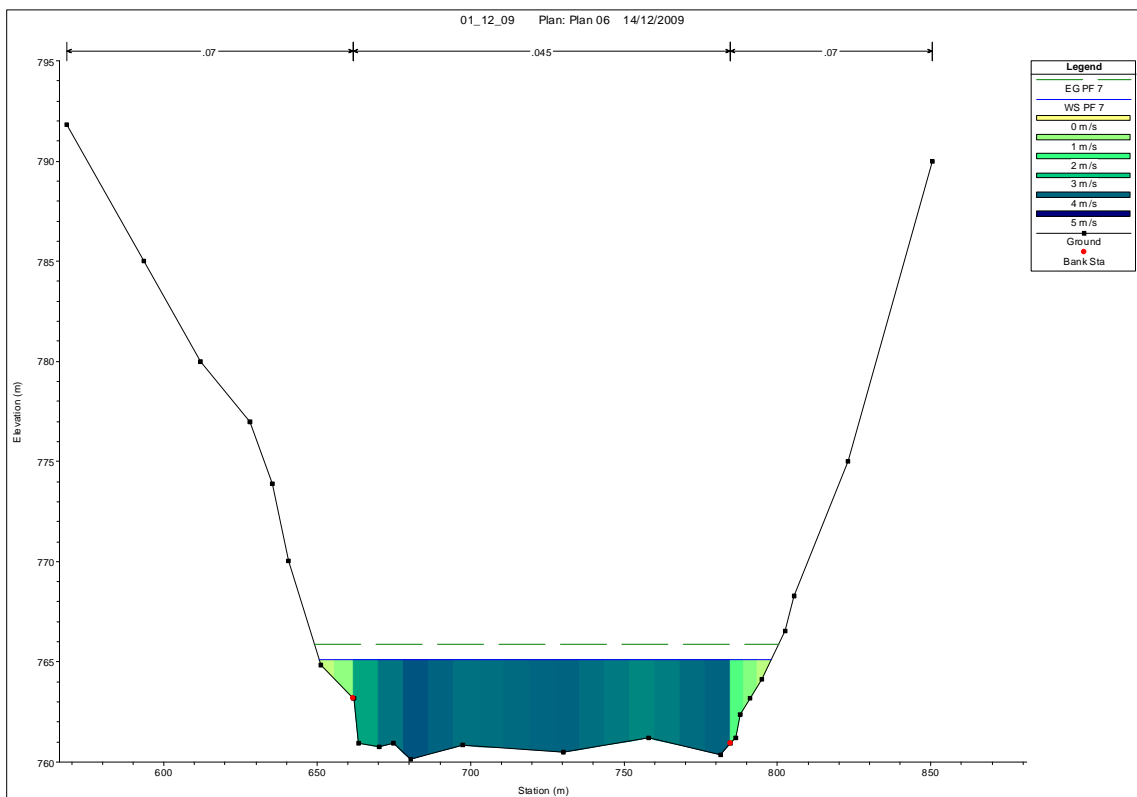


**Seção 57.6, Perfil 5.**

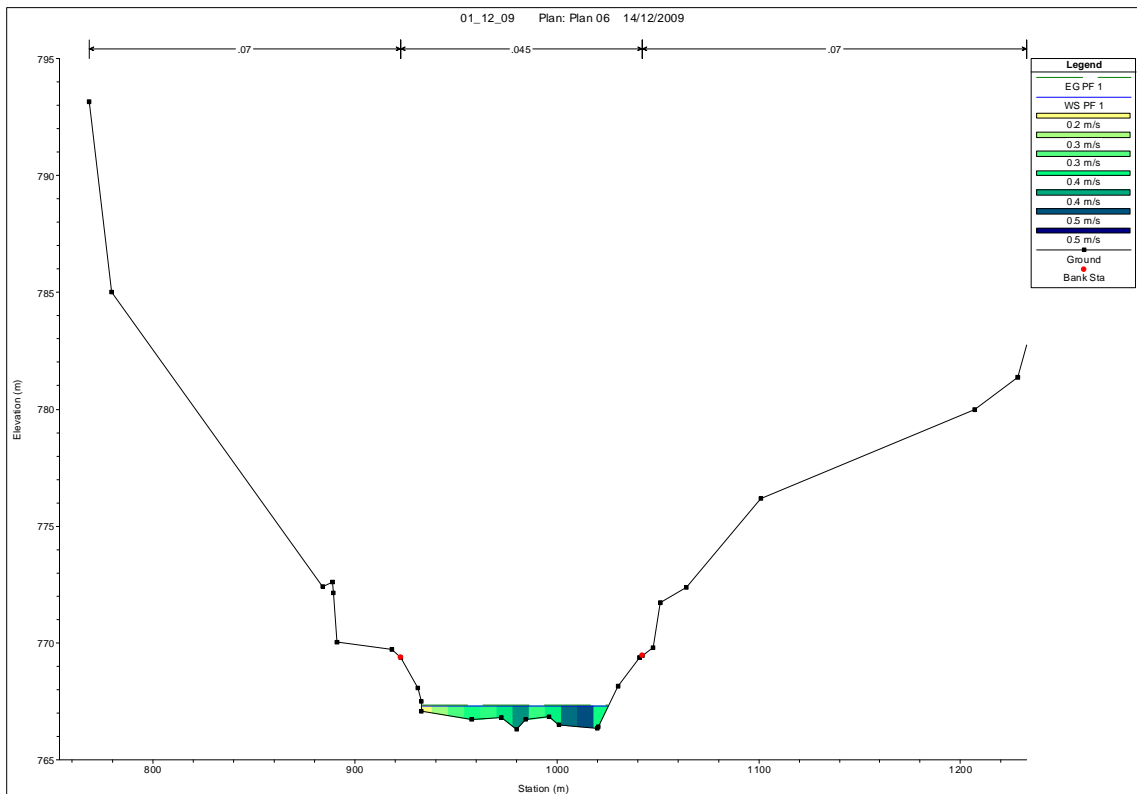




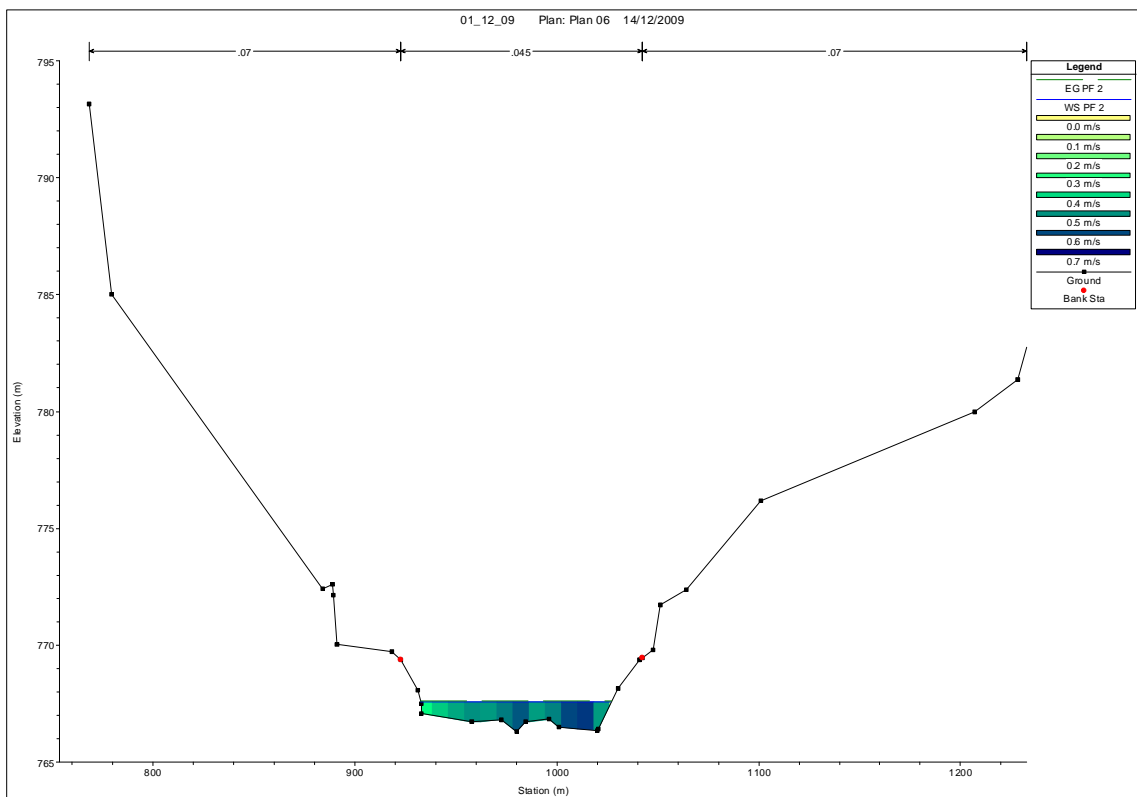
**Seção 57.6, Perfil 6.**



**Seção 57.6, Perfil 6.**

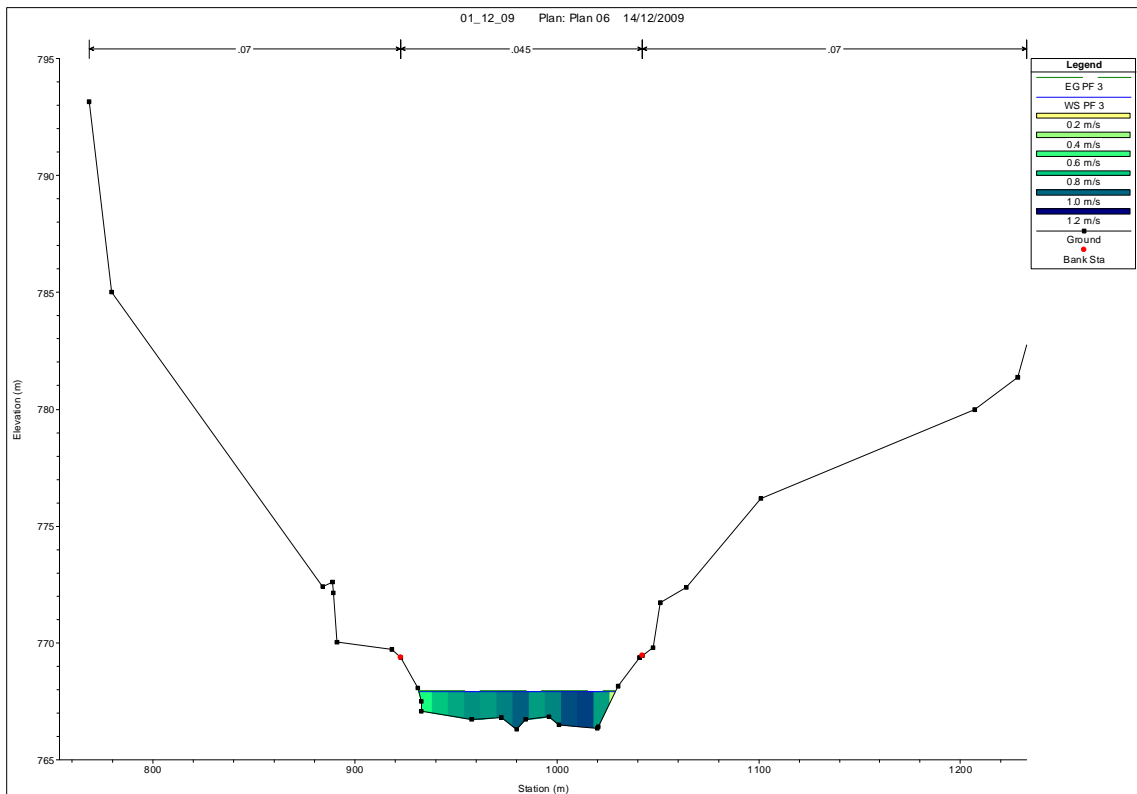


**Seção 61.3, Perfil 1.**

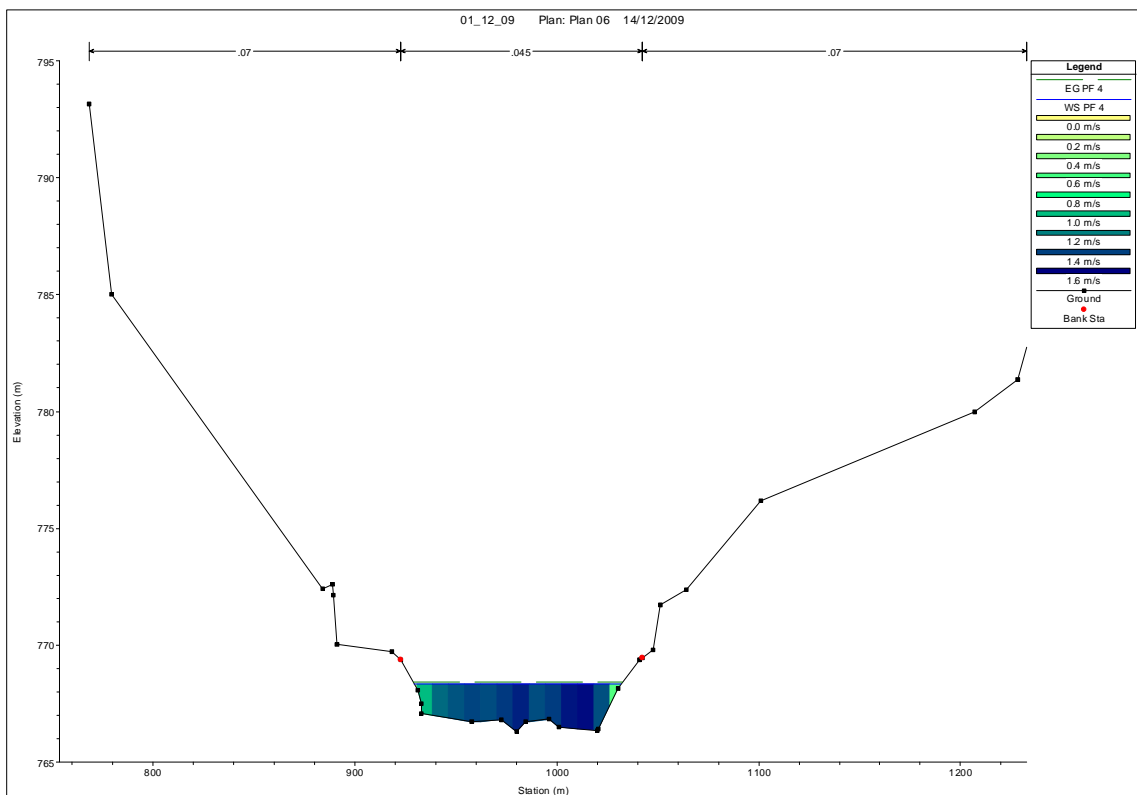


**Seção 61.3, Perfil 2.**

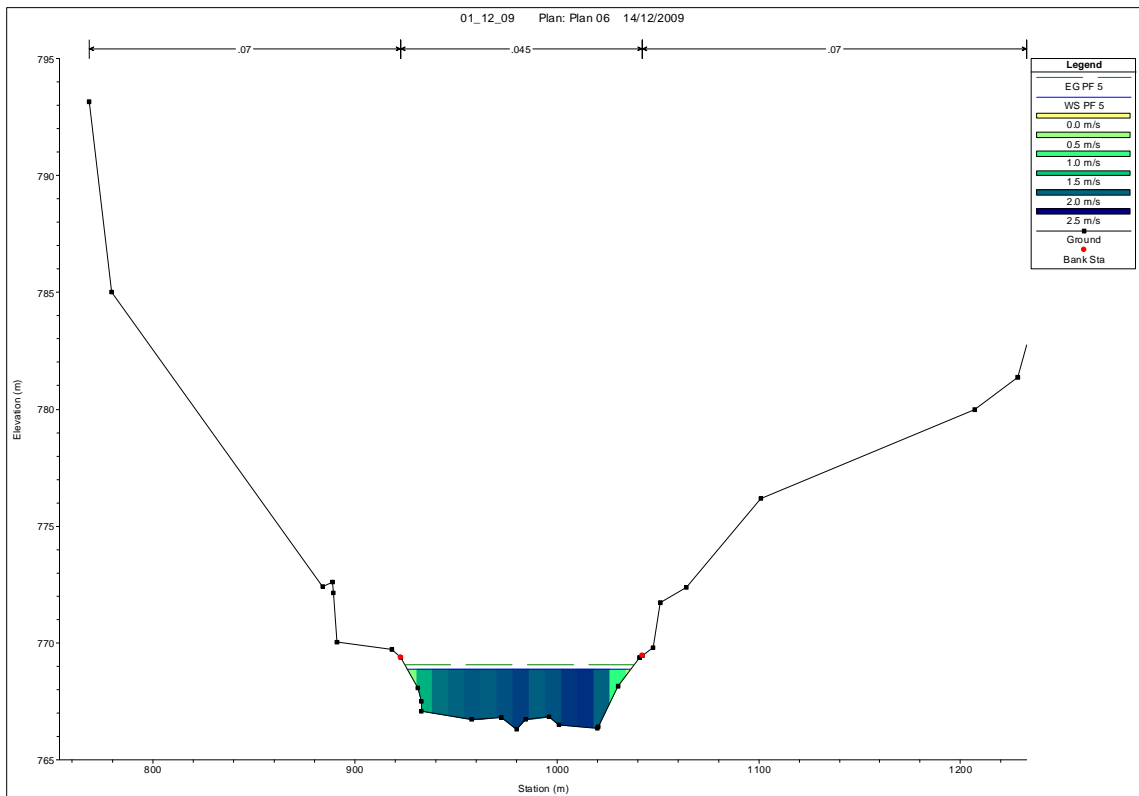




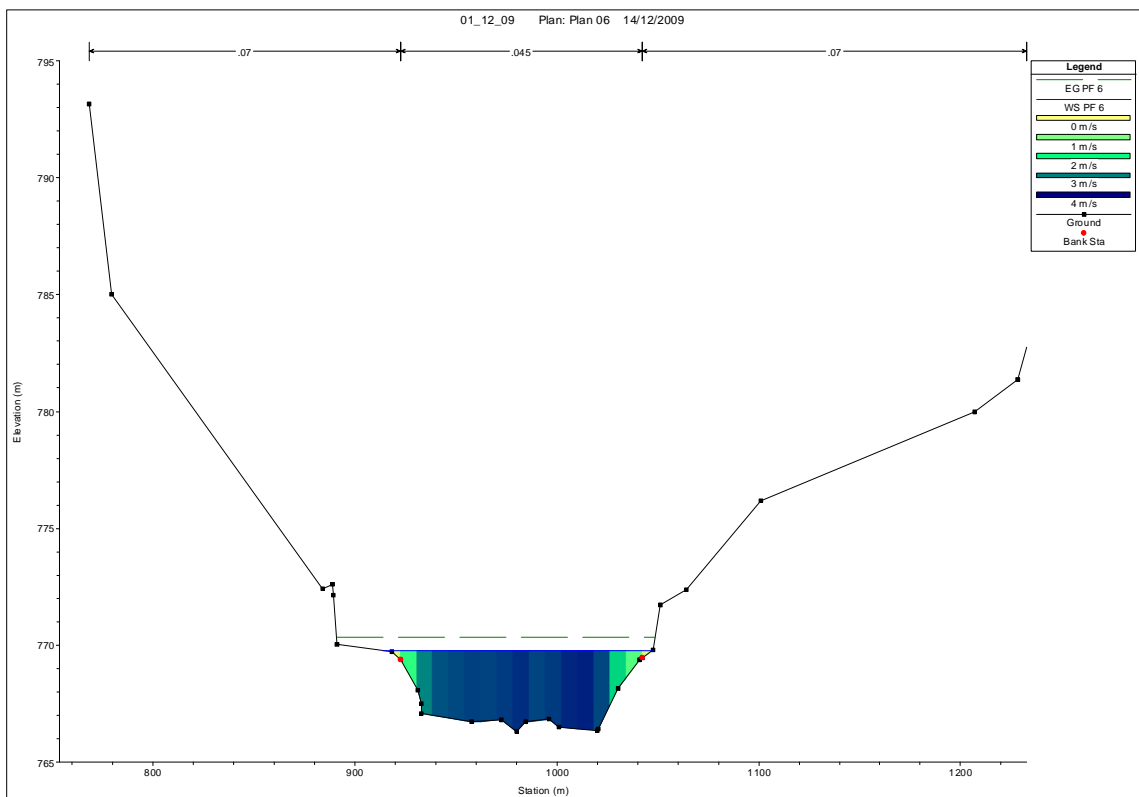
**Seção 61.3, Perfil 3.**



**Seção 61.3, Perfil 4.**

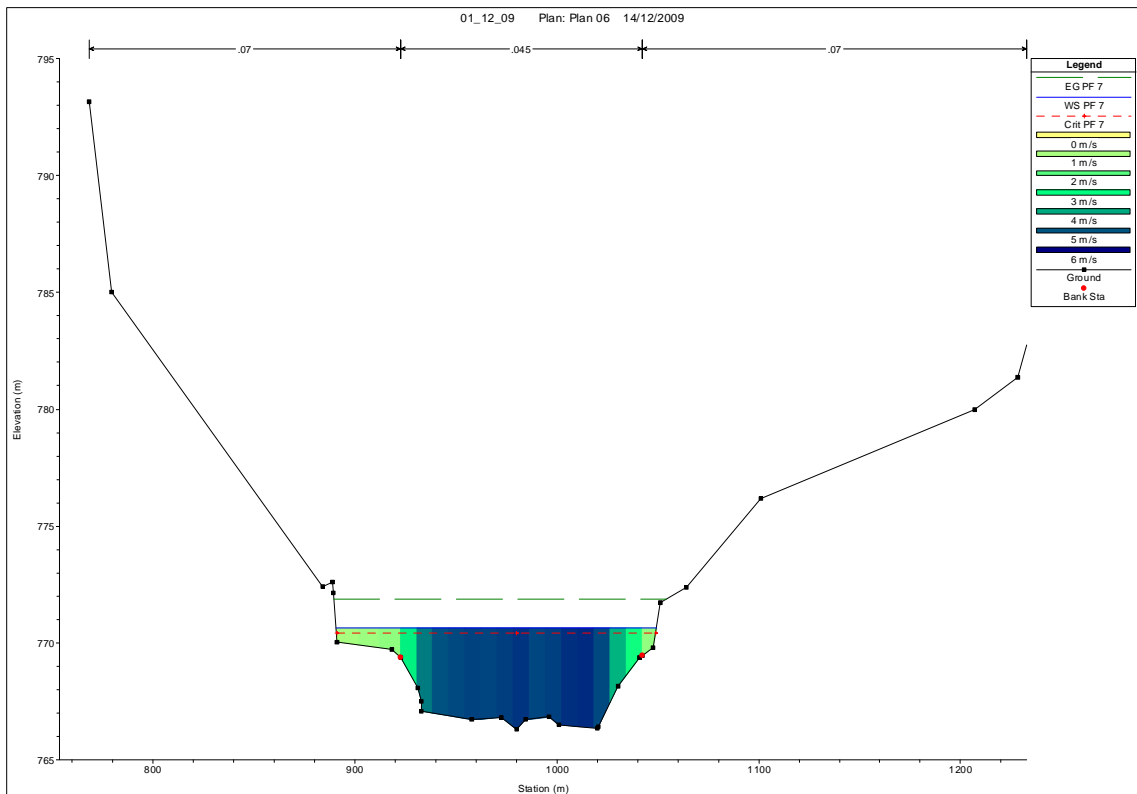


**Seção 61.3, Perfil 5.**

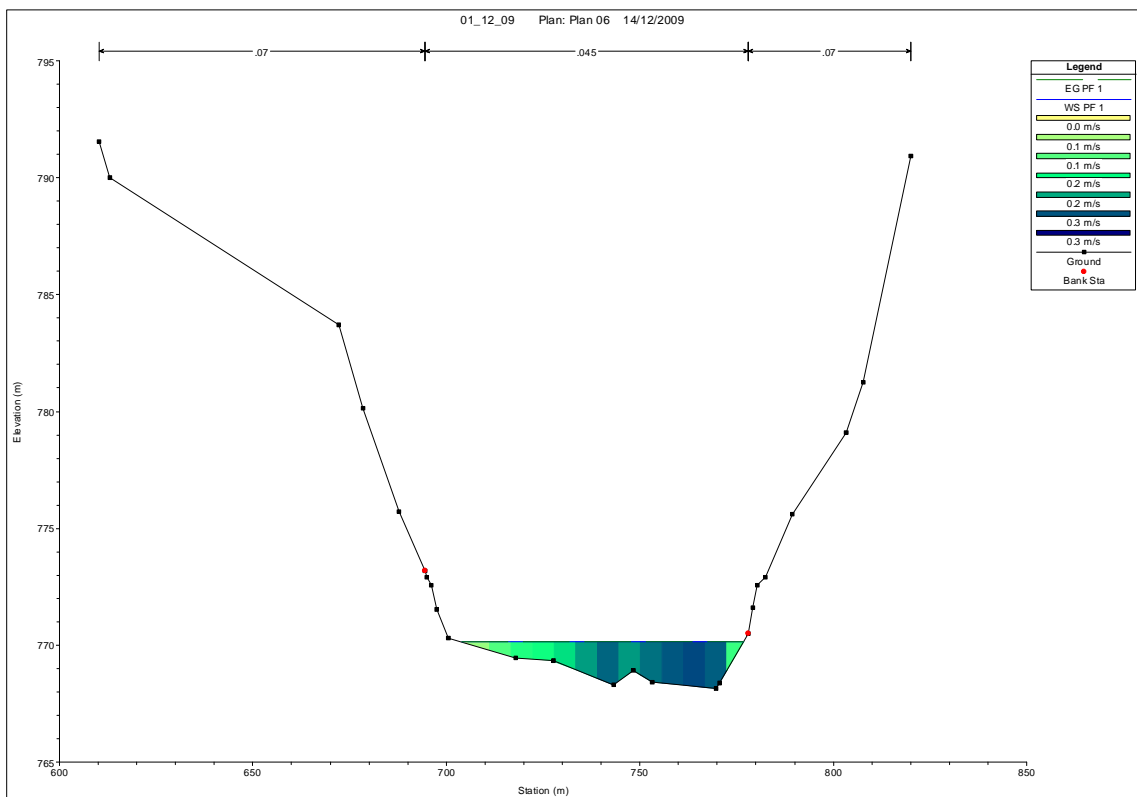


**Seção 61.3, Perfil 6.**

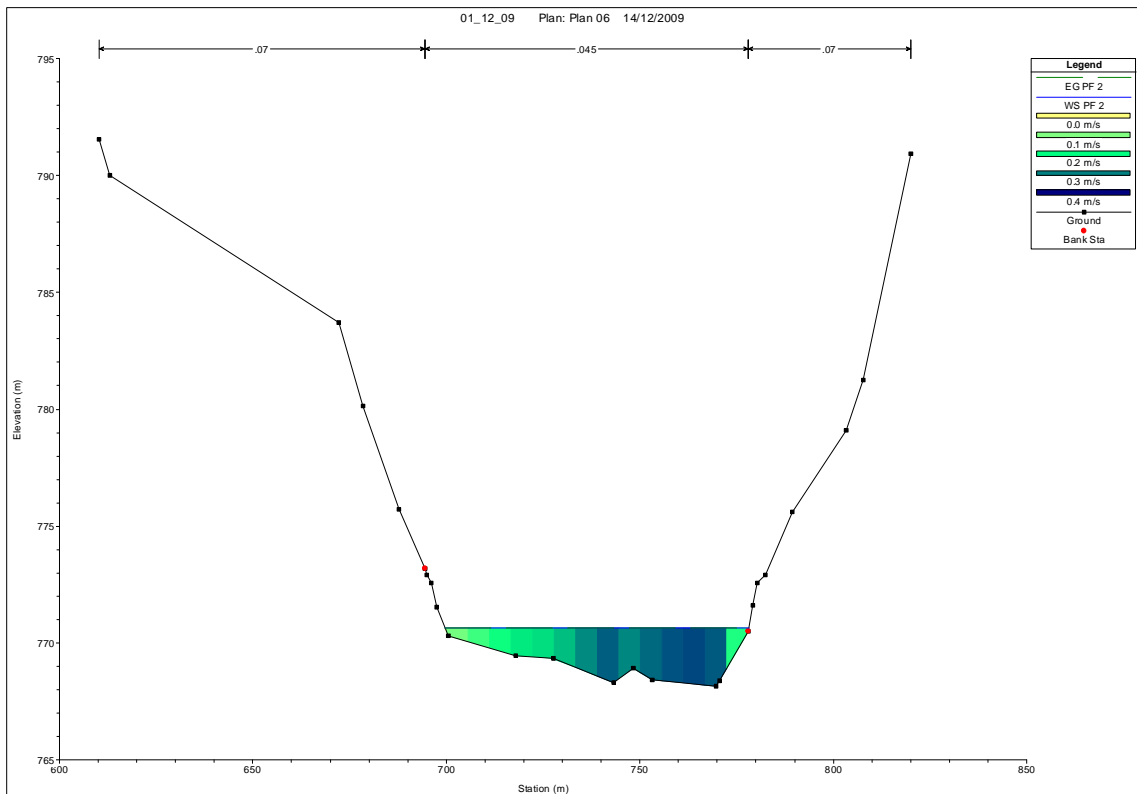




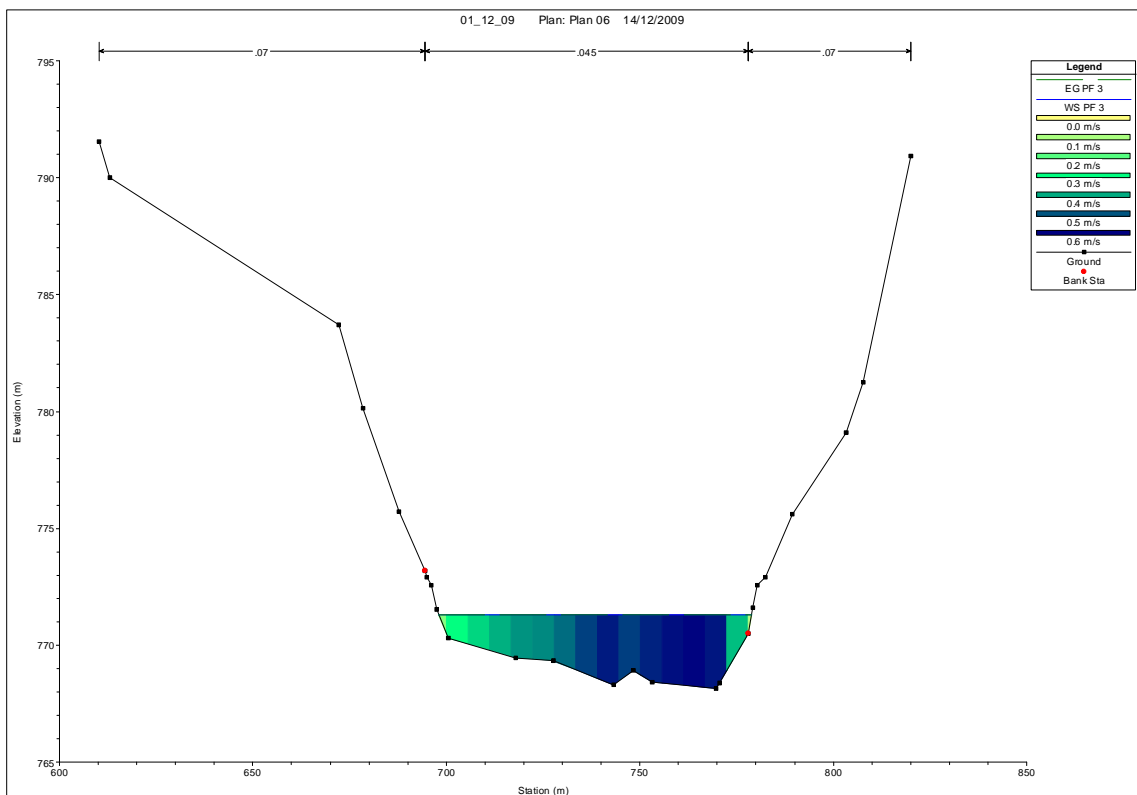
**Seção 61.3, Perfil 7.**



**Seção 66.4, Perfil.**

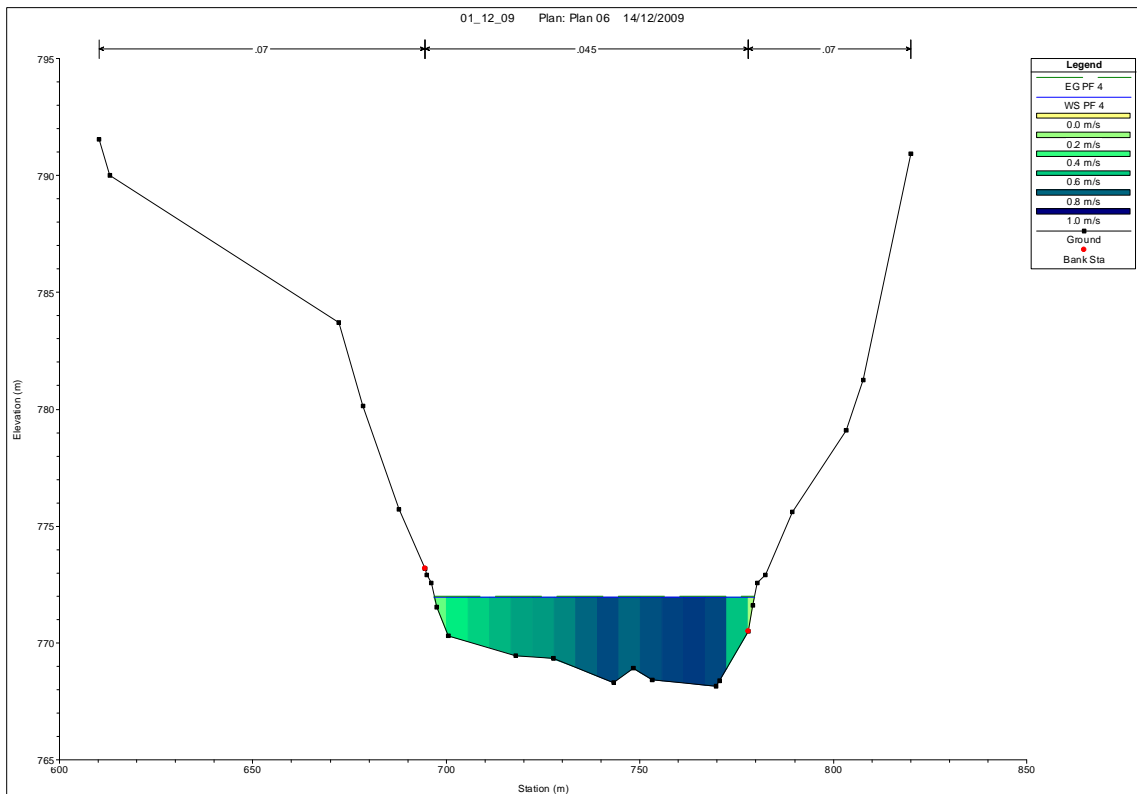


**Seção 66.4, Perfil 2.**

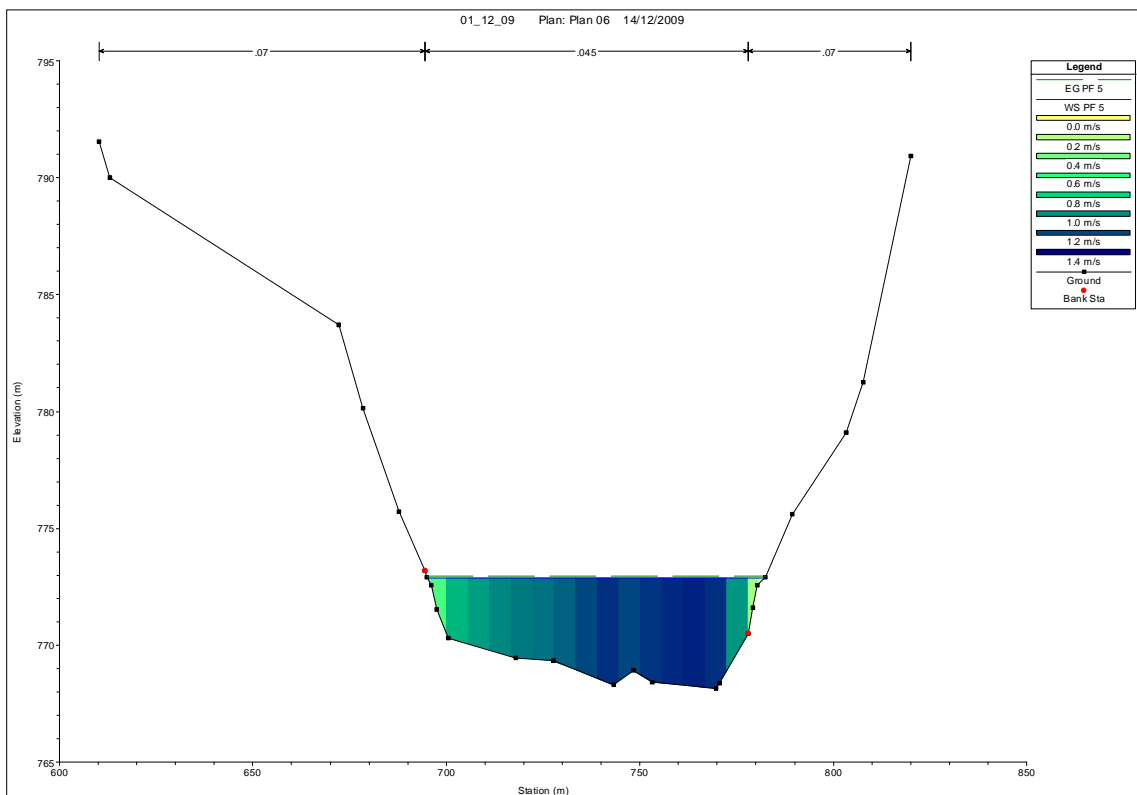


**Seção 66.4, Perfil 3.**

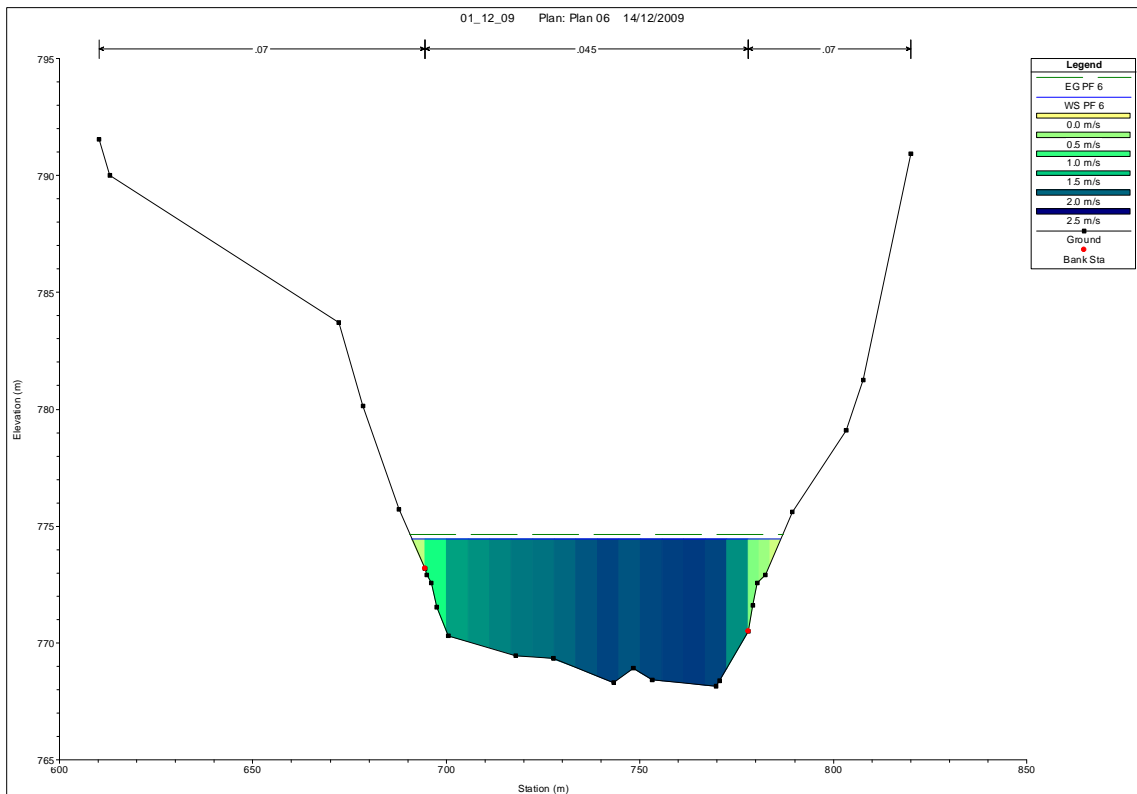




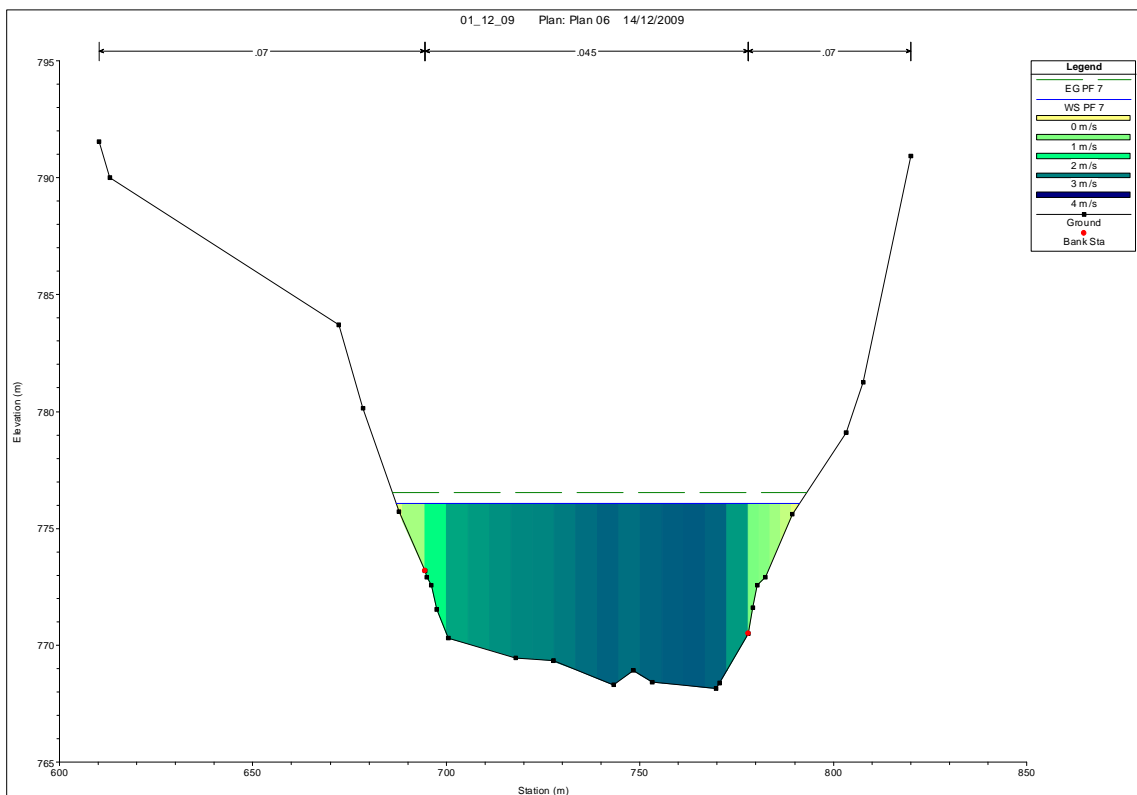
**Seção 66.4, Perfil 4.**



**Seção 66.4, Perfil 5.**

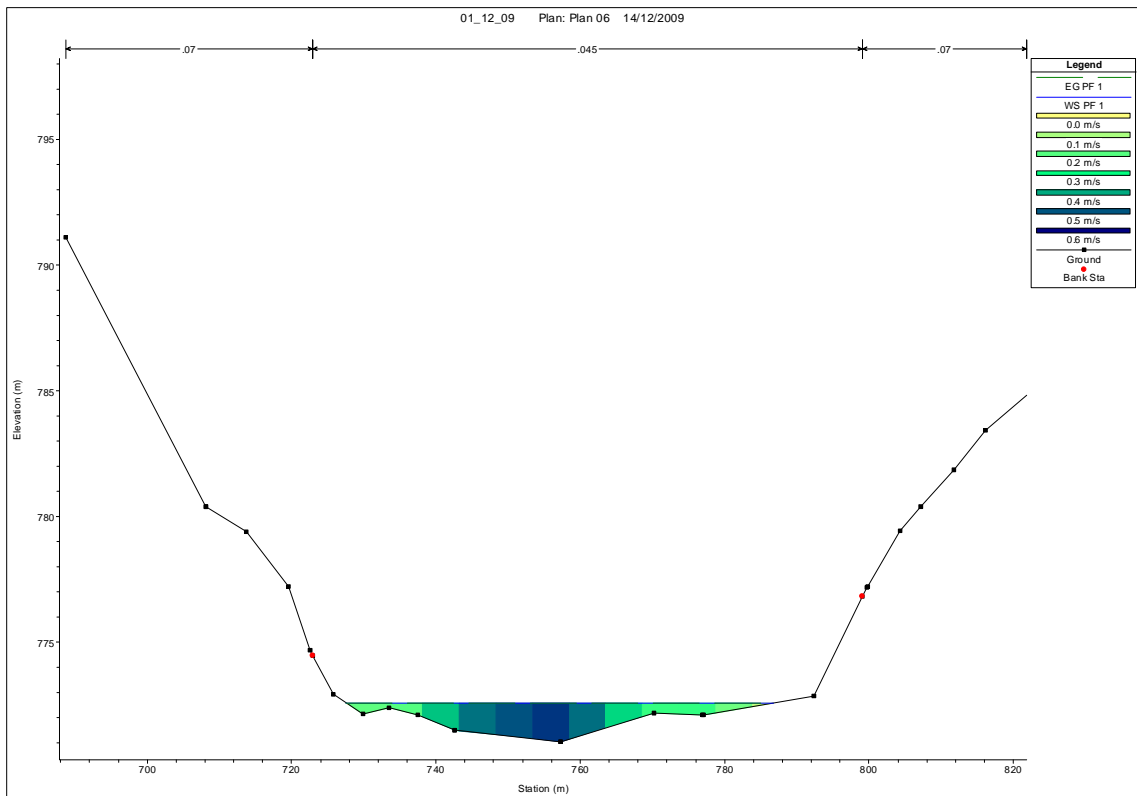


**Seção 66.4, Perfil 6.**

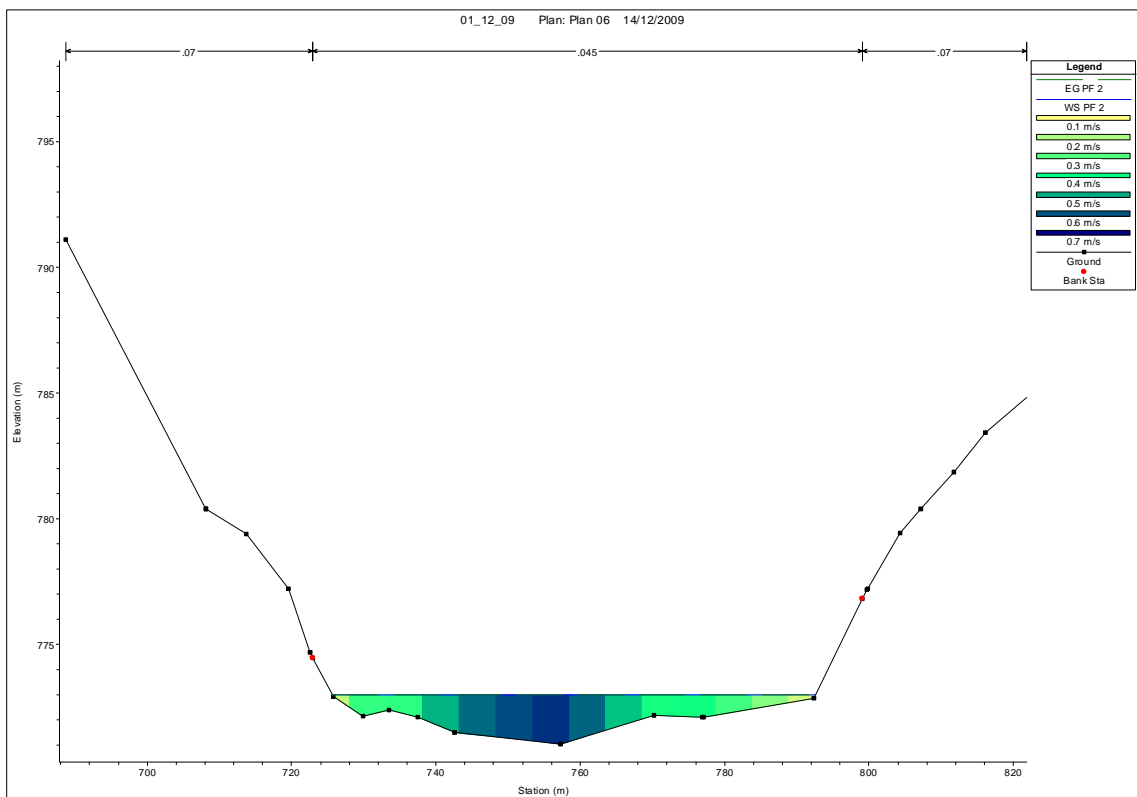


**Seção 66.4, Perfil 7.**

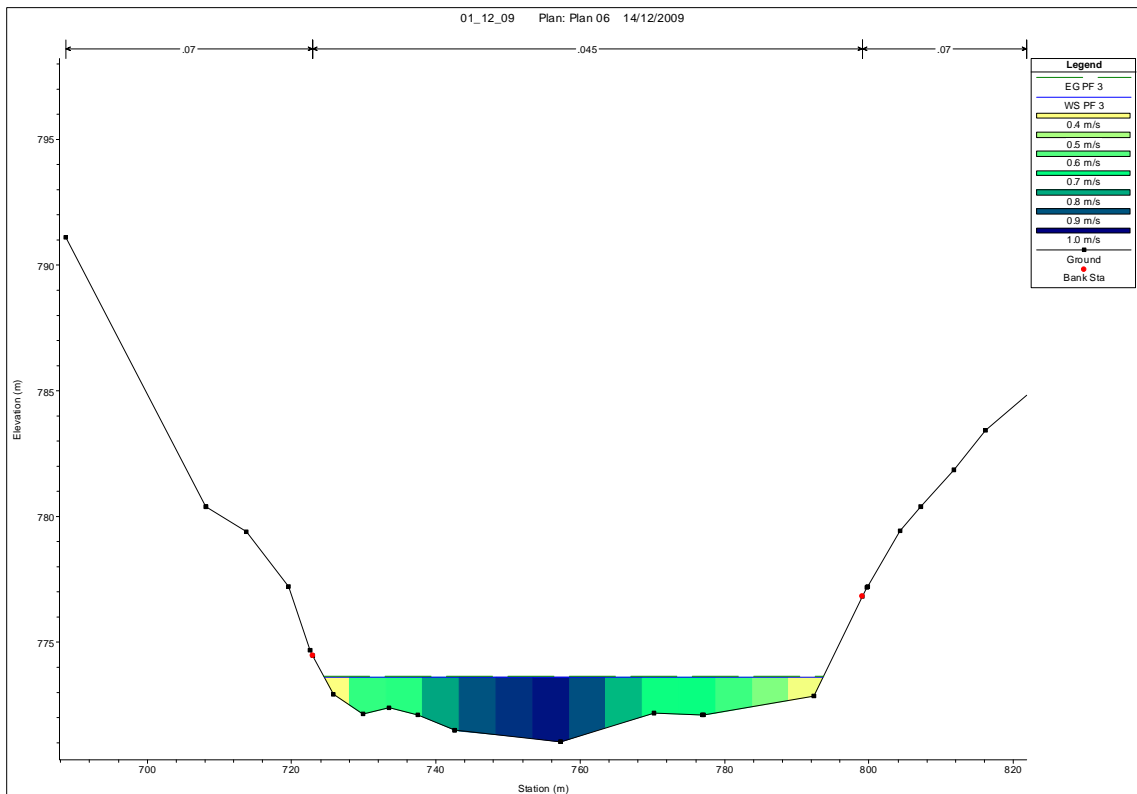




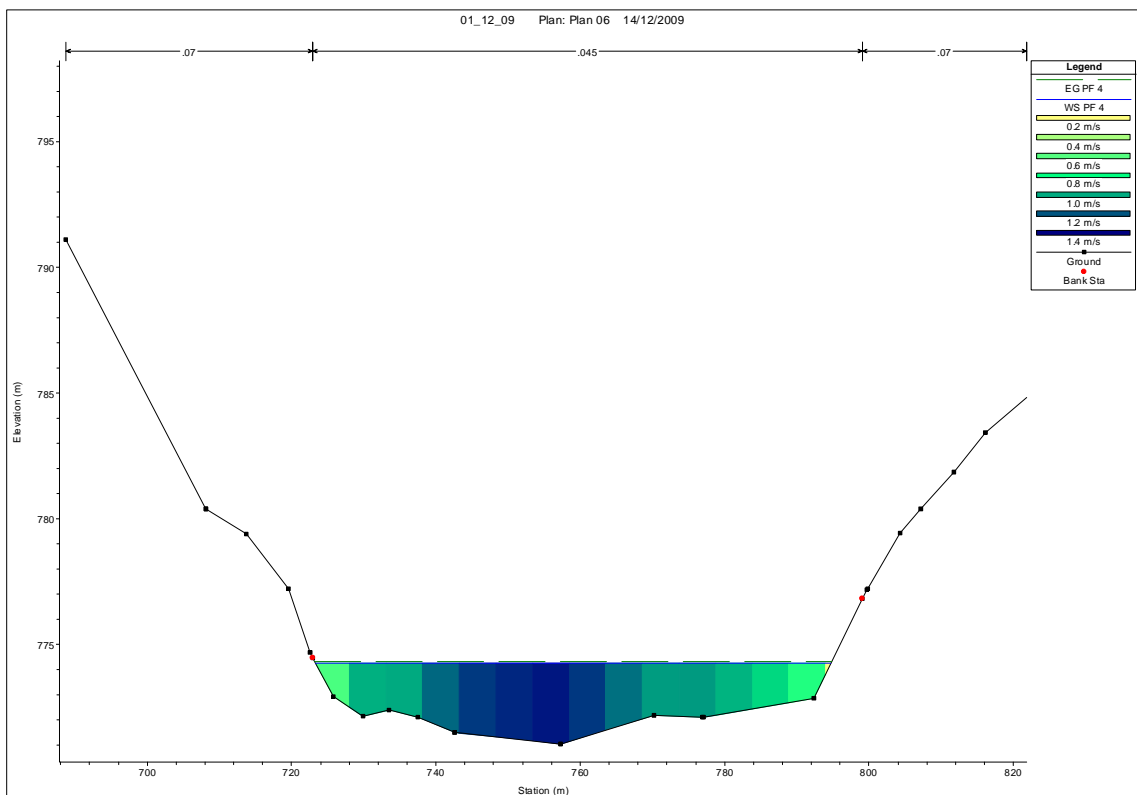
**Seção 71.1, Perfil 1.**



**Seção 71.1, Perfil 2.**

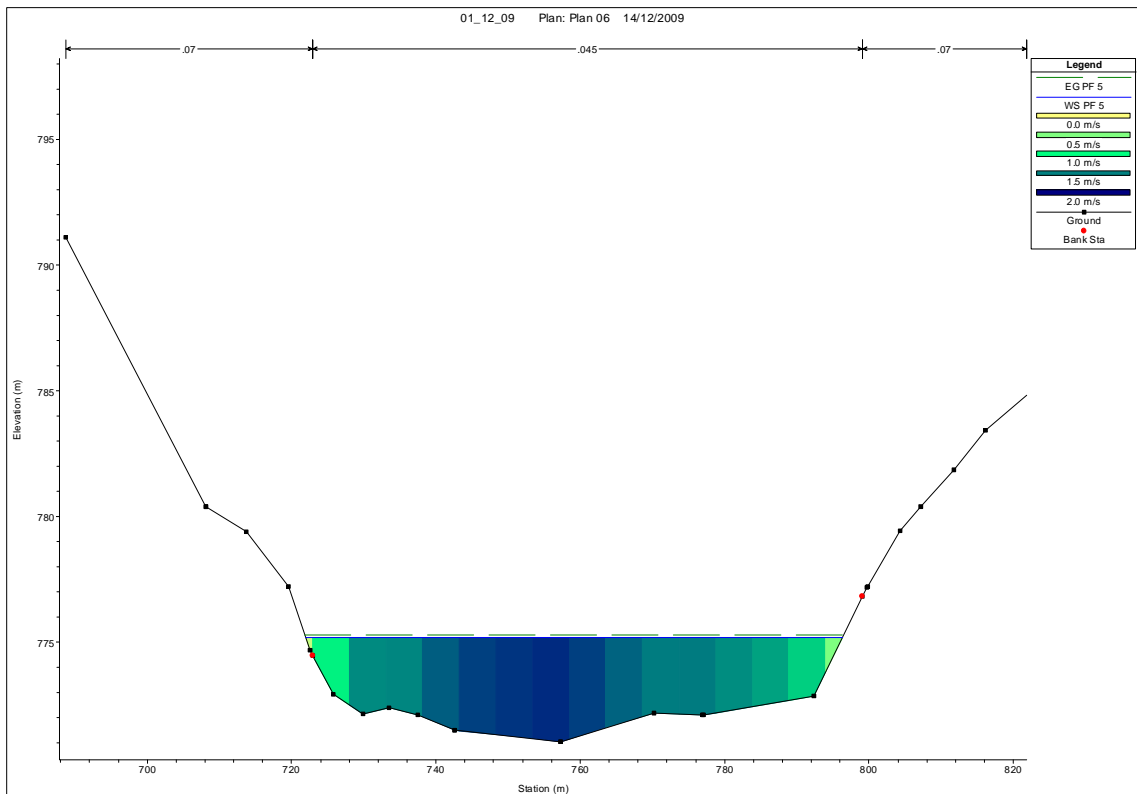


**Seção 71.1, Perfil 3.**

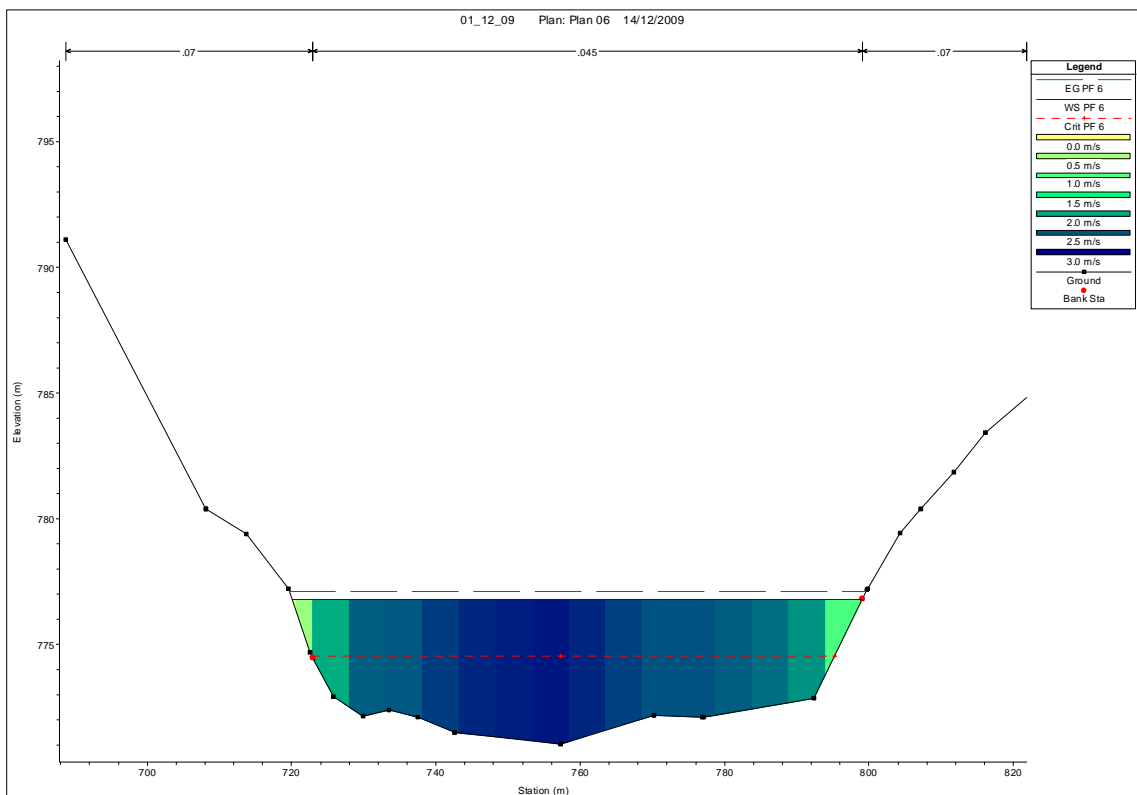


**Seção 71.1, Perfil 4.**

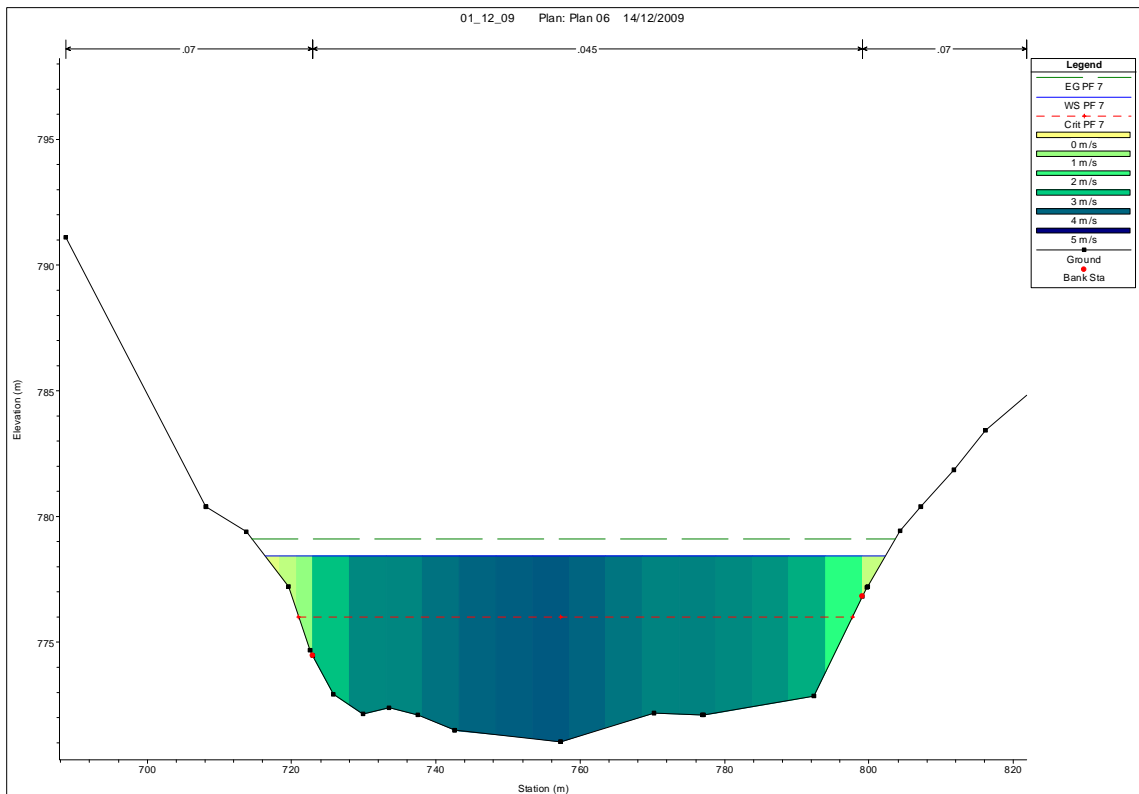




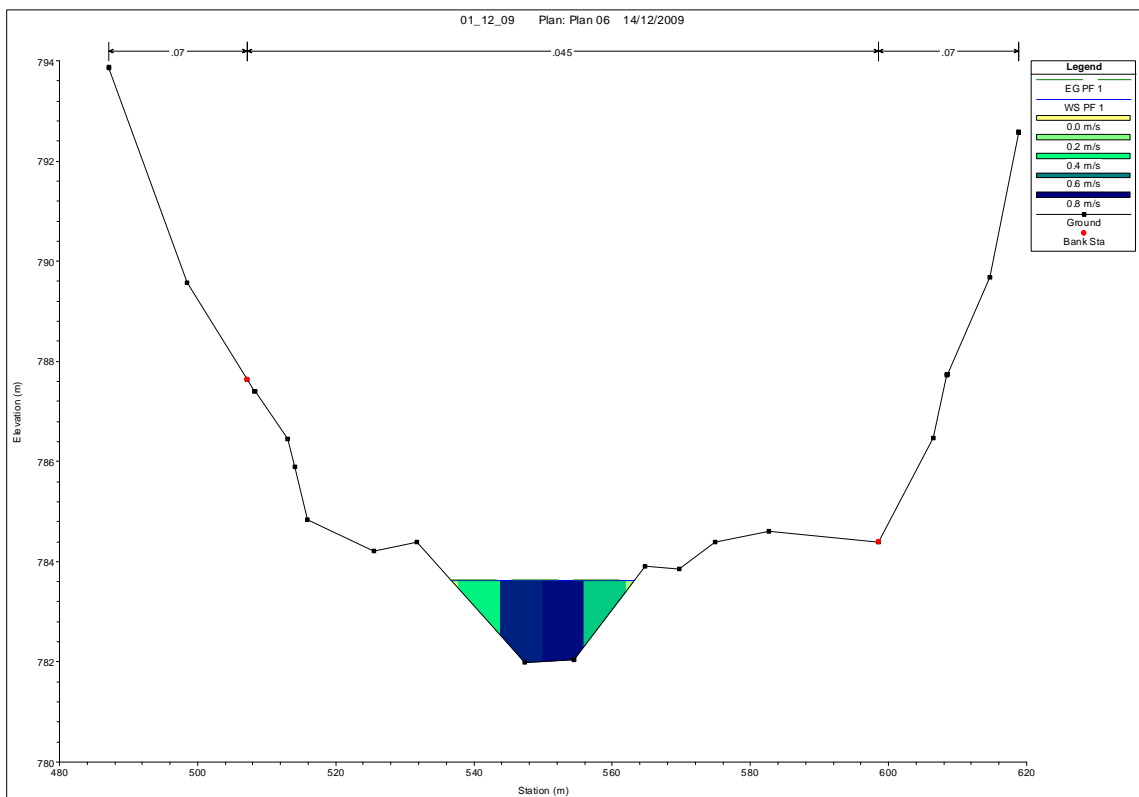
**Seção 71.1, Perfil 5.**



**Seção 71.1, Perfil 6.**

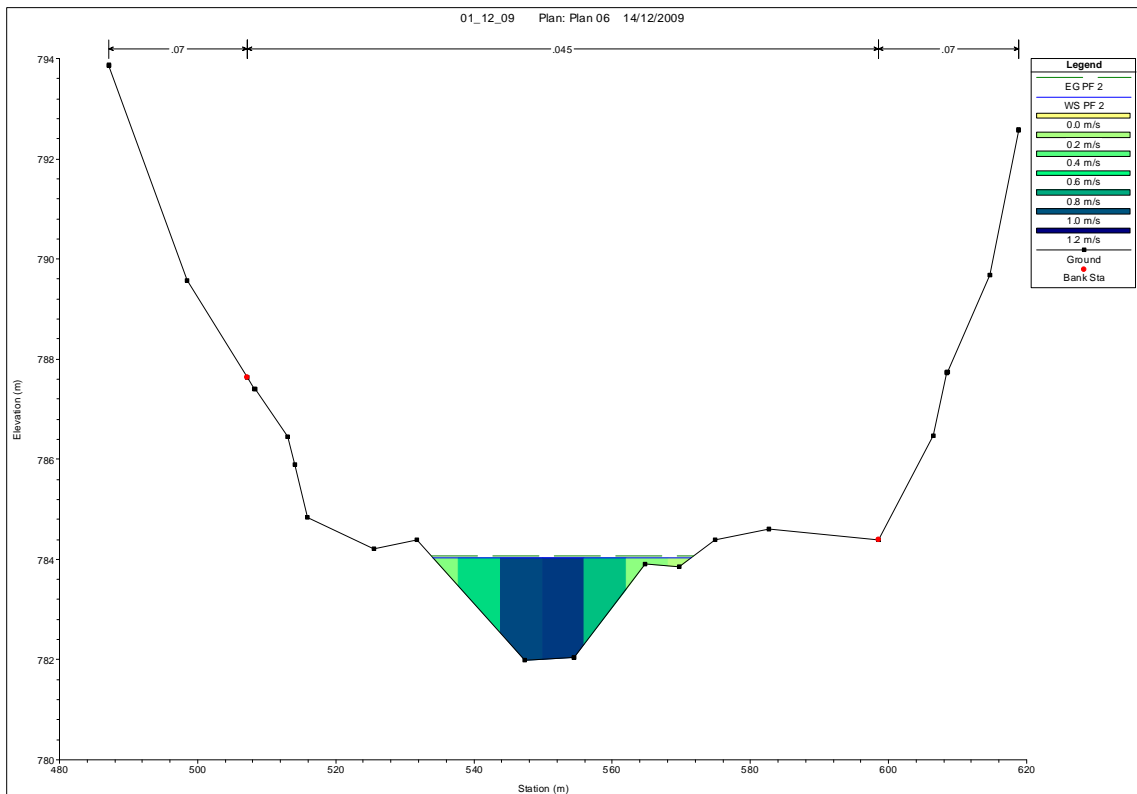


**Seção 71.1, Perfil 7.**

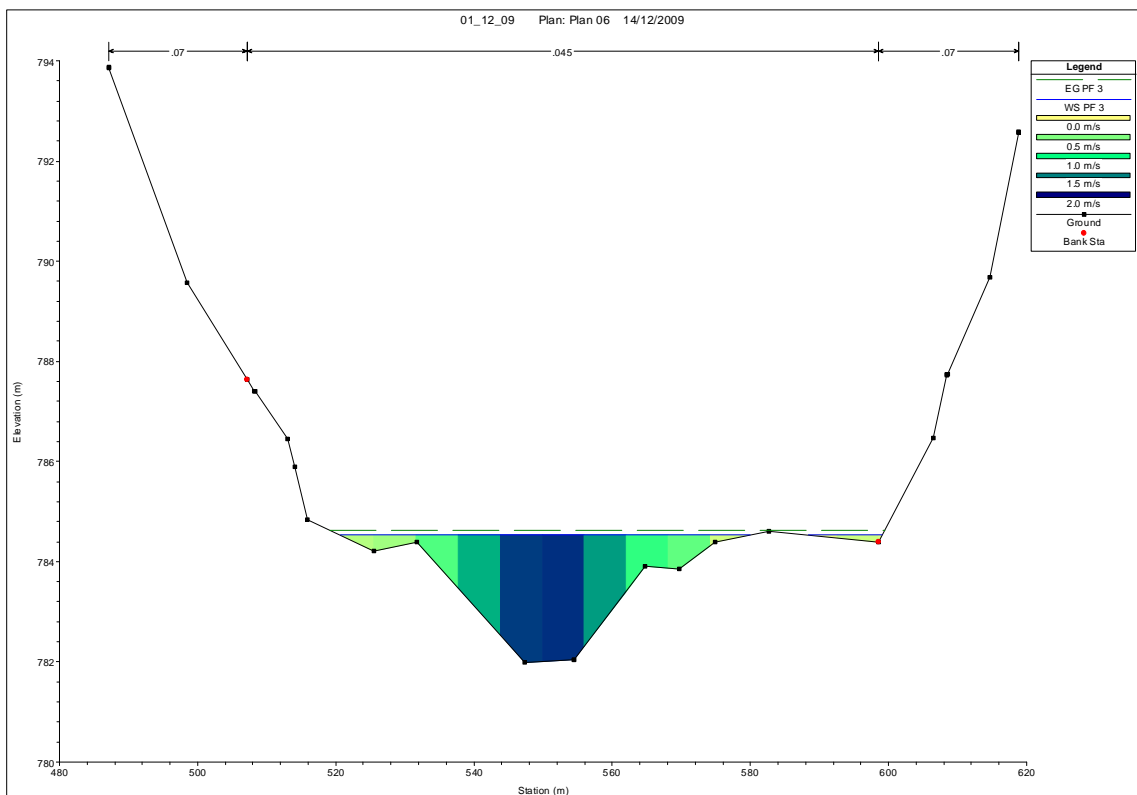


**Seção 76.2, Perfil 1.**

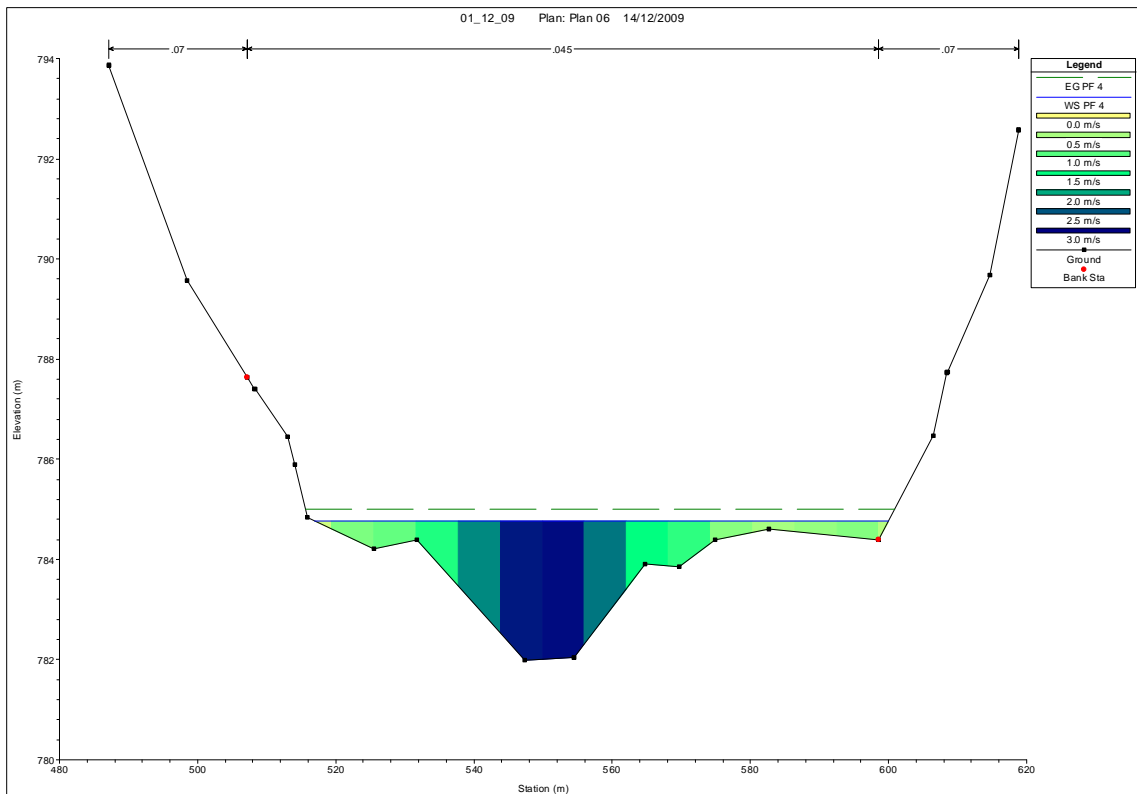




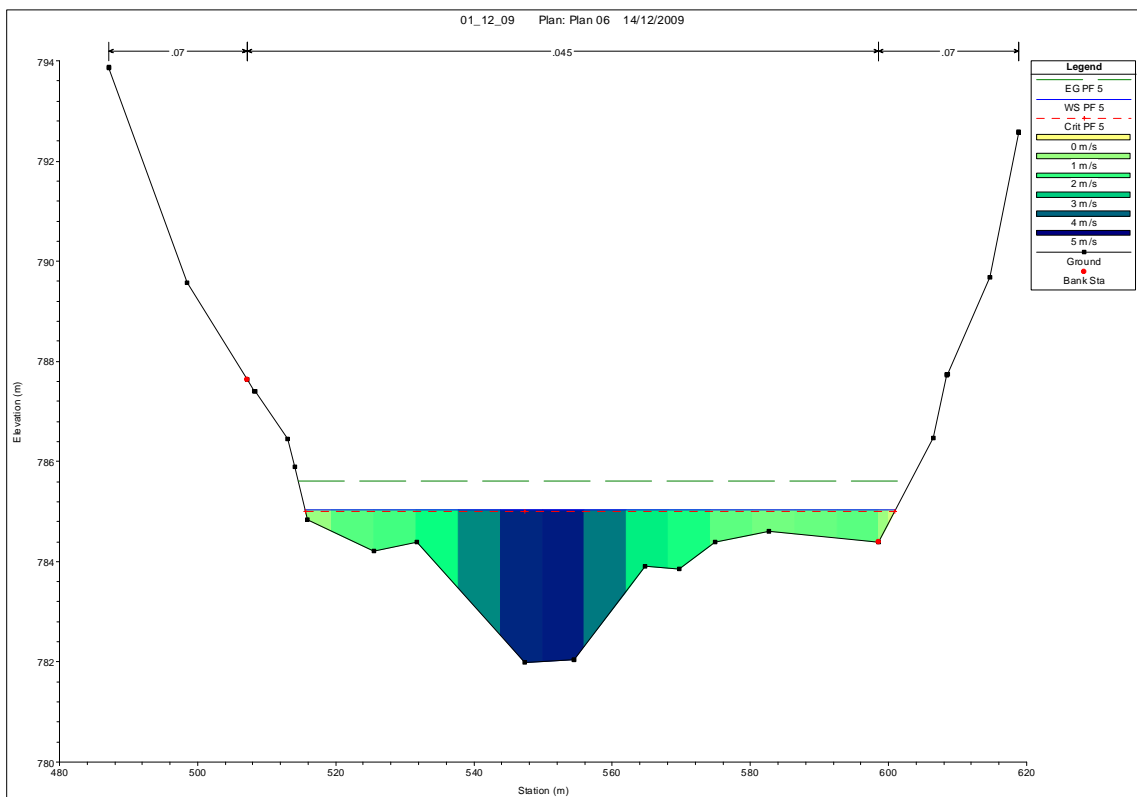
**Seção 76.2, Perfil 2.**



**Seção 76.2, Perfil 3.**

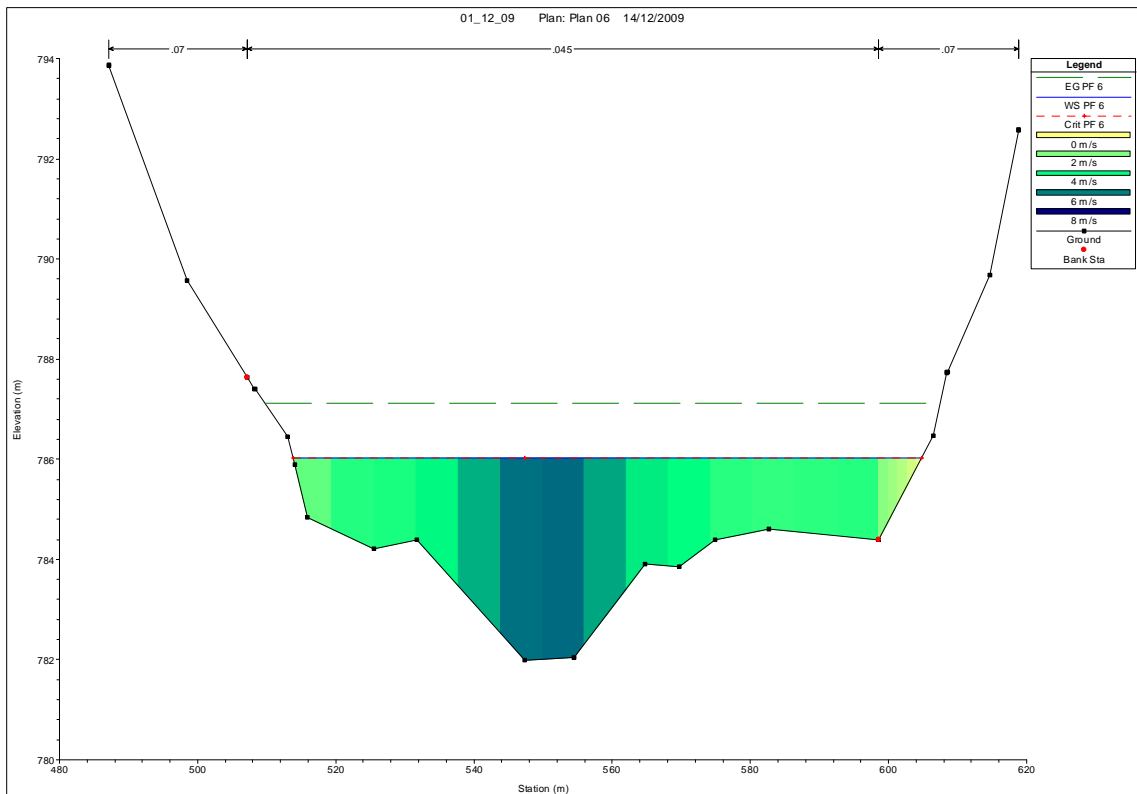


**Seção 76.2, Perfil 4.**

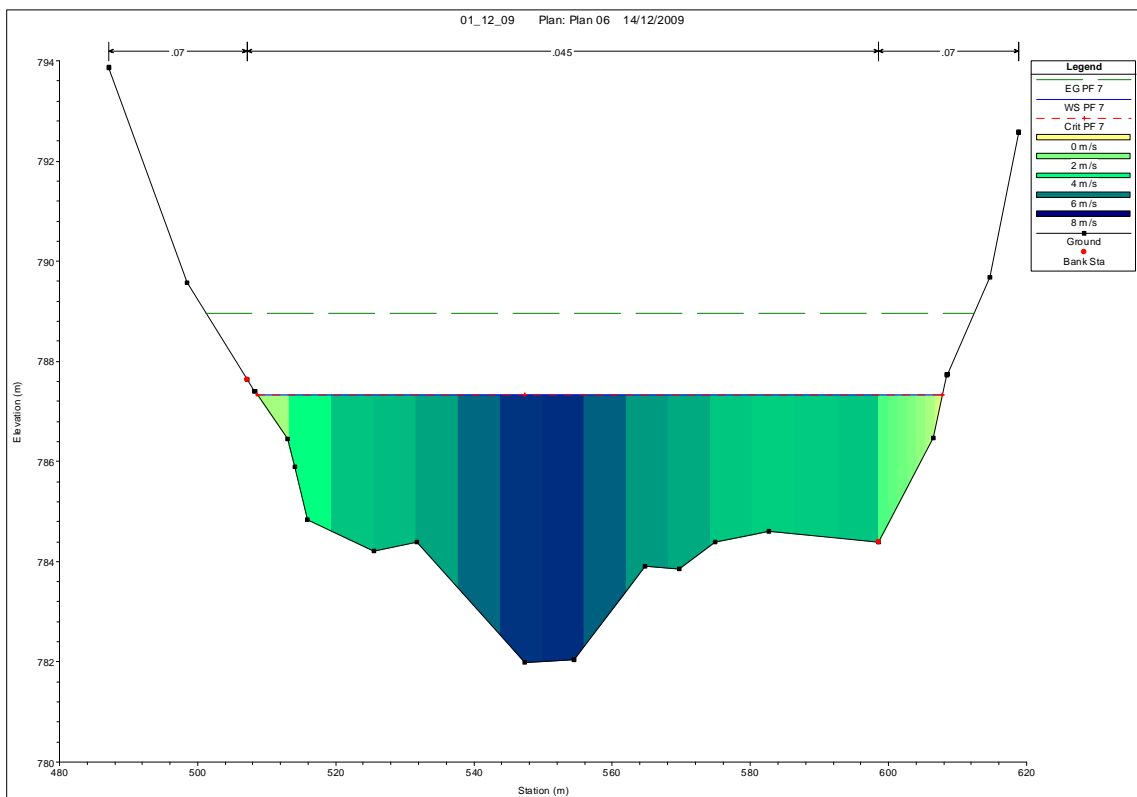


**Seção 76.2, Perfil 5.**

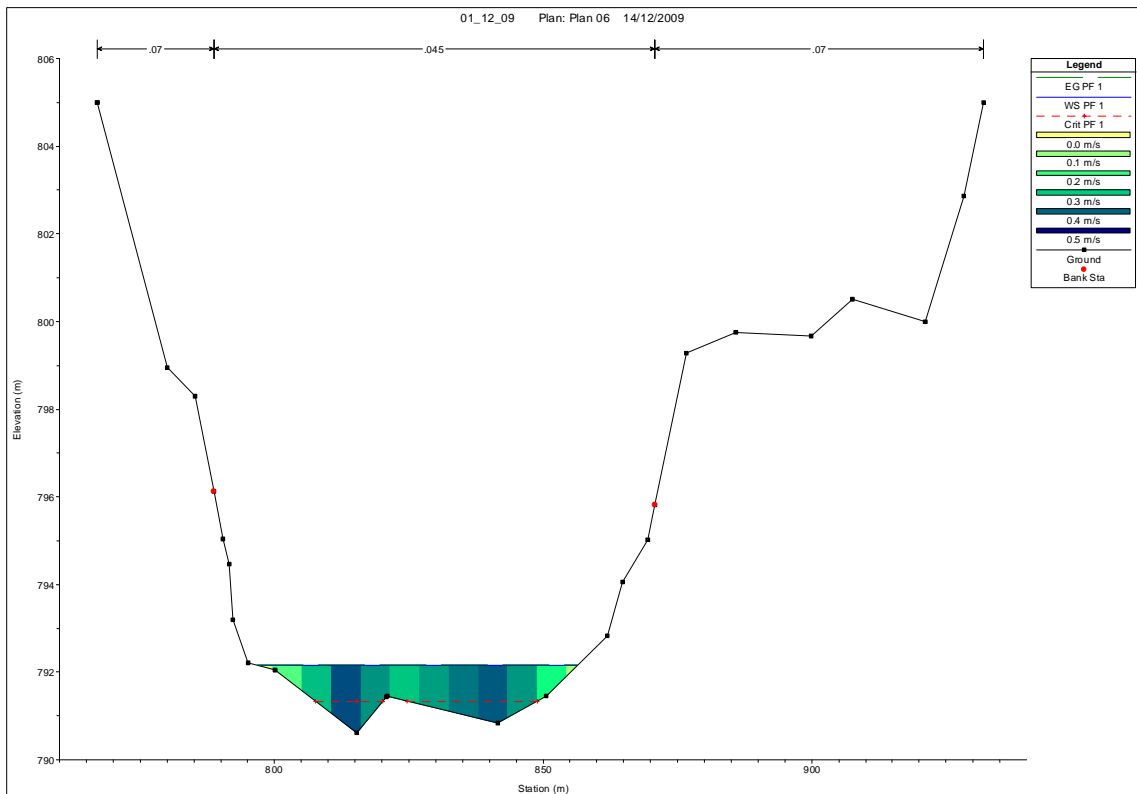




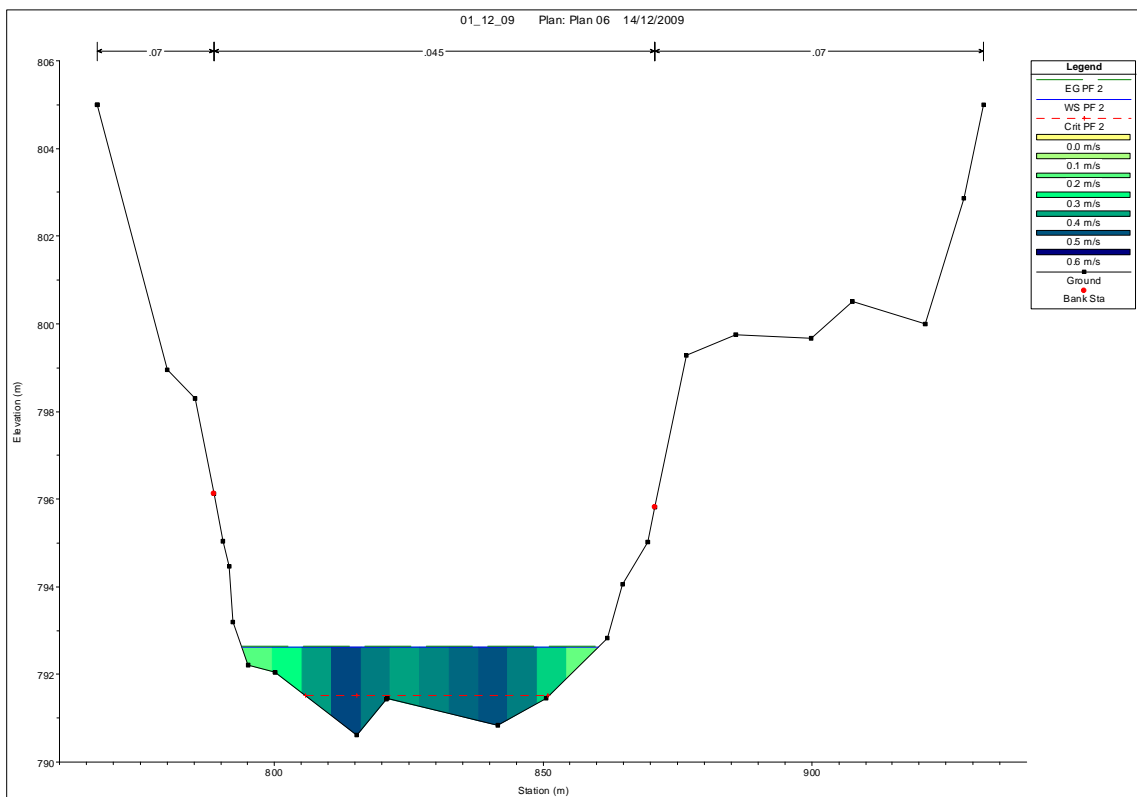
**Seção 76.2, Perfil 6.**



**Seção 76.2, Perfil 7.**

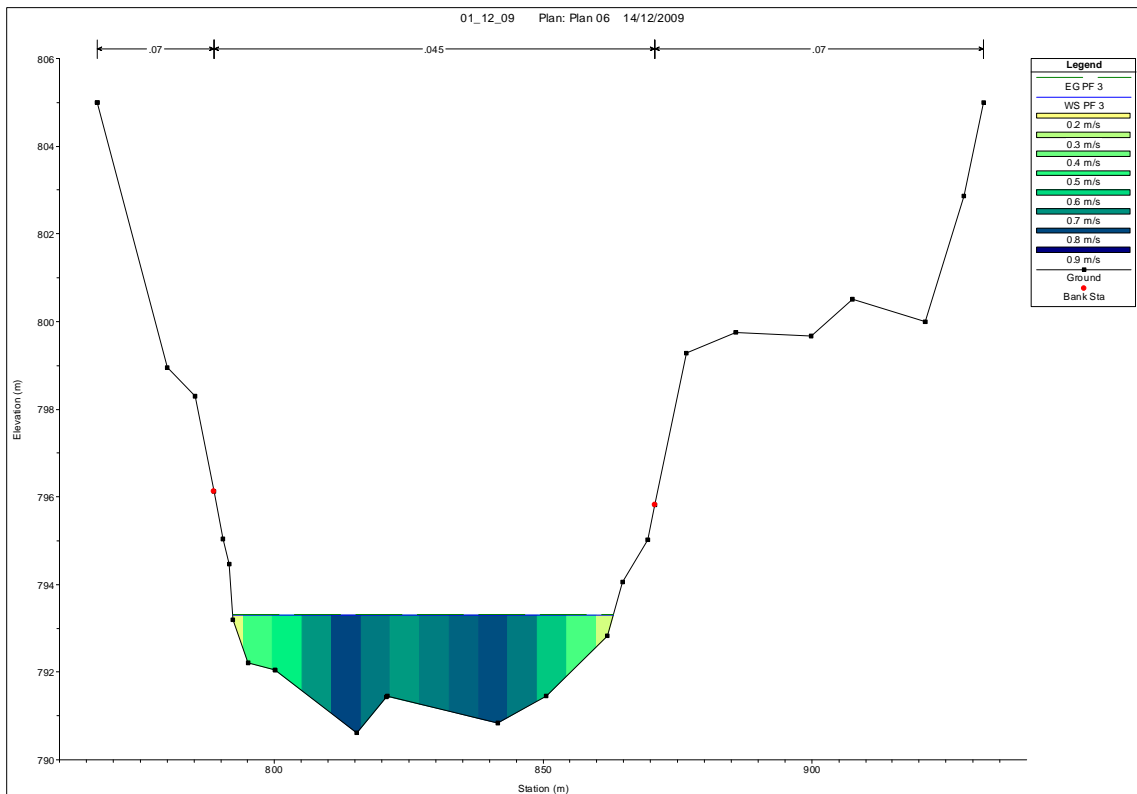


**Seção 81.5, Perfil 1.**

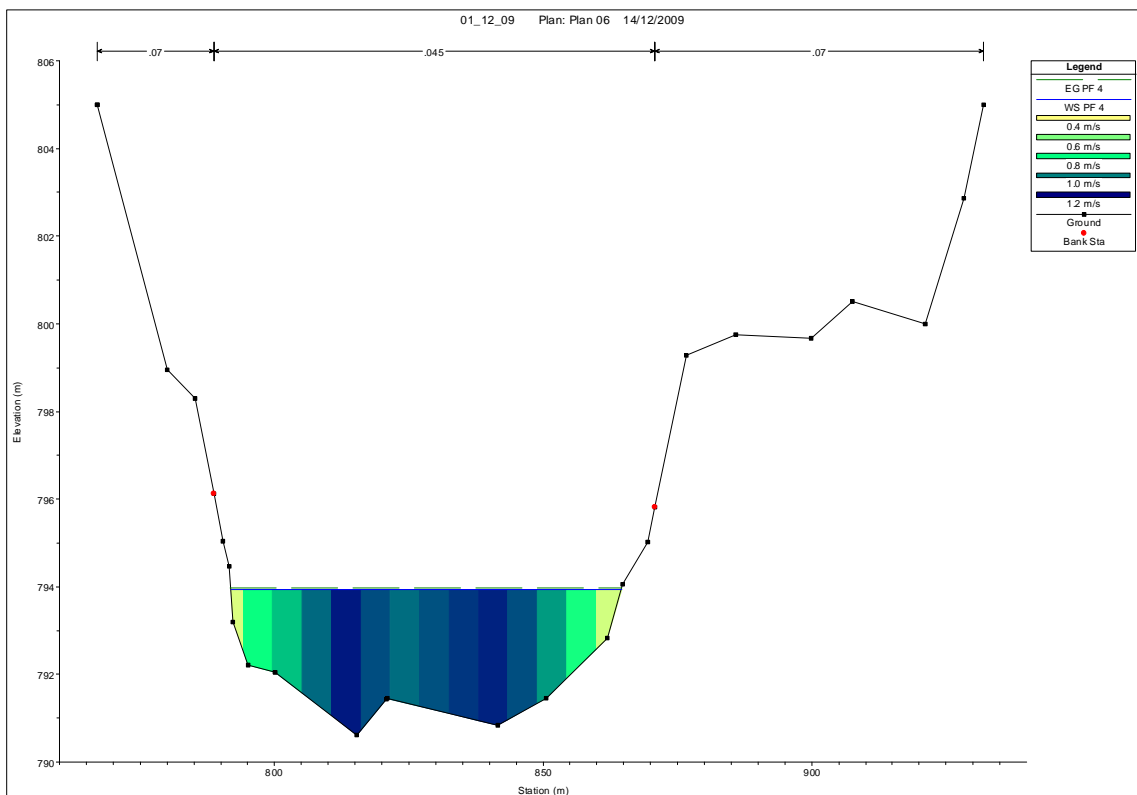


**Seção 81.5, Perfil 2.**

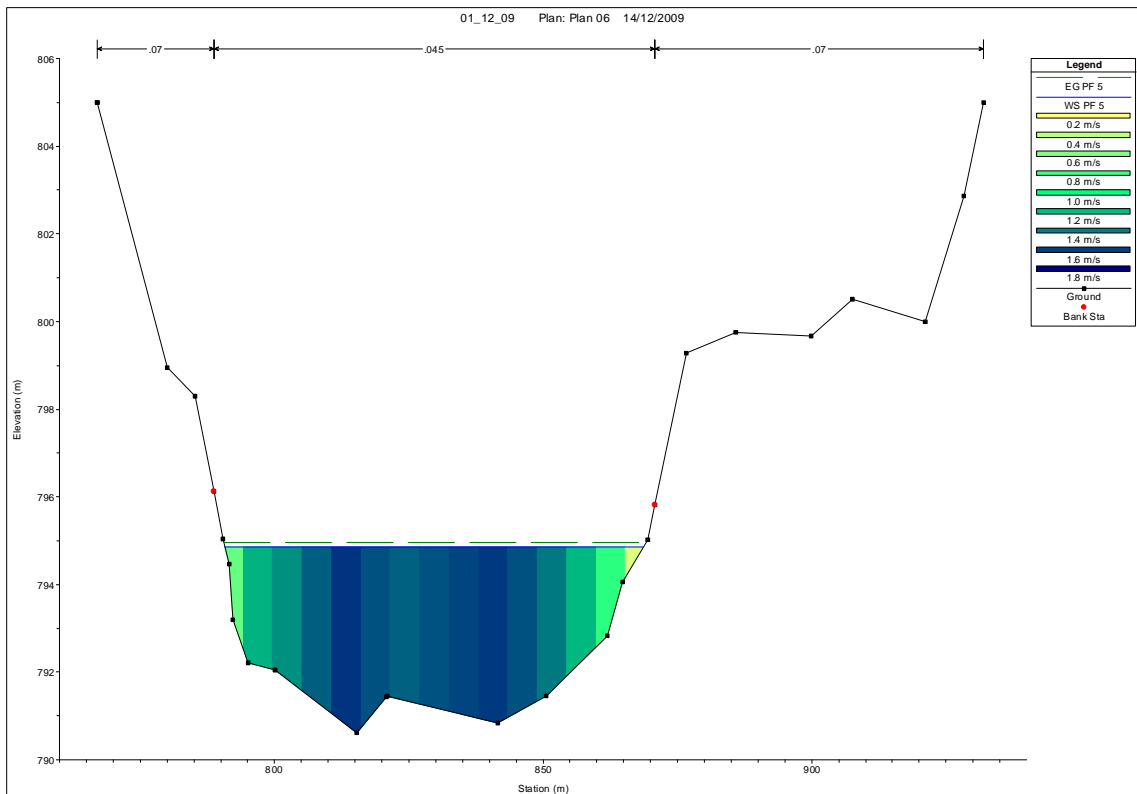




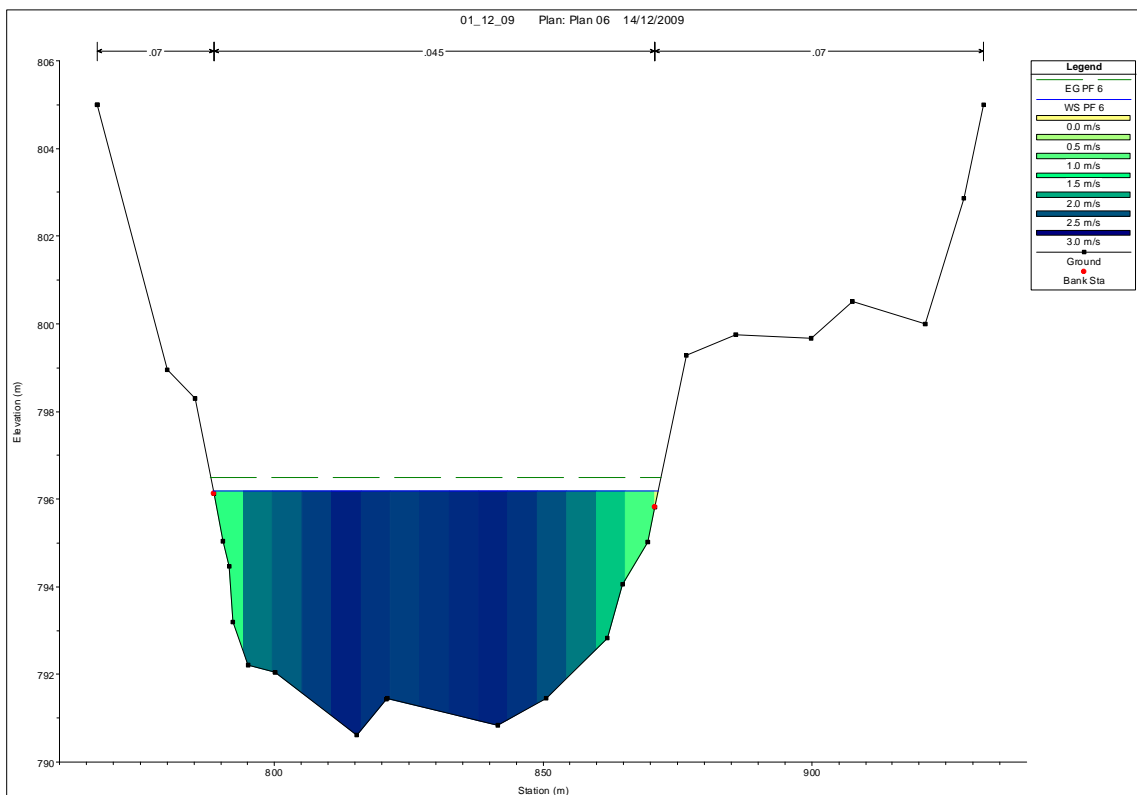
**Seção 81.5, Perfil 3.**



**Seção 81.5, Perfil 4.**

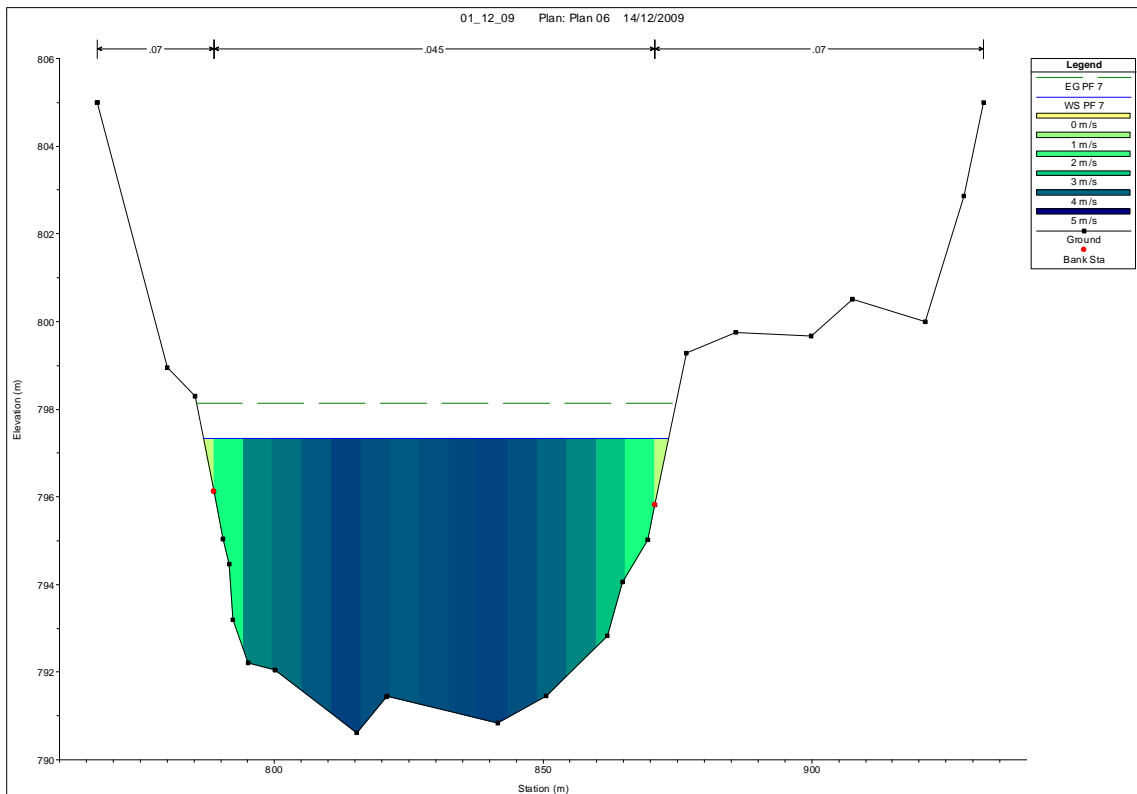


**Seção 81.5, Perfil 5.**

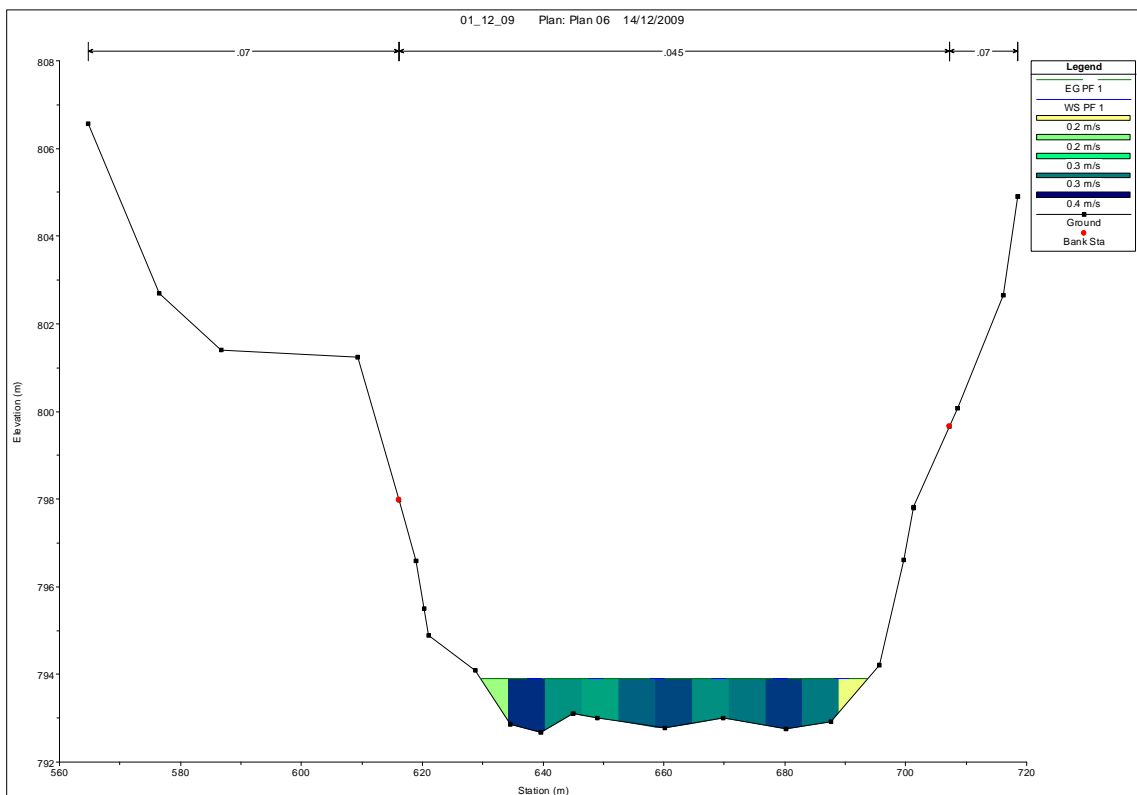


**Seção 81.5, Perfil 6.**

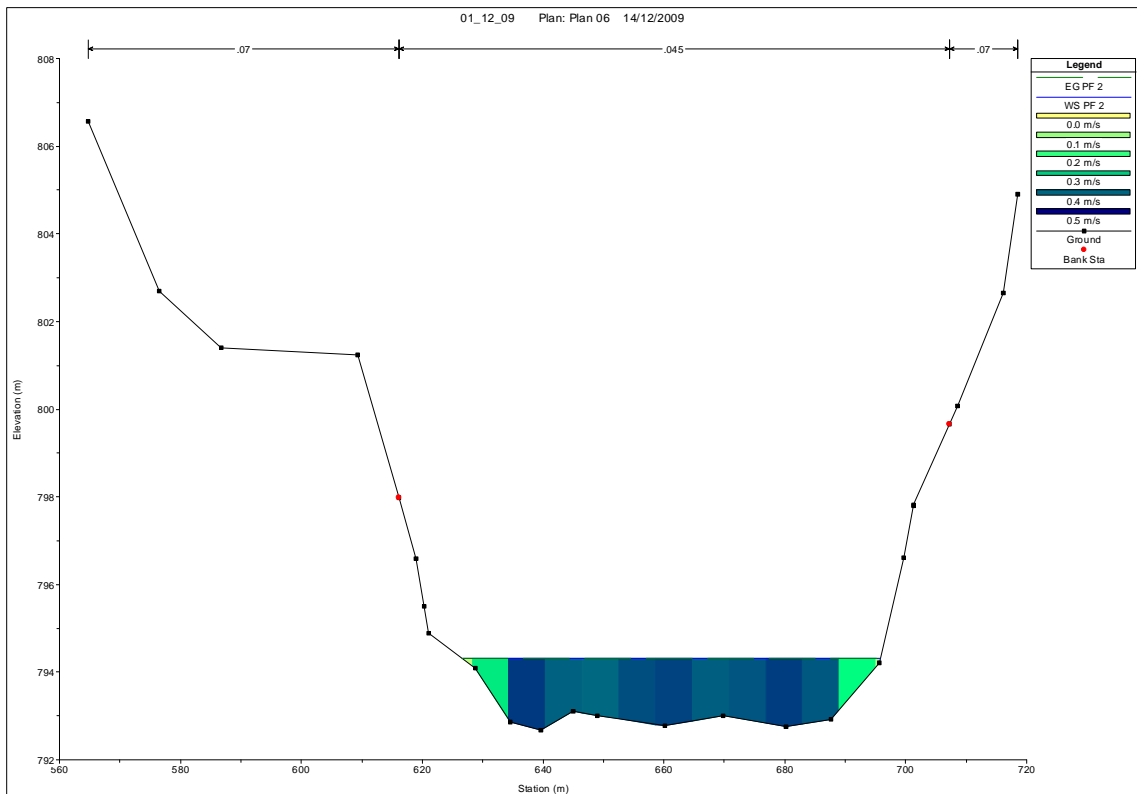




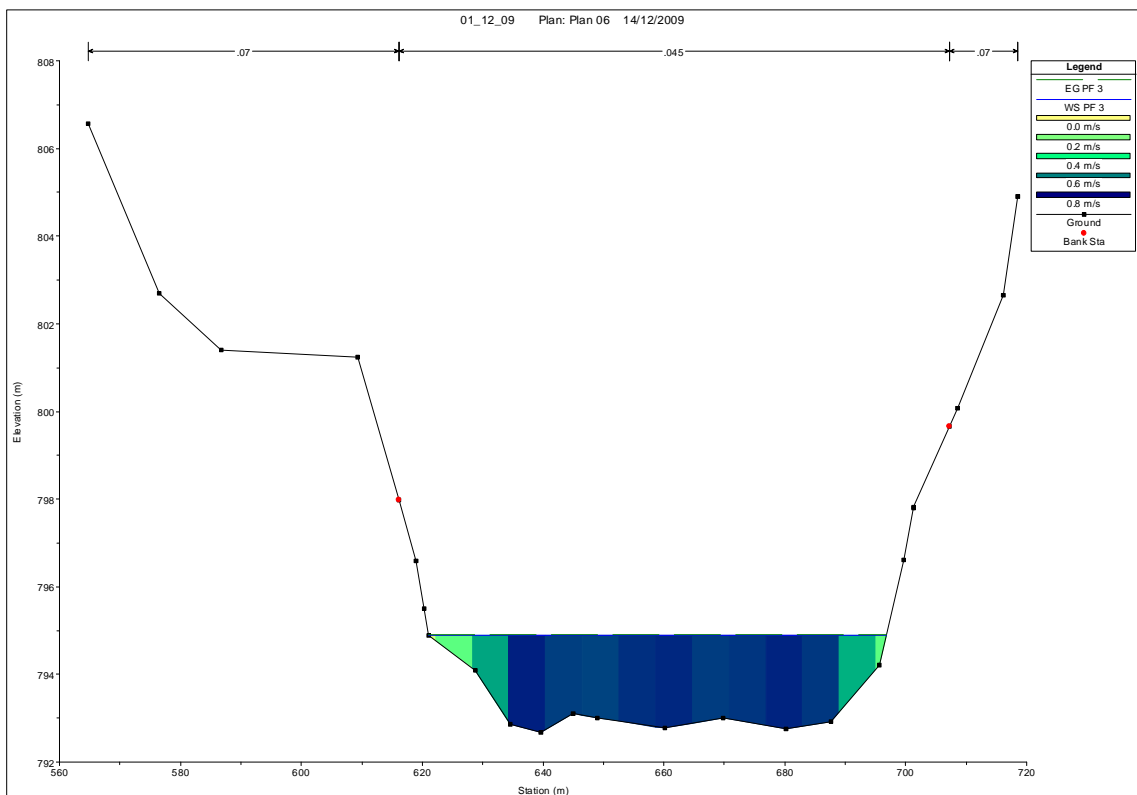
**Seção 81.5, Perfil 7.**



**Seção 83.7, Perfil 1.**

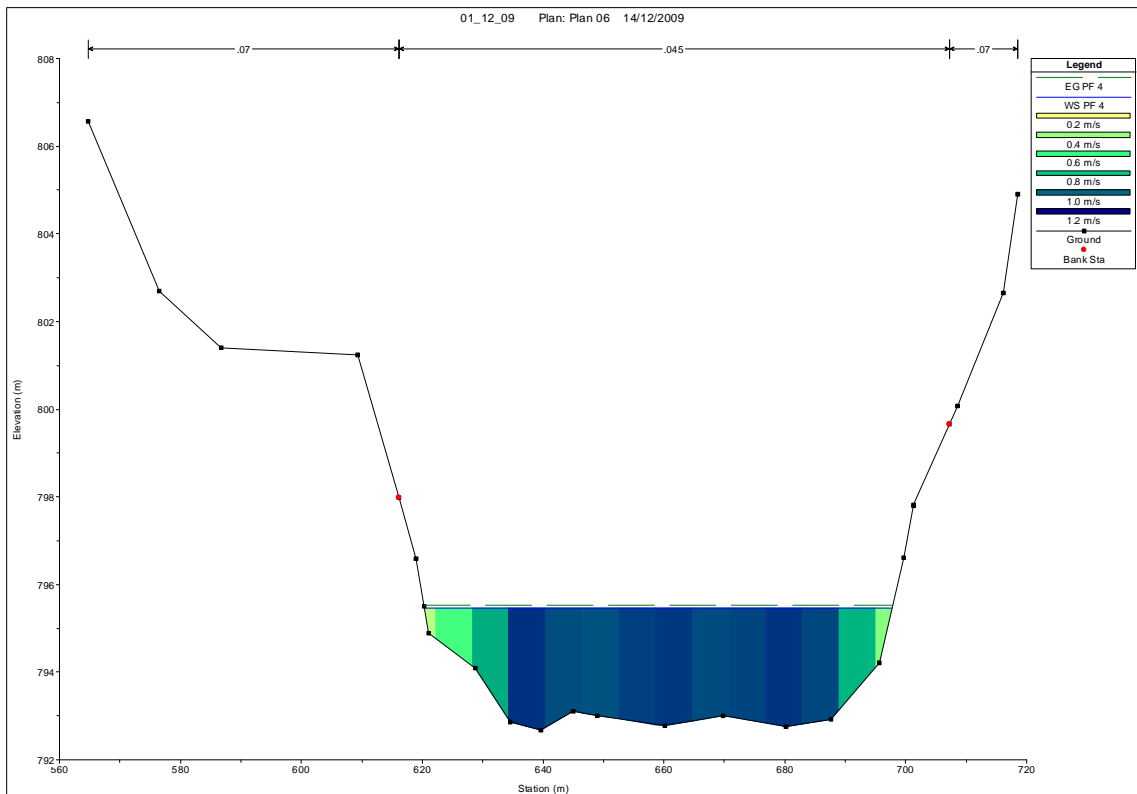


**Seção 83.7, Perfil 2.**

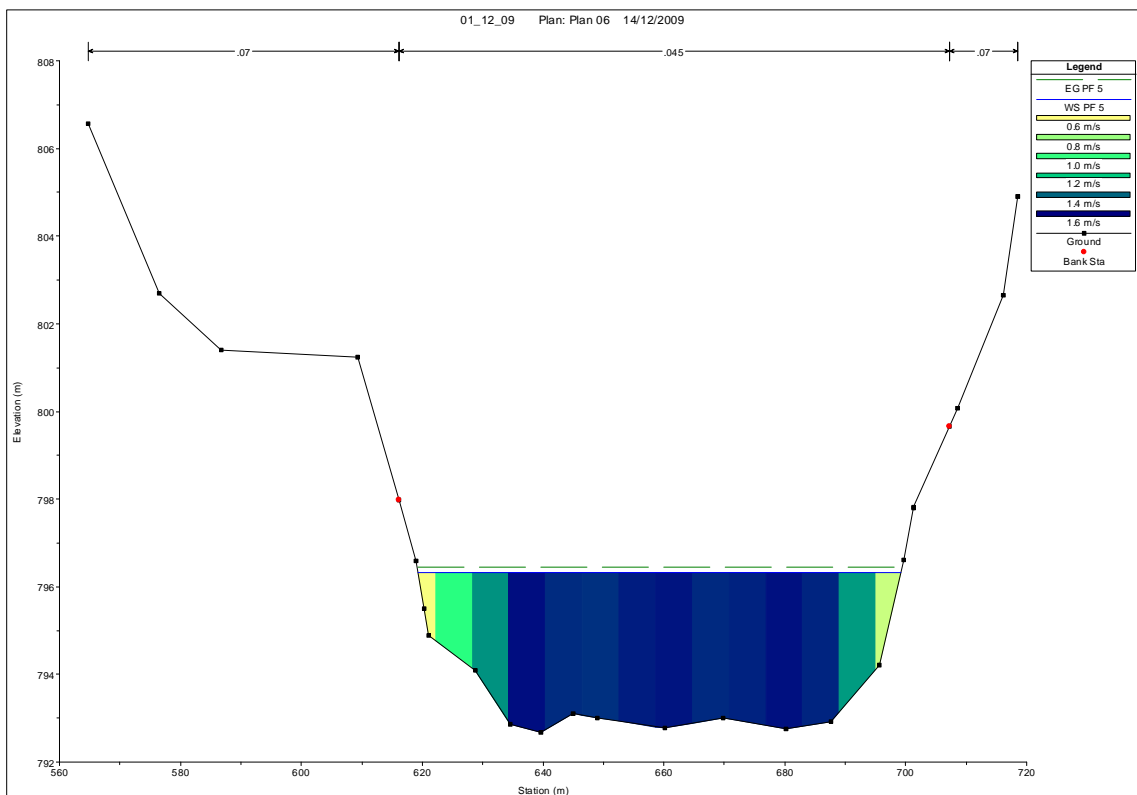


**Seção 83.7, Perfil 3.**

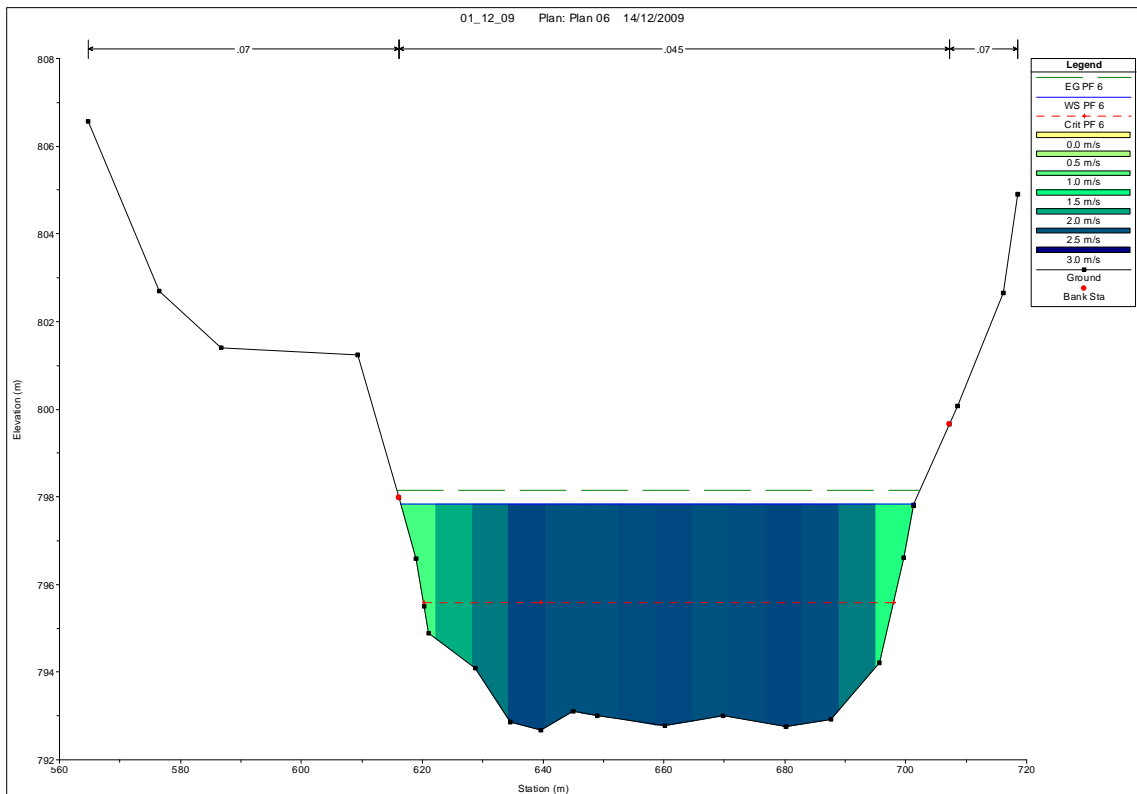




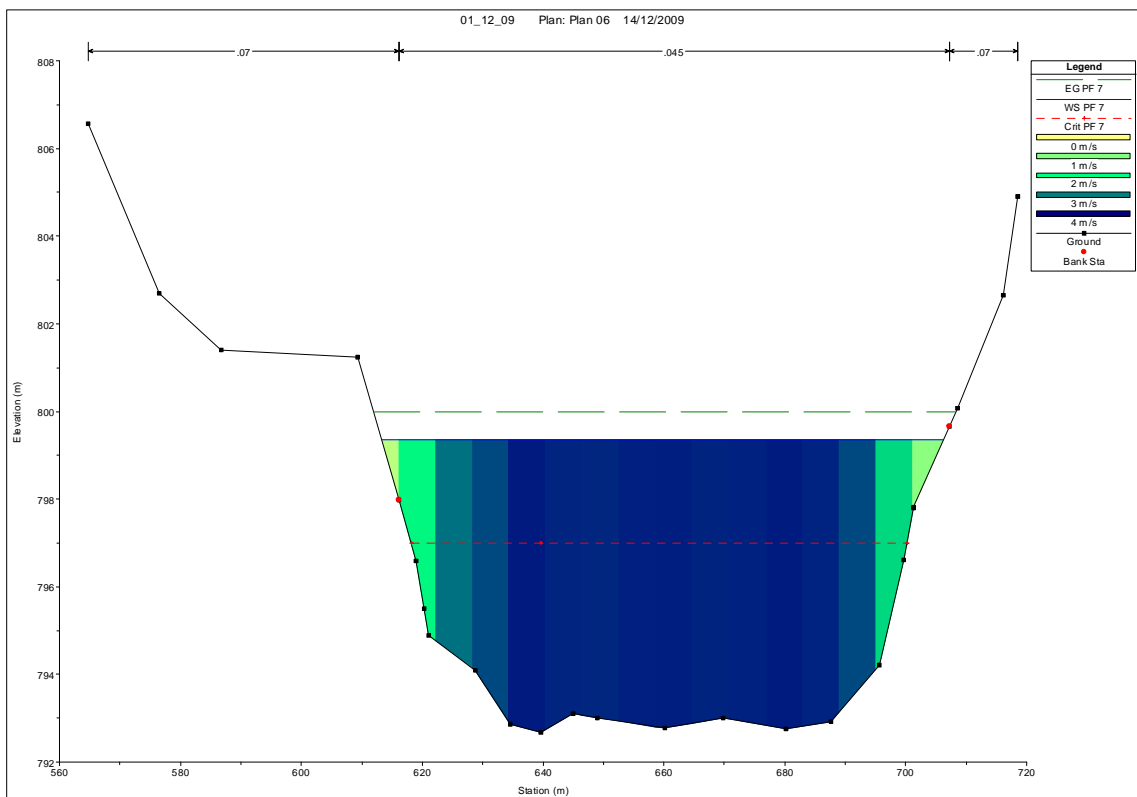
**Seção 83.7, Perfil 4.**



**Seção 83.7, Perfil 5.**

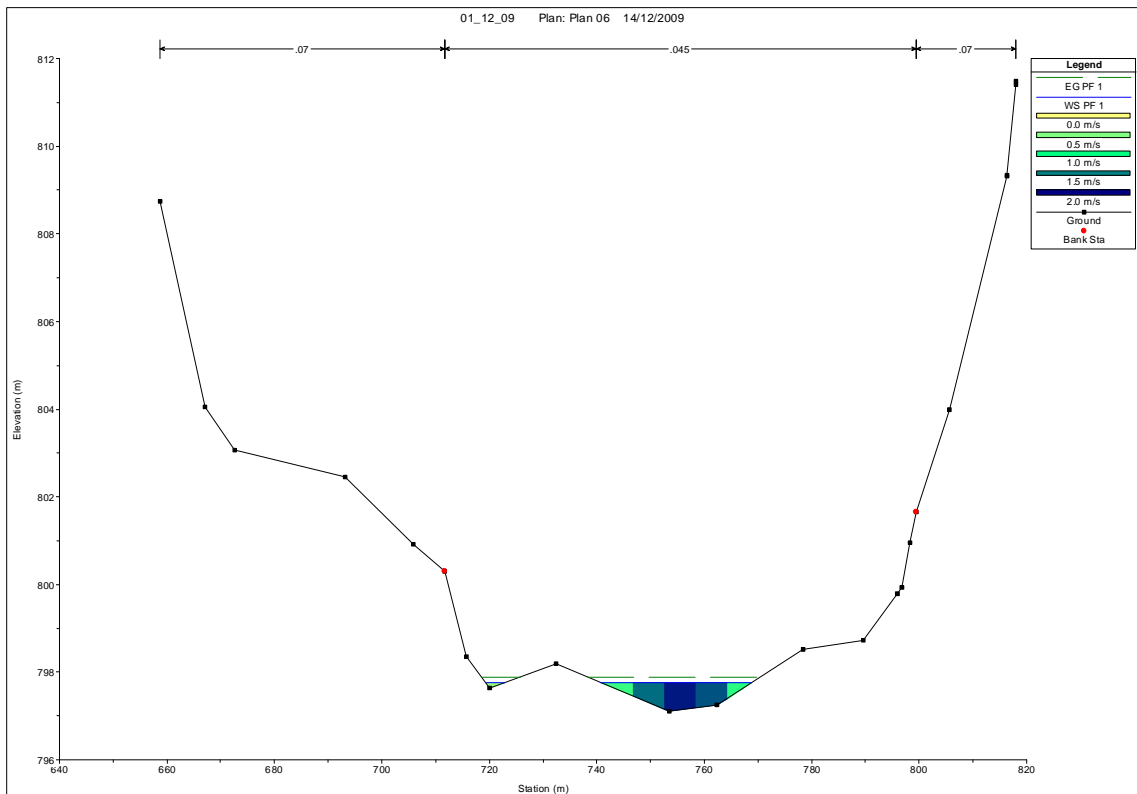


**Seção 83.7, Perfil 6.**

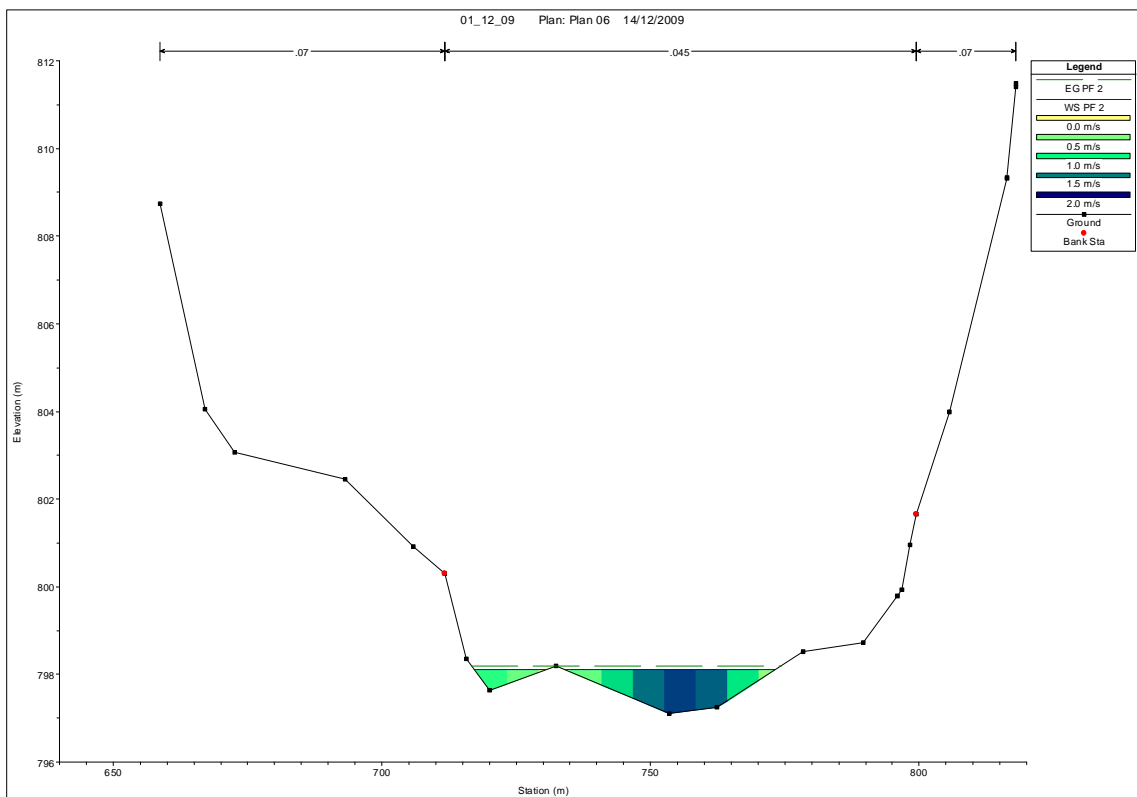


**Seção 83.7, Perfil 7.**

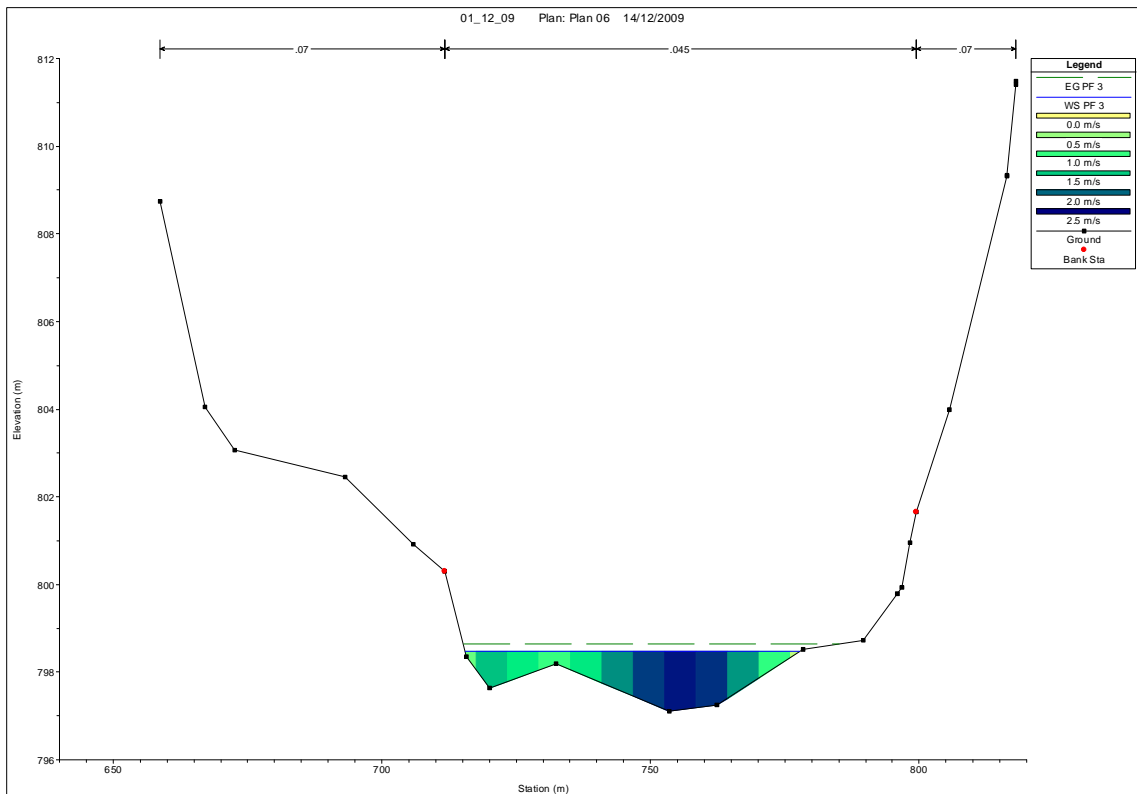




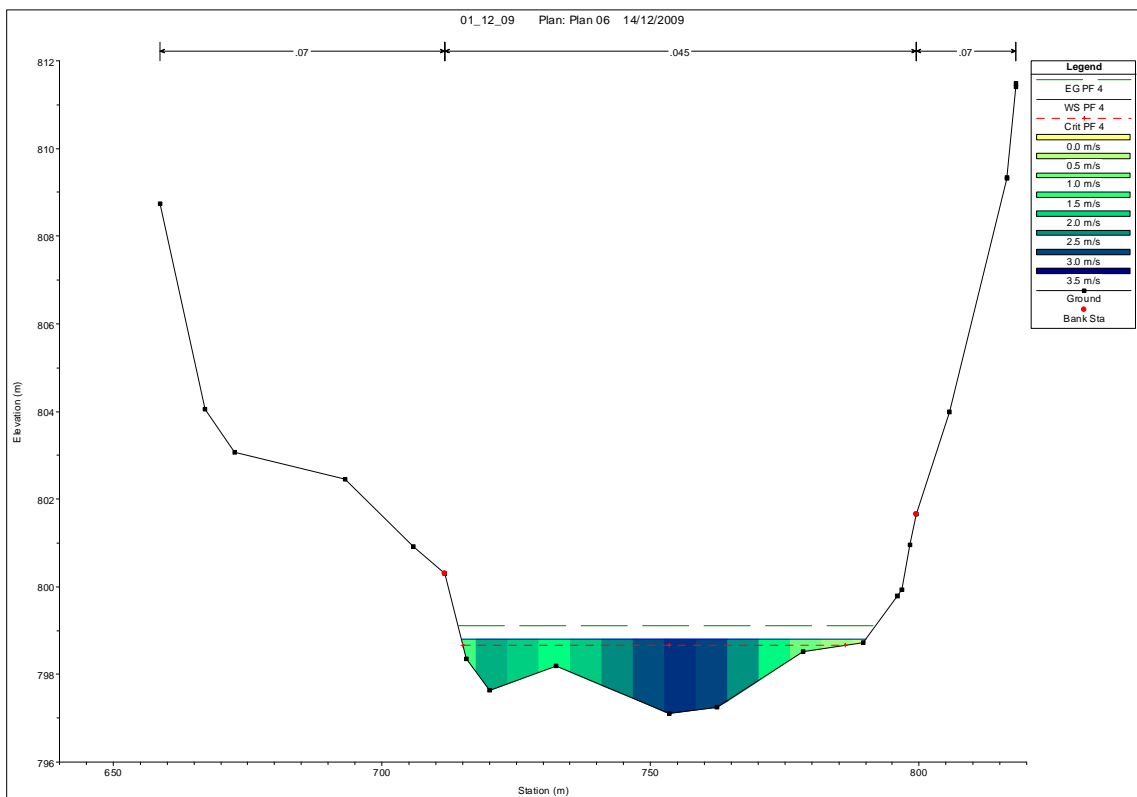
**Seção 85.5, Perfil 1.**



**Seção 85.5, Perfil 2.**

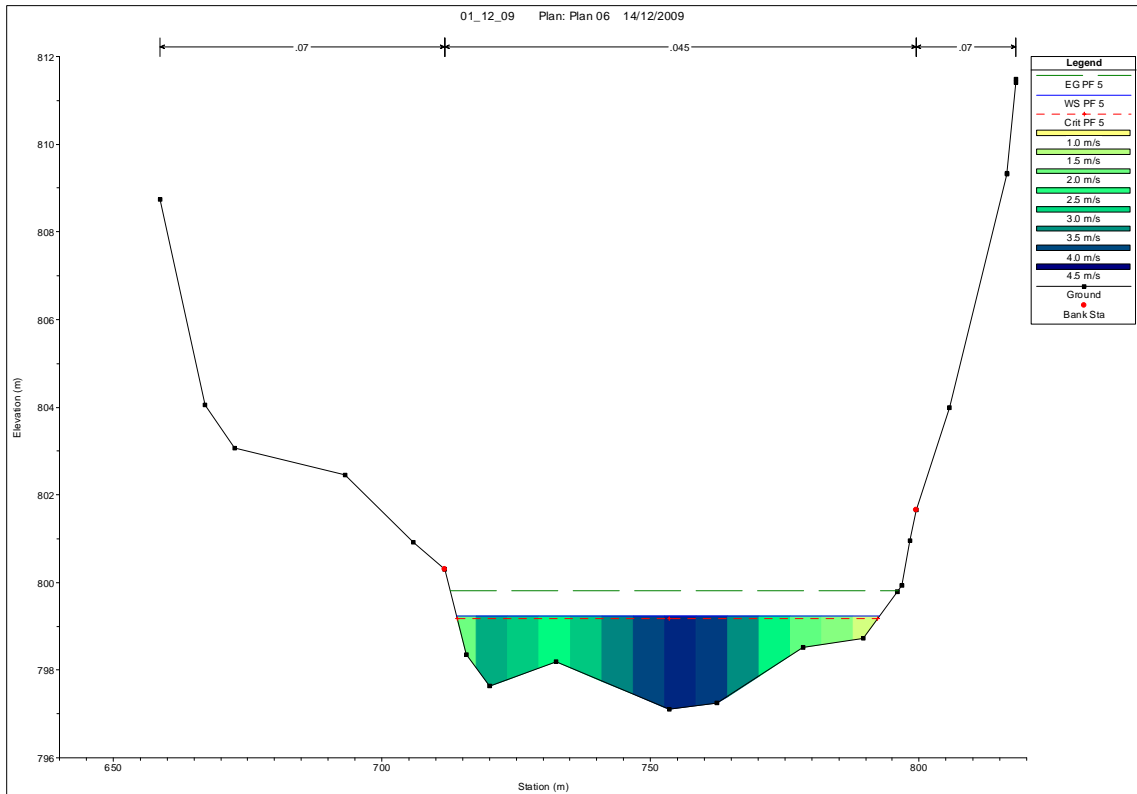


**Seção 85.5, Perfil 3.**

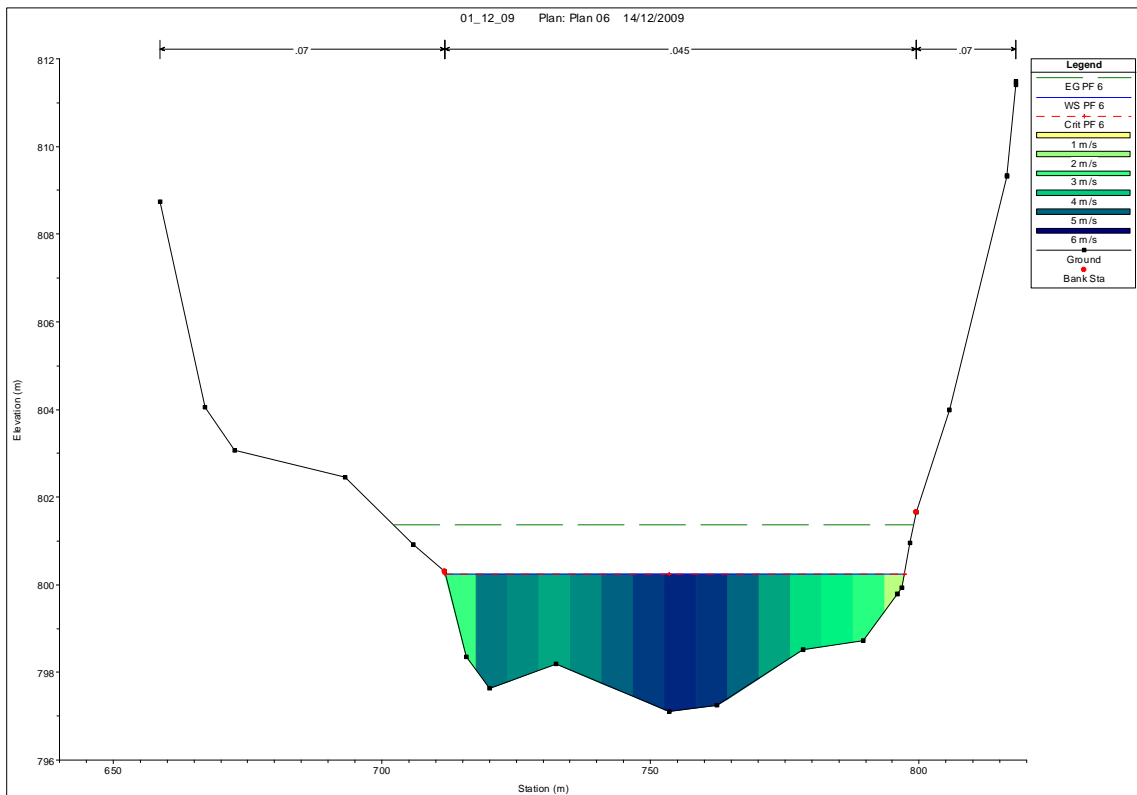


**Seção 85.5, Perfil 4.**

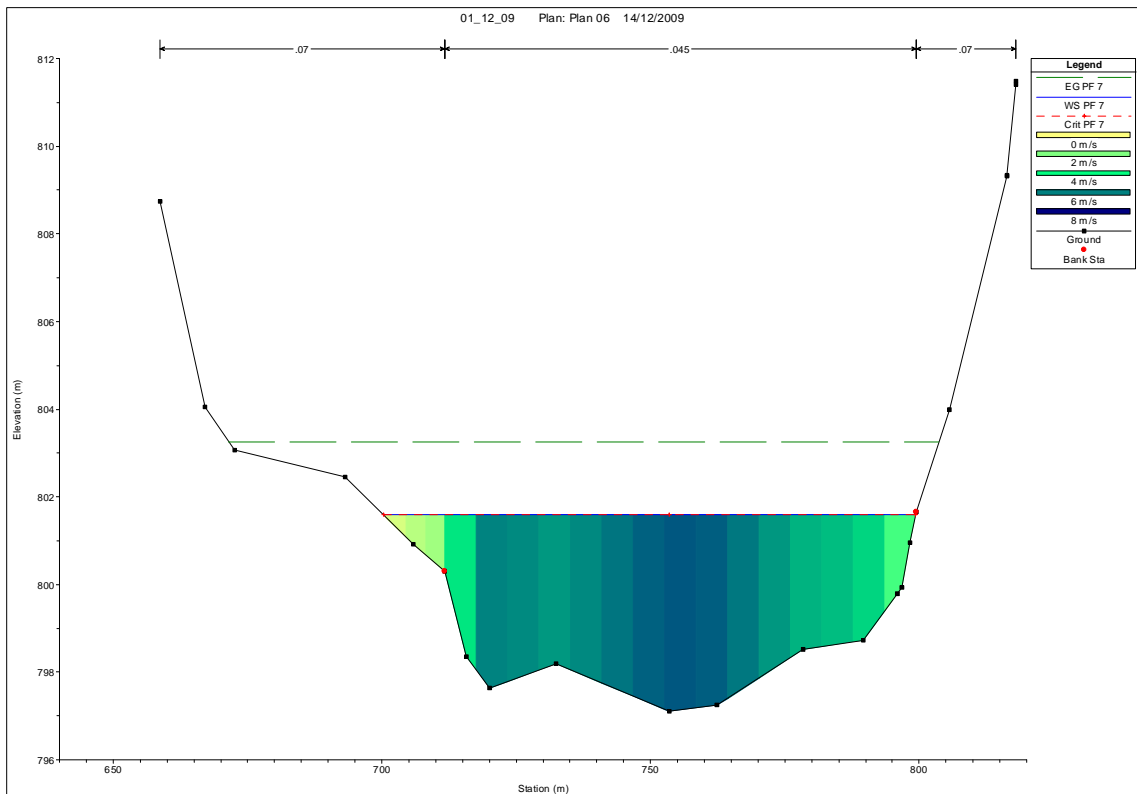




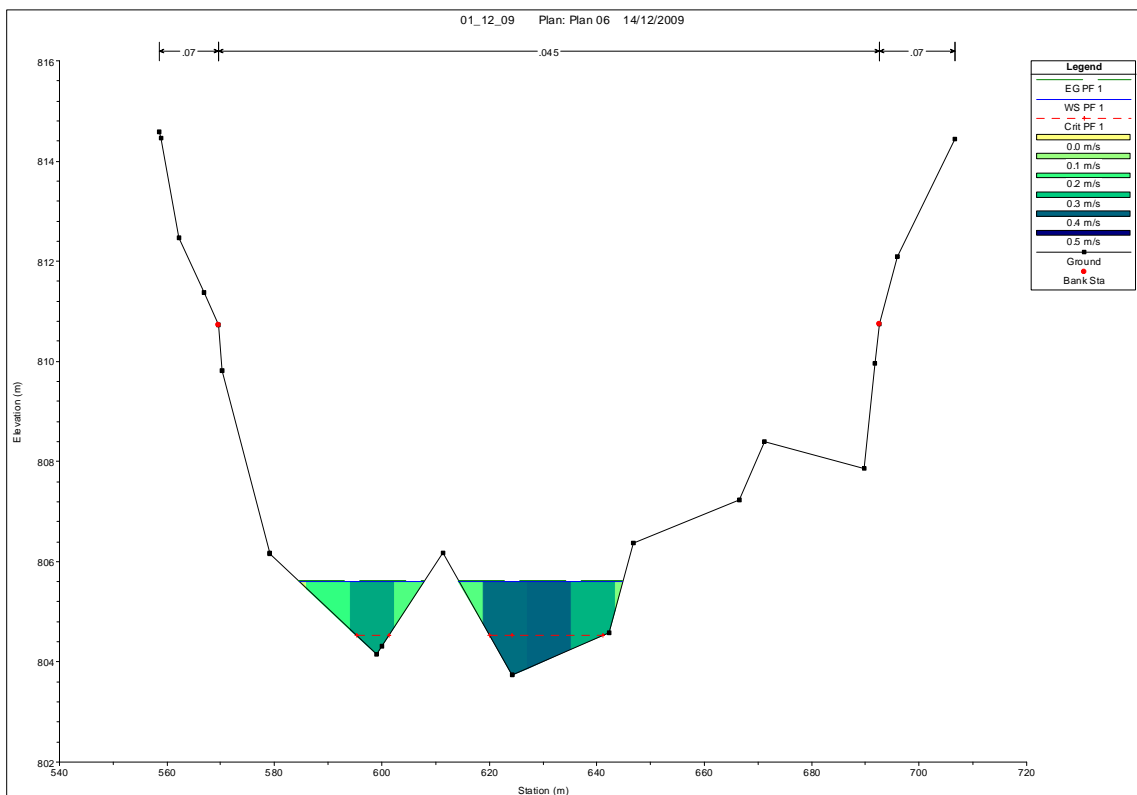
**Seção 85.5, Perfil 5.**



**Seção 85.5, Perfil 6.**

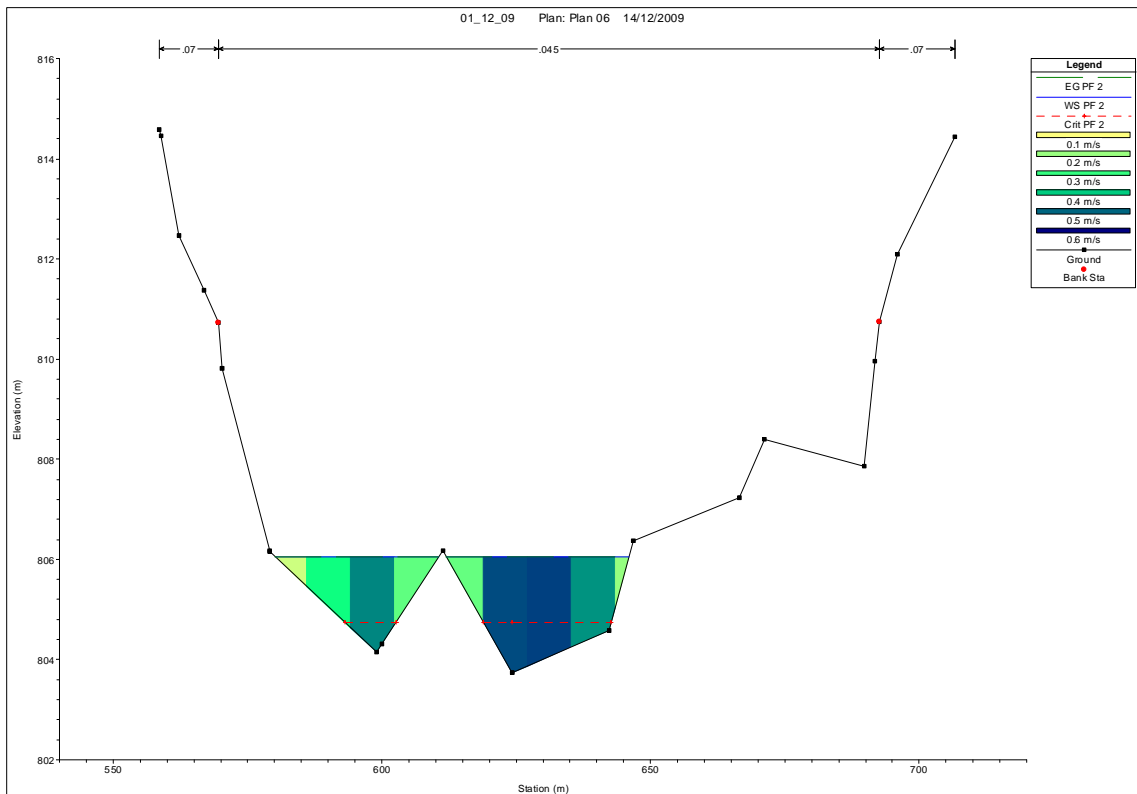


**Seção 85.5, Perfil 7.**

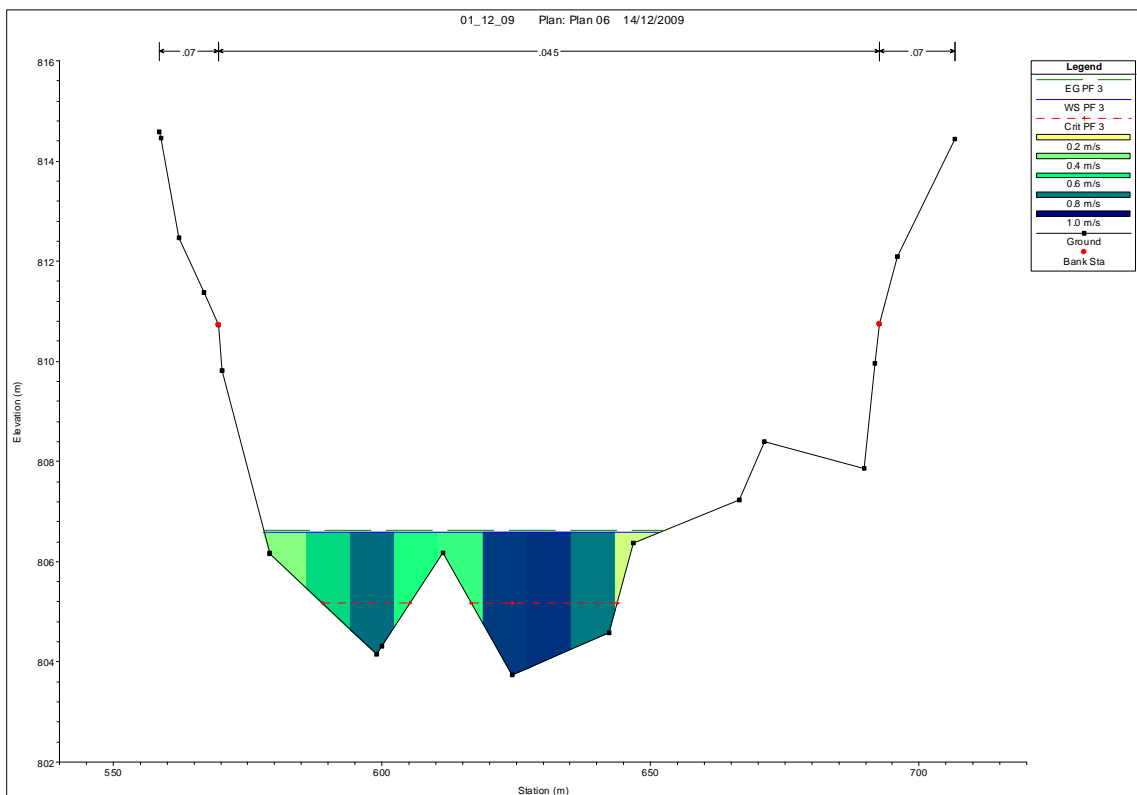


**Seção 88.6, Perfil 1.**

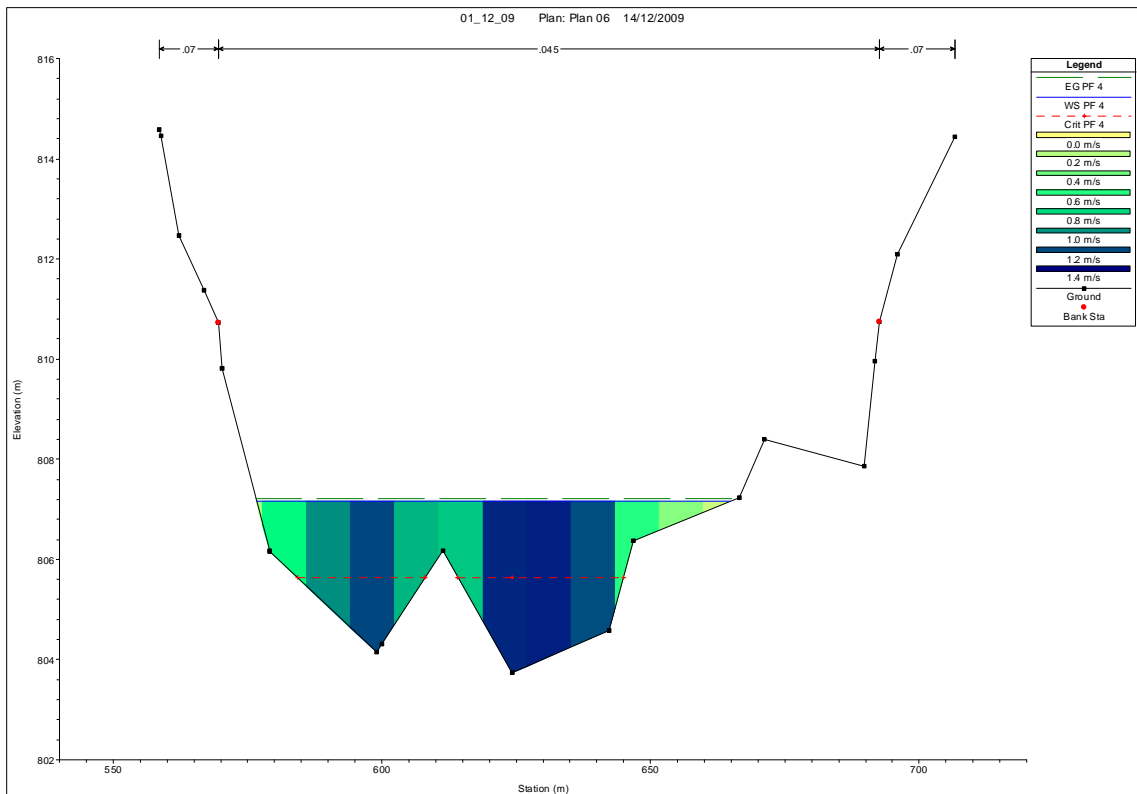




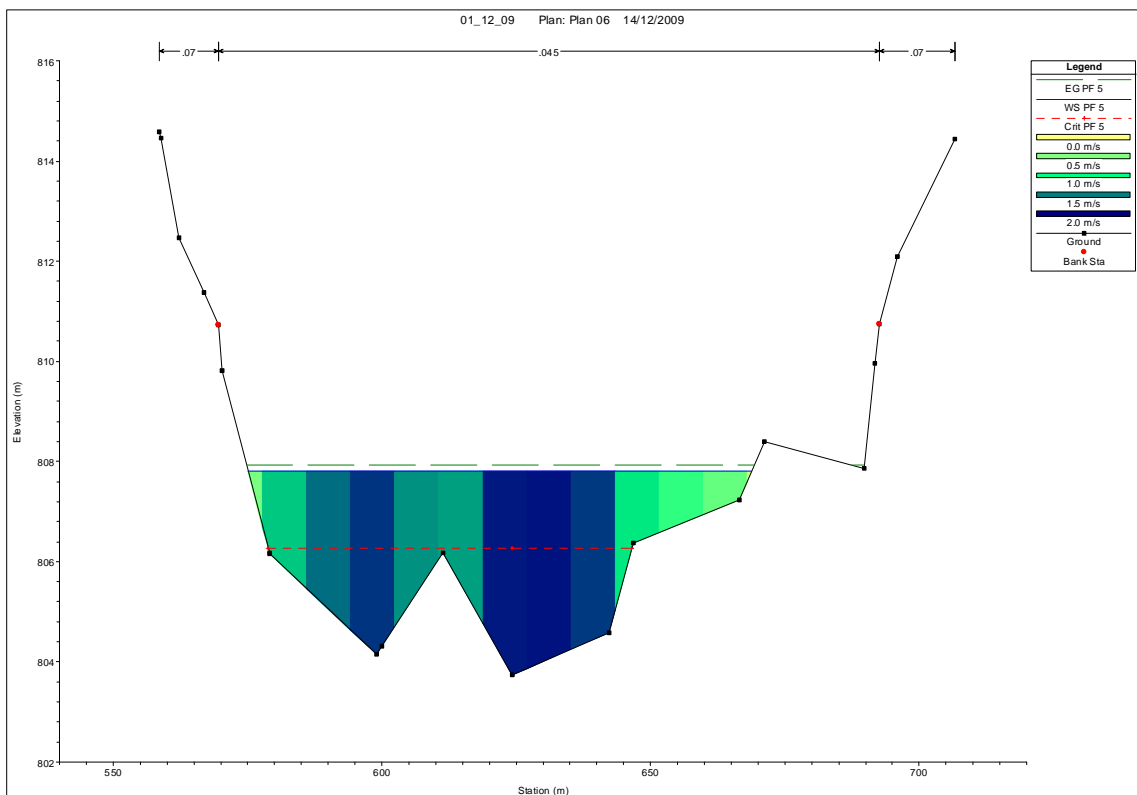
**Seção 88.6, Perfil 2.**



**Seção 88.6, Perfil 3.**

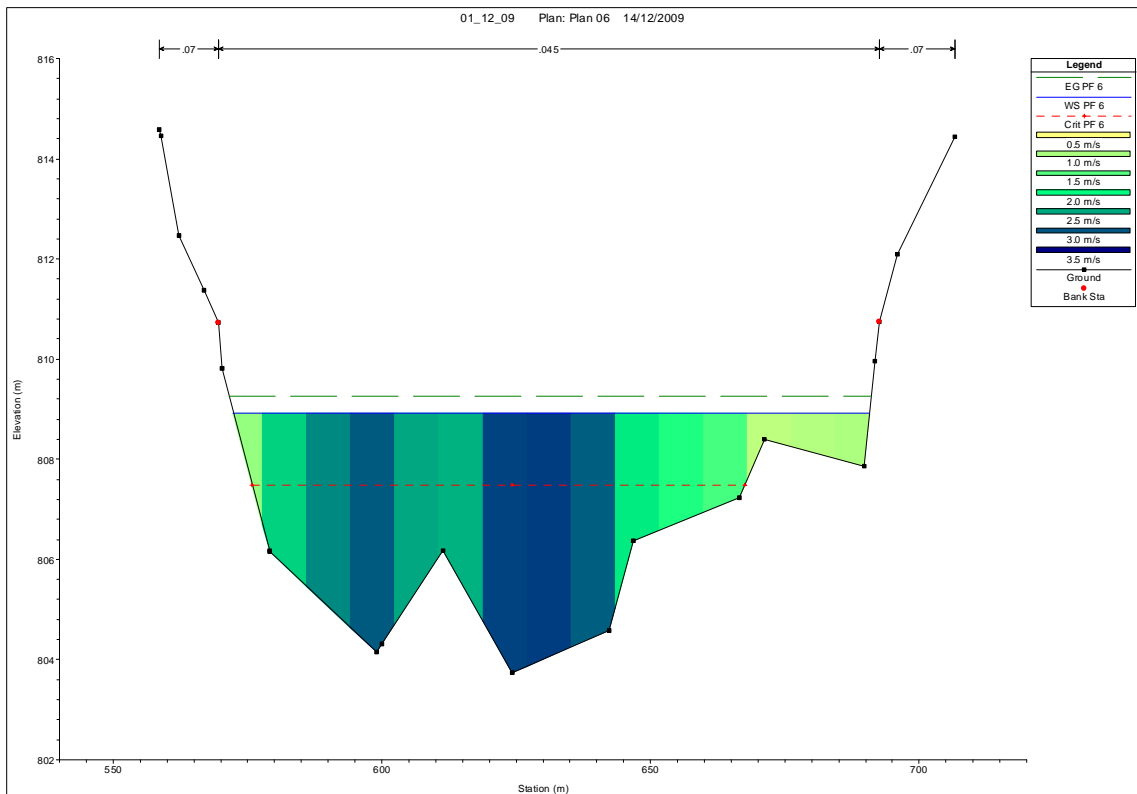


**Seção 88.6, Perfil 4.**

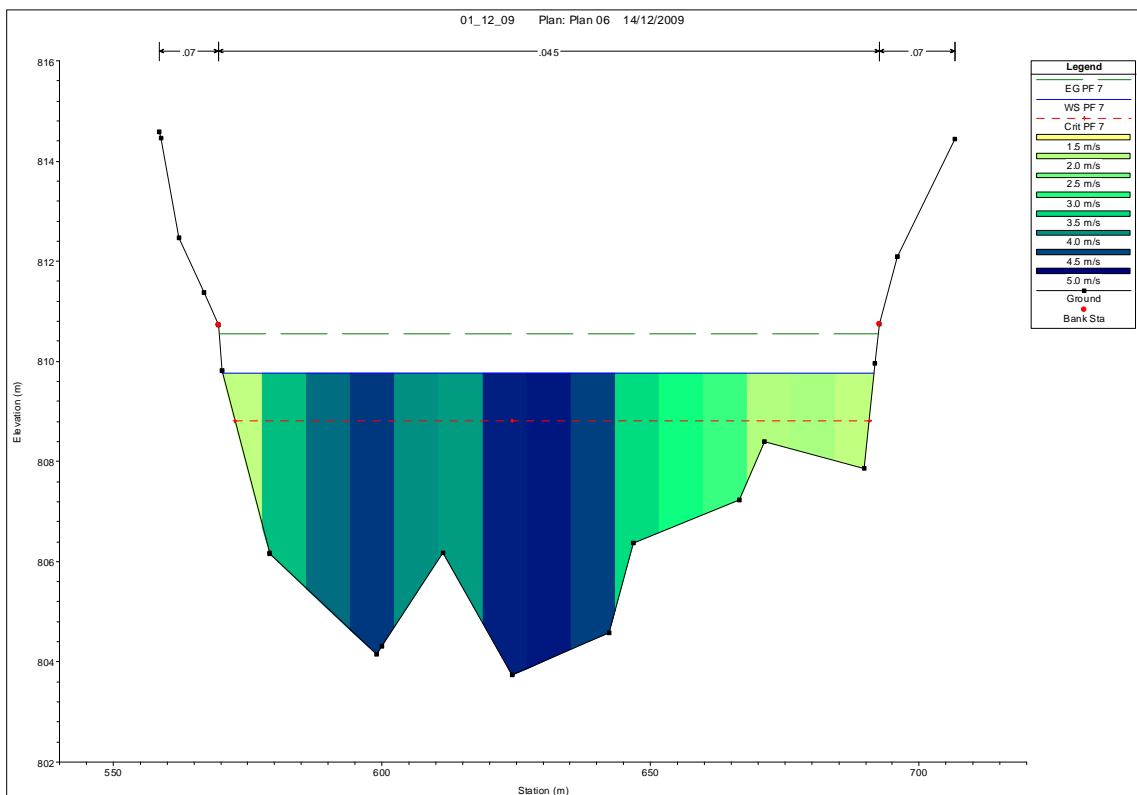


**Seção 88.6, Perfil 5.**

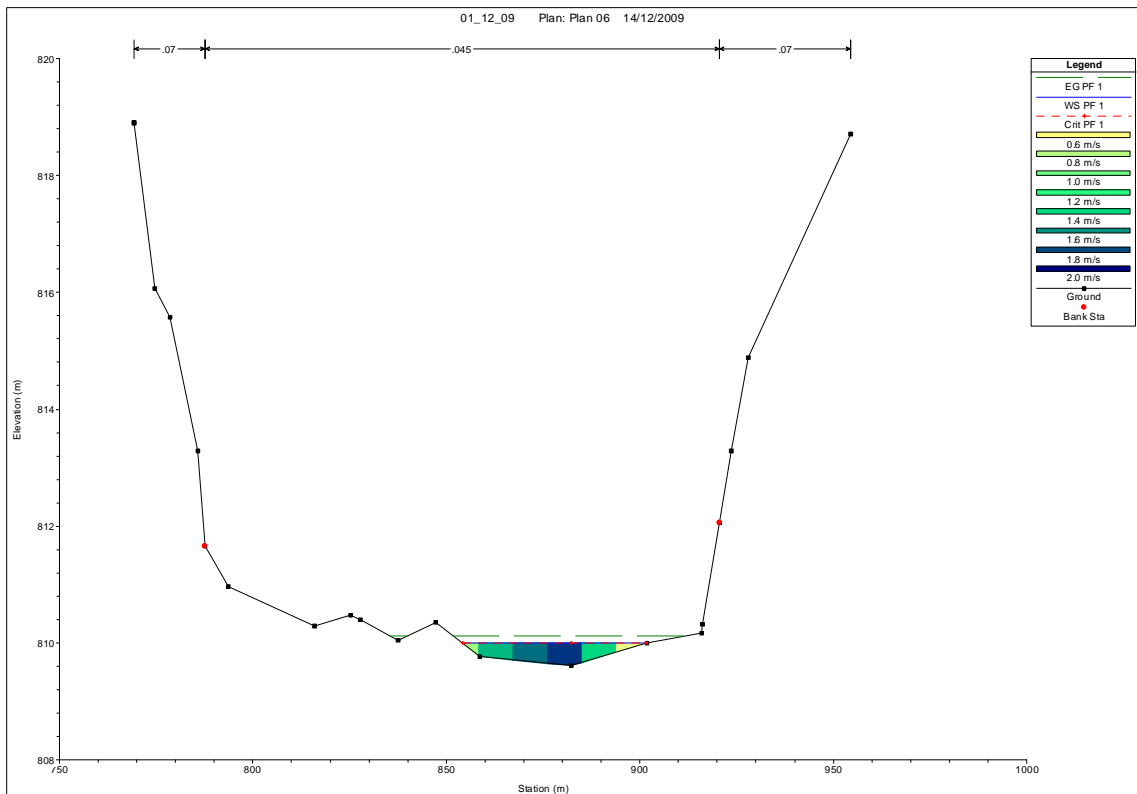




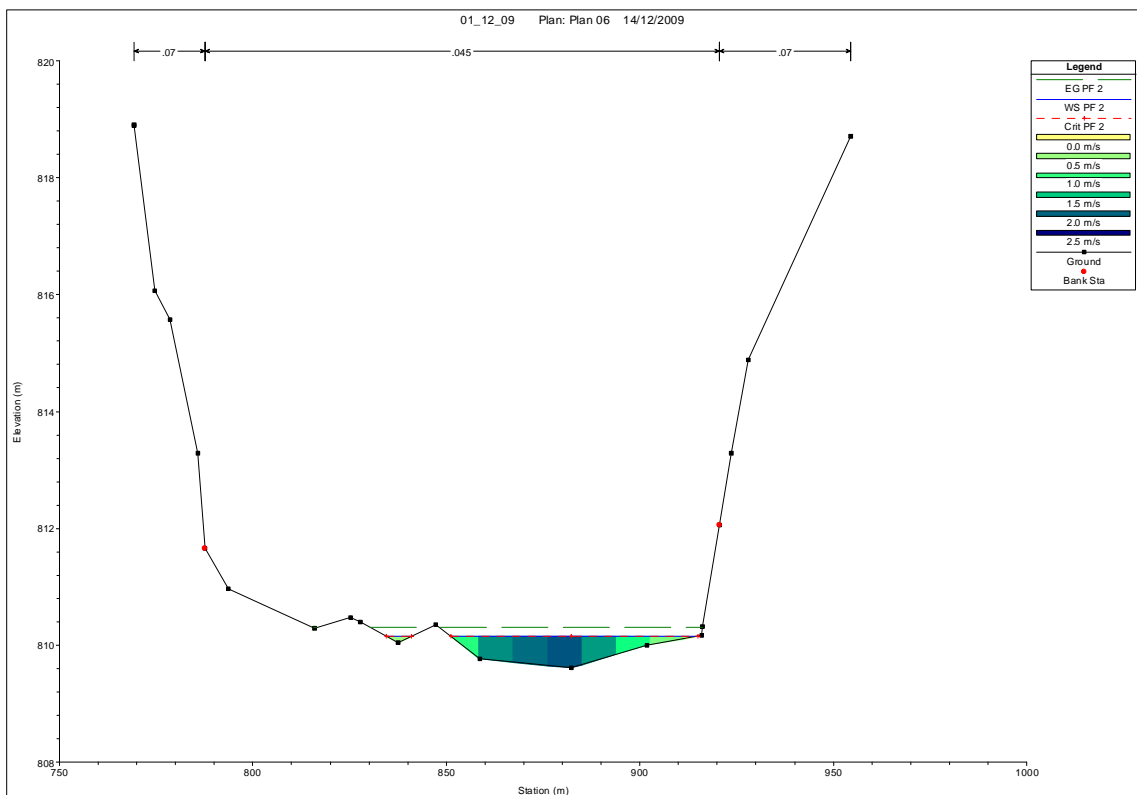
**Seção 88.6, Perfil 6.**



**Seção 88.6, Perfil 7.**

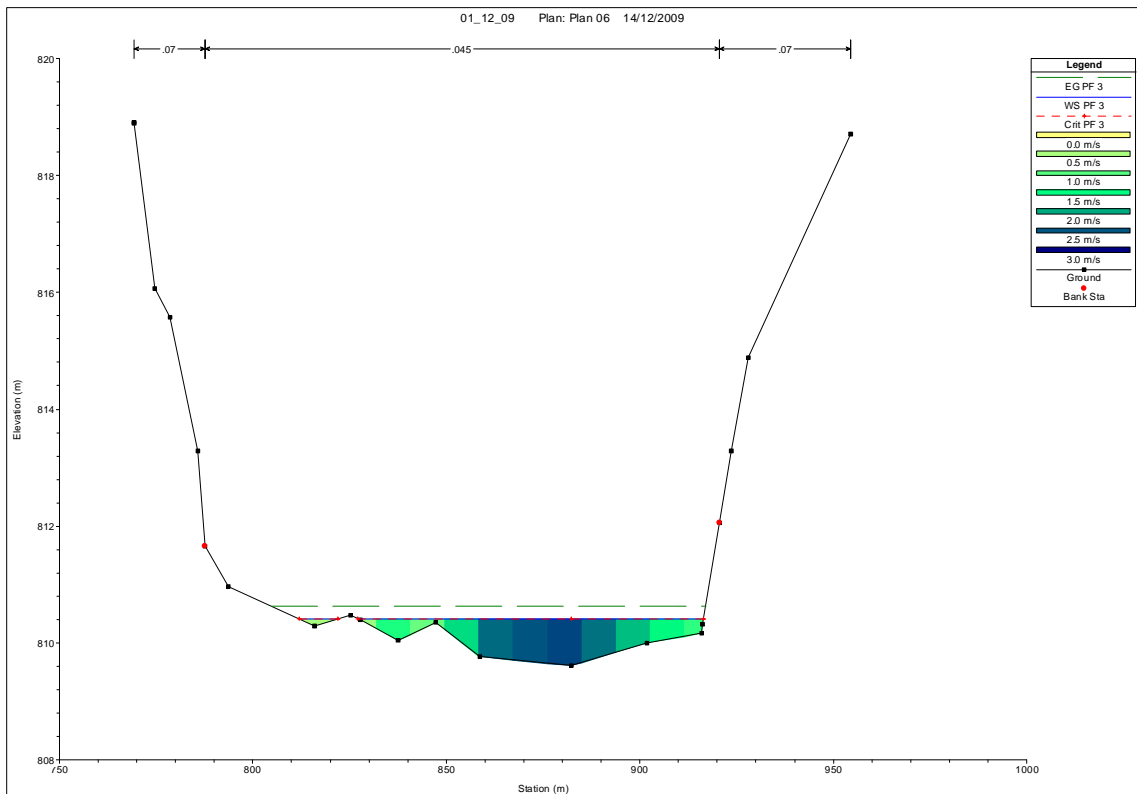


**Seção 89.8, Perfil 1.**

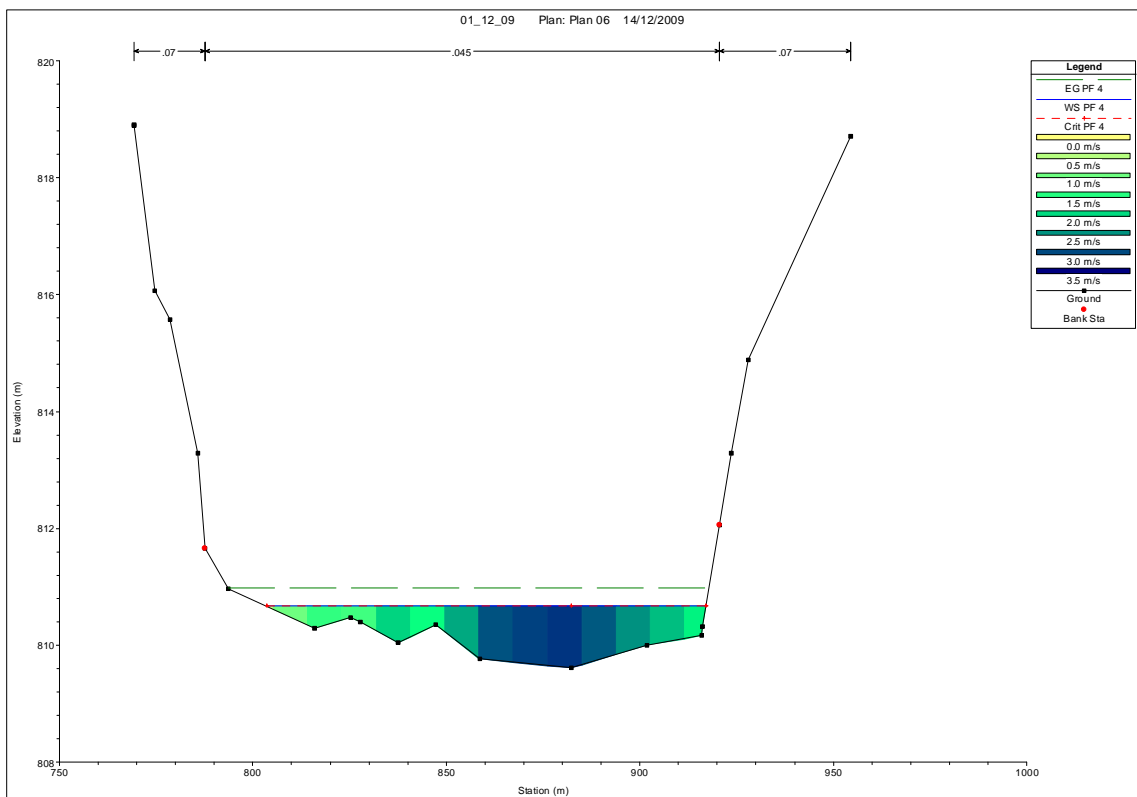


**Seção 89.8, Perfil 2.**

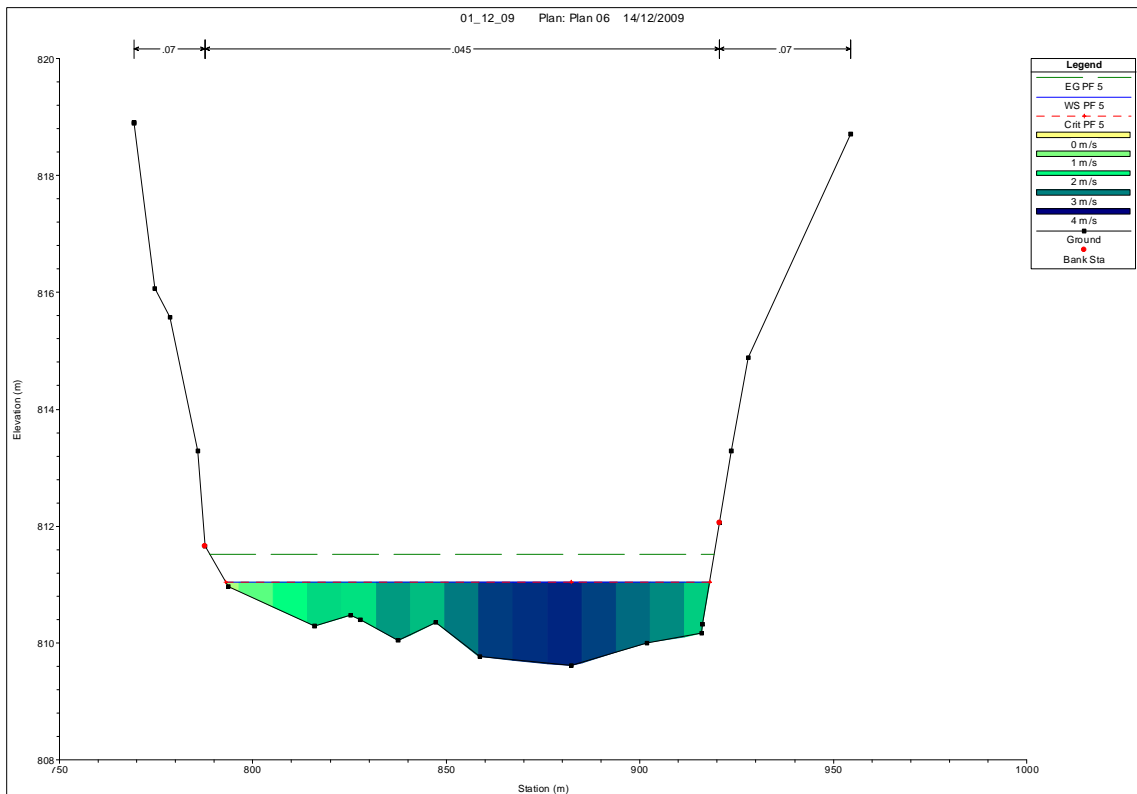




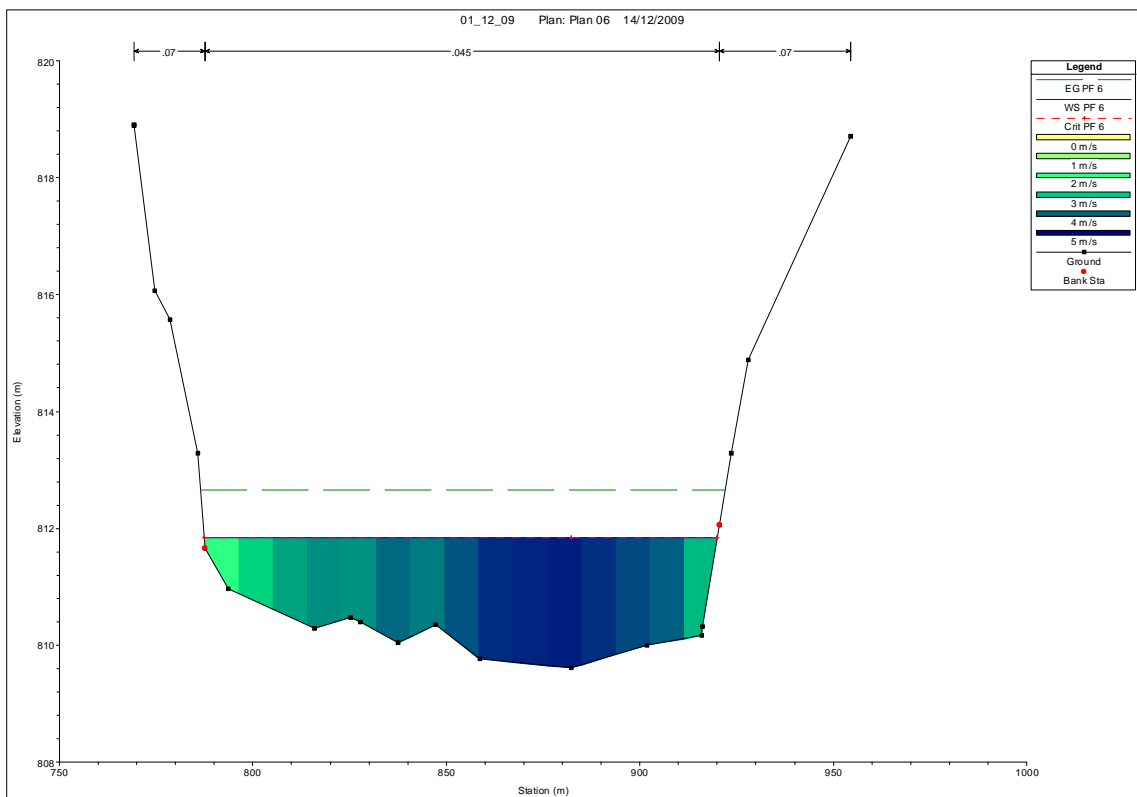
**Seção 89.8, Perfil 3.**



**Seção 89.8, Perfil 4.**

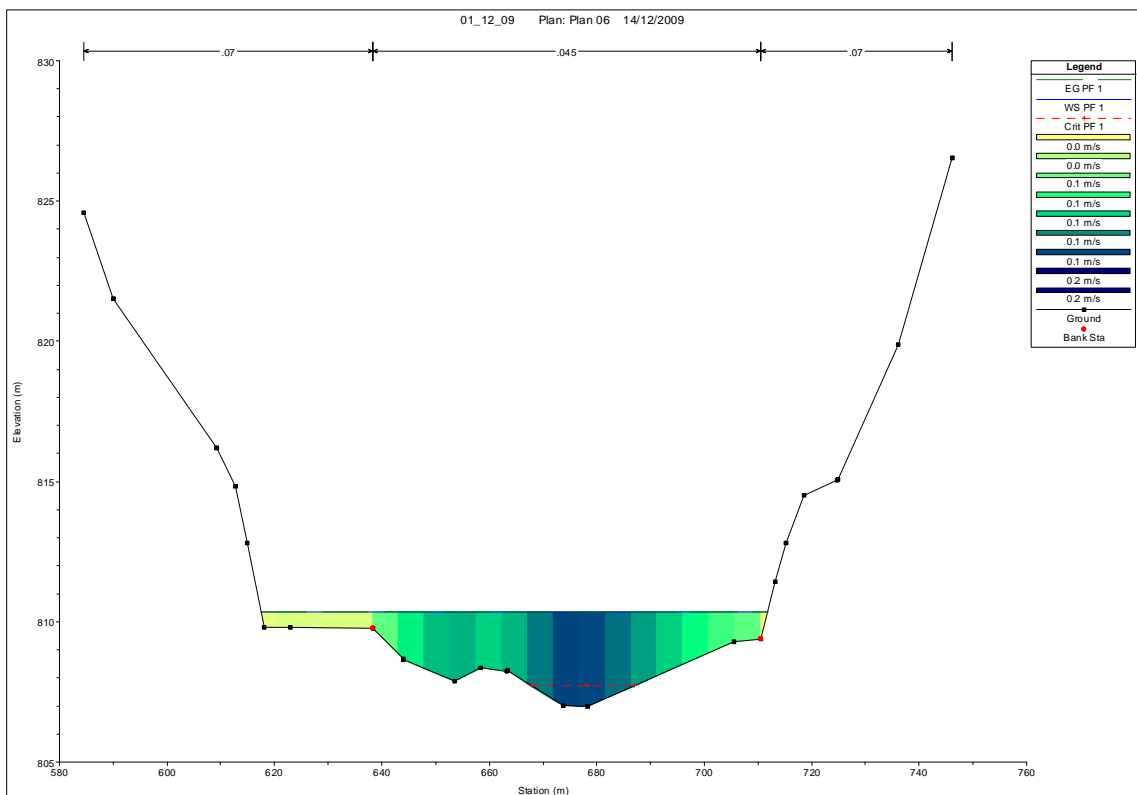
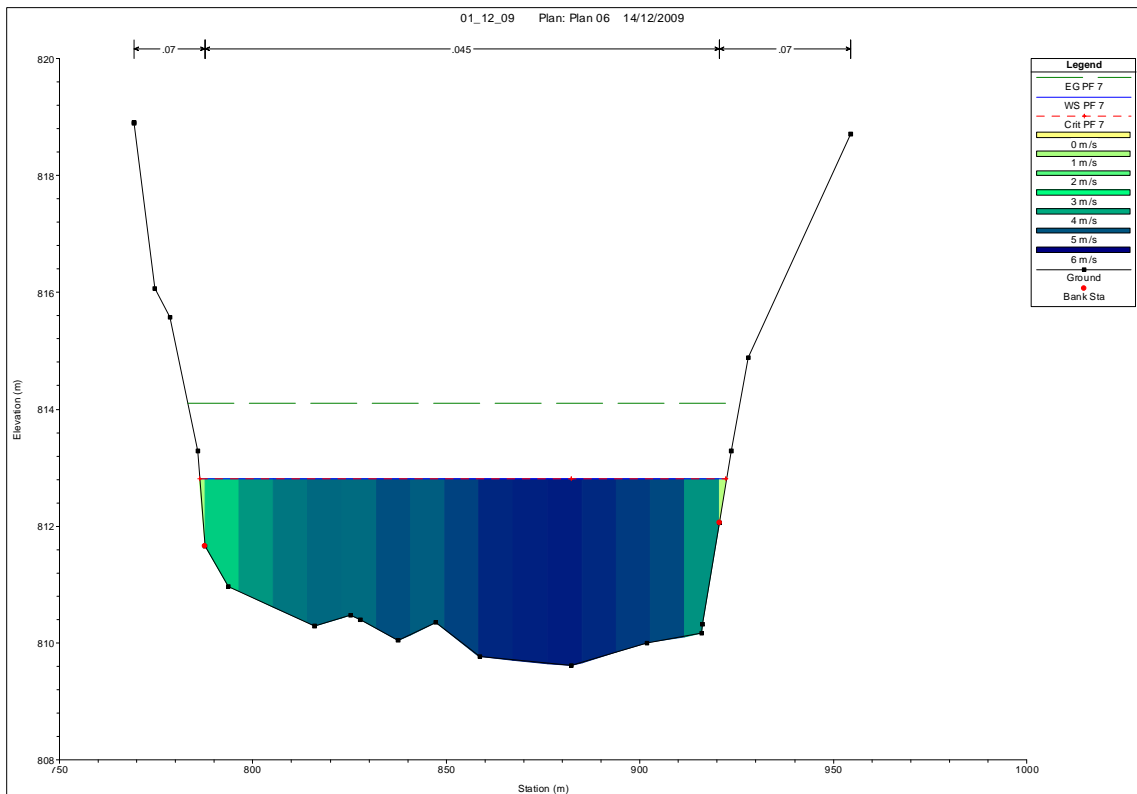


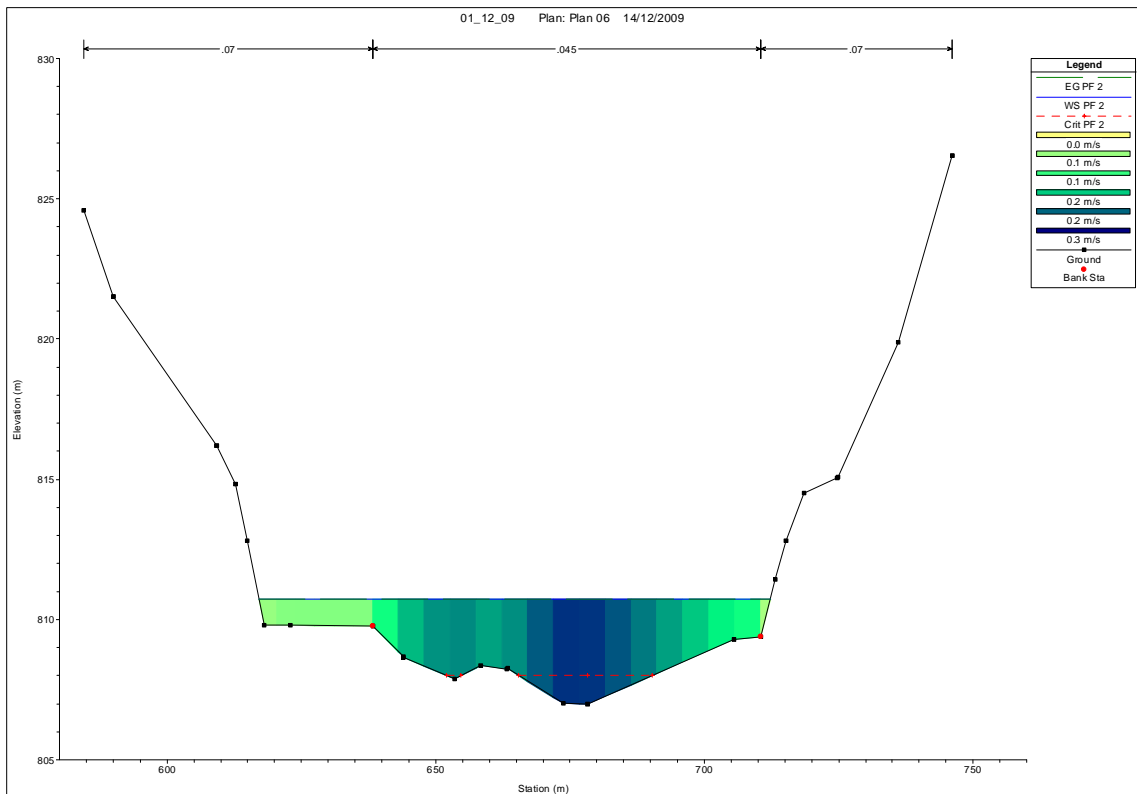
**Seção 89.8, Perfil 5.**



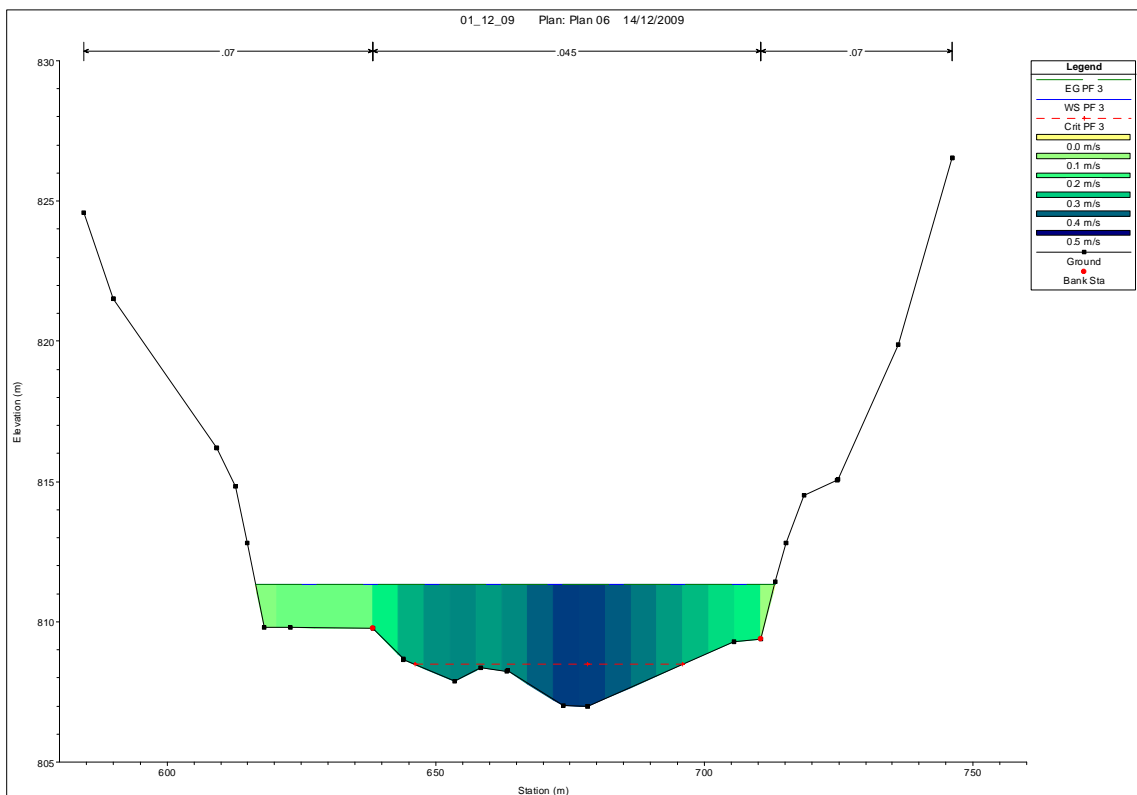
**Seção 89.8, Perfil 6.**





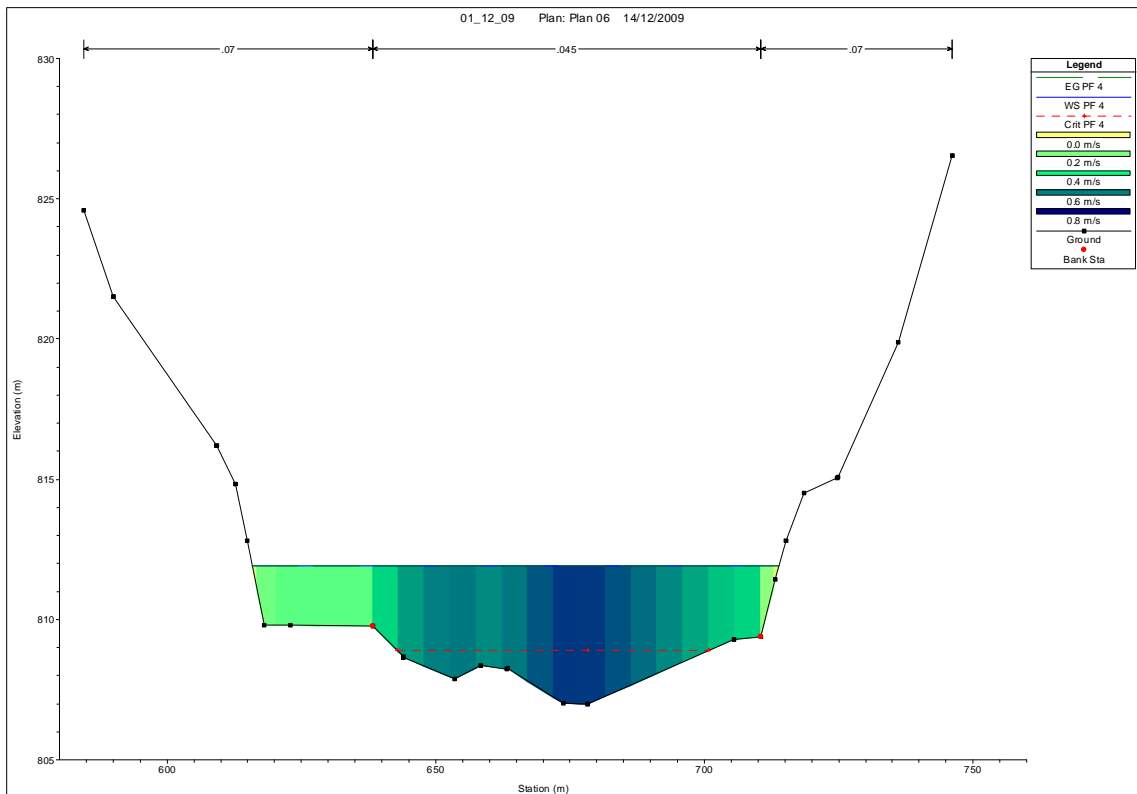


**Seção 91.8, Perfil 2.**

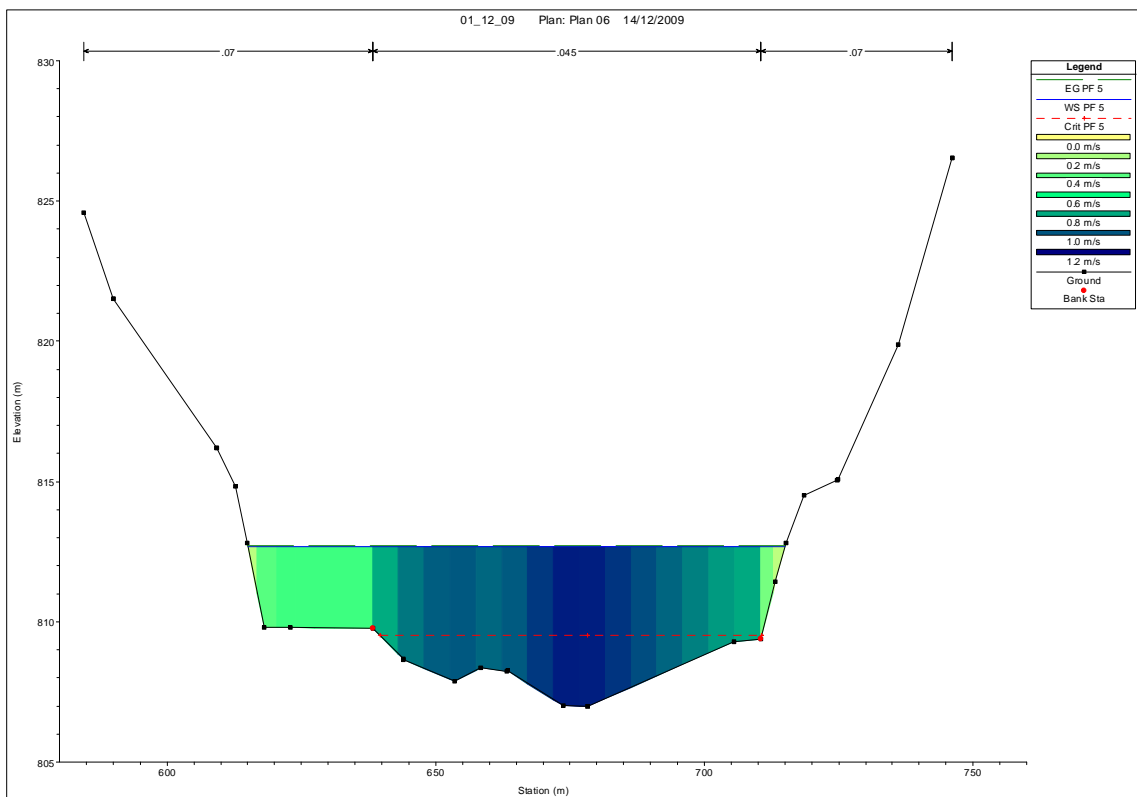


**Seção 91.8, Perfil 3.**

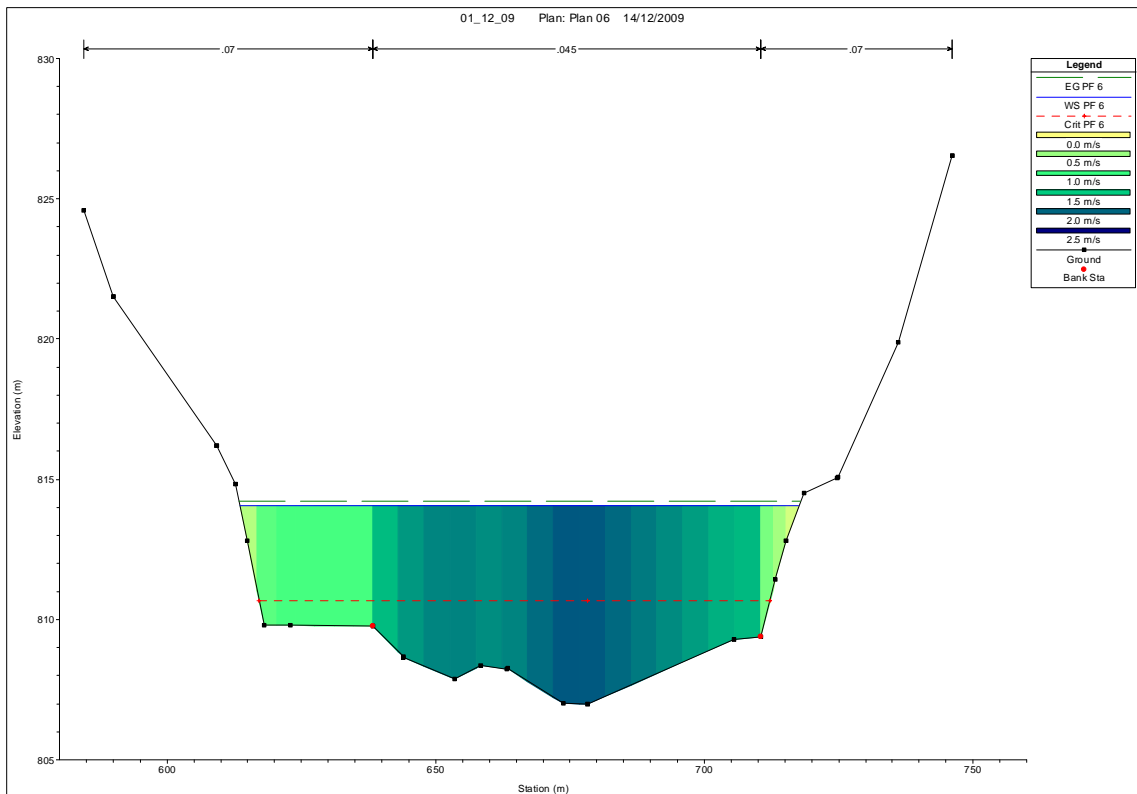




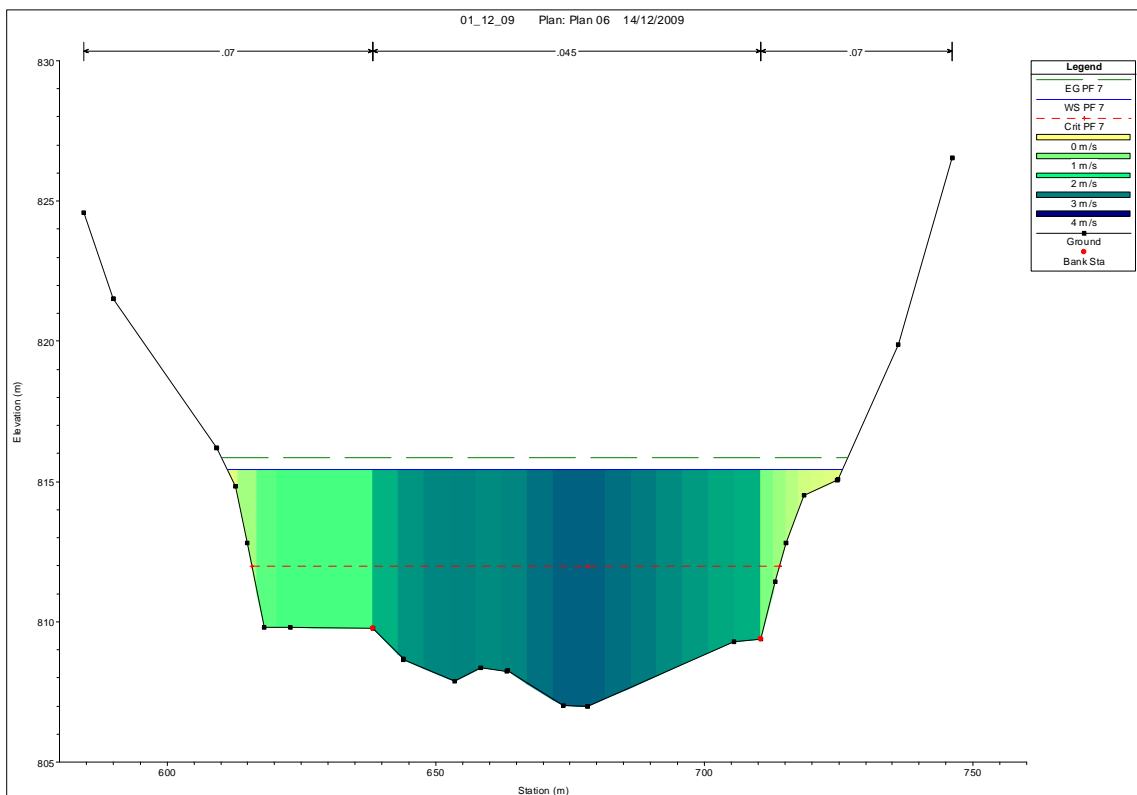
**Seção 91.8, Perfil 4.**



**Seção 91.8, Perfil 5.**

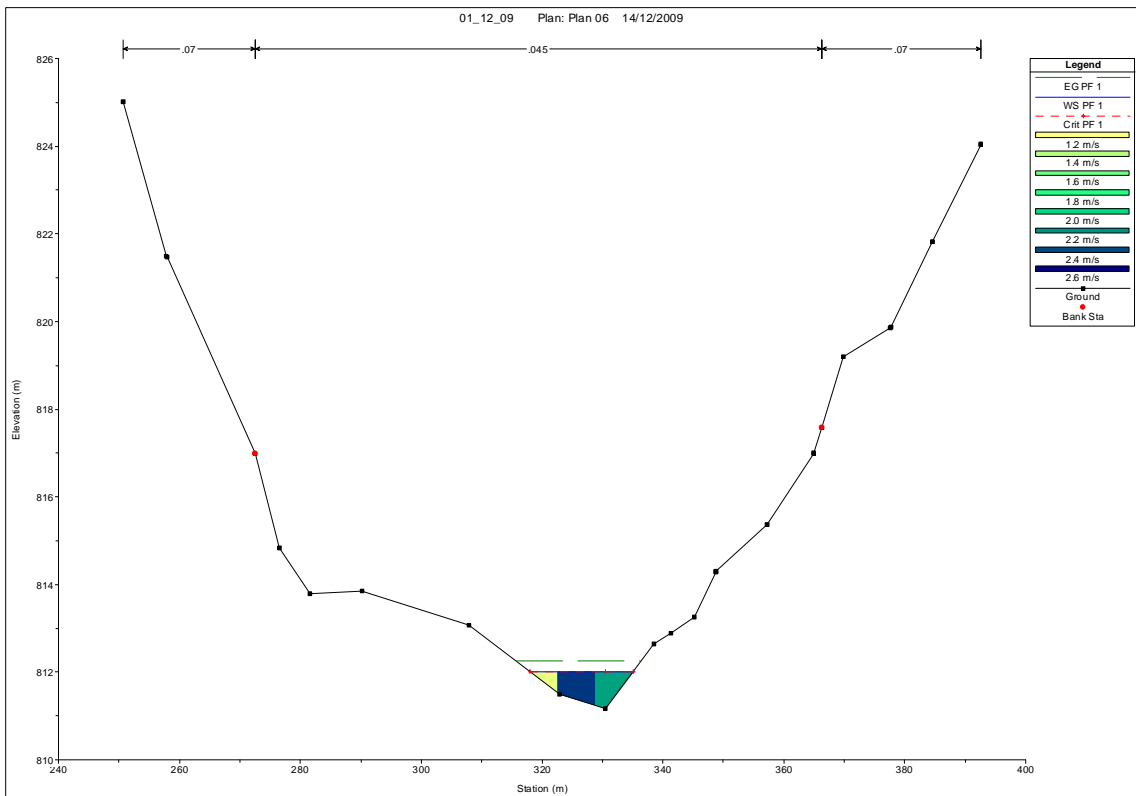


**Seção 91.8, Perfil 6.**

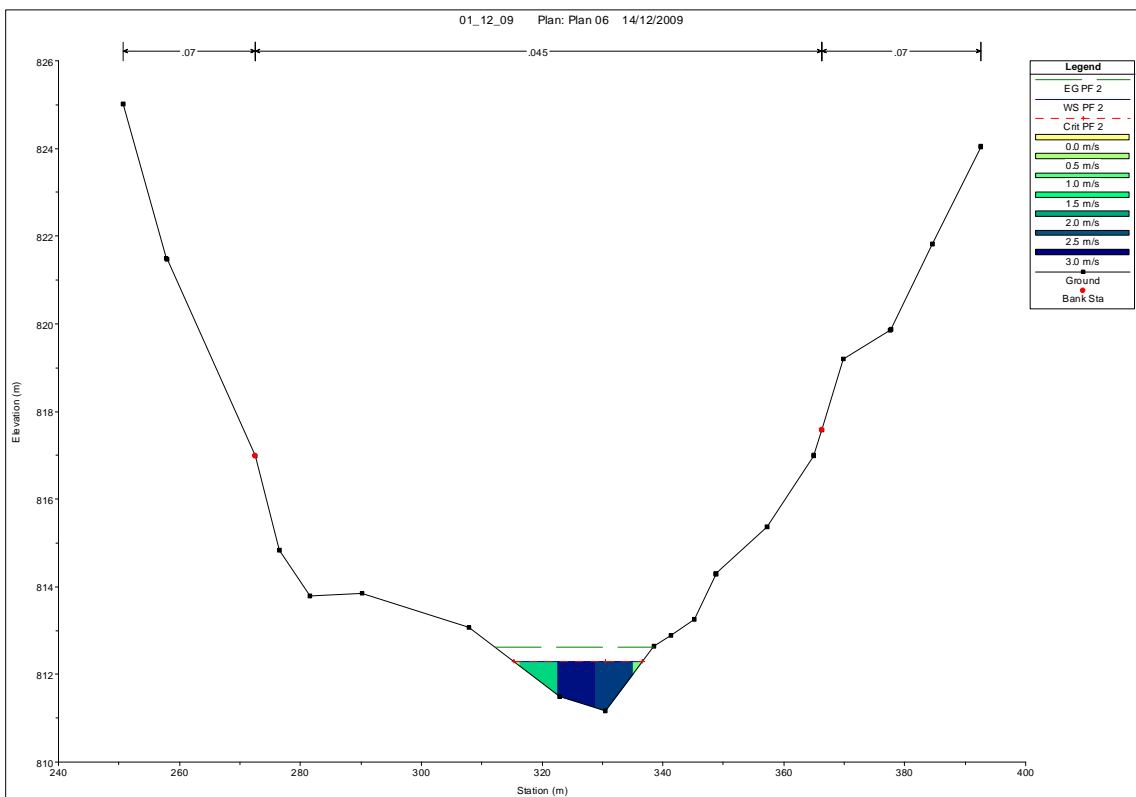


**Seção 91.8, Perfil 7.**

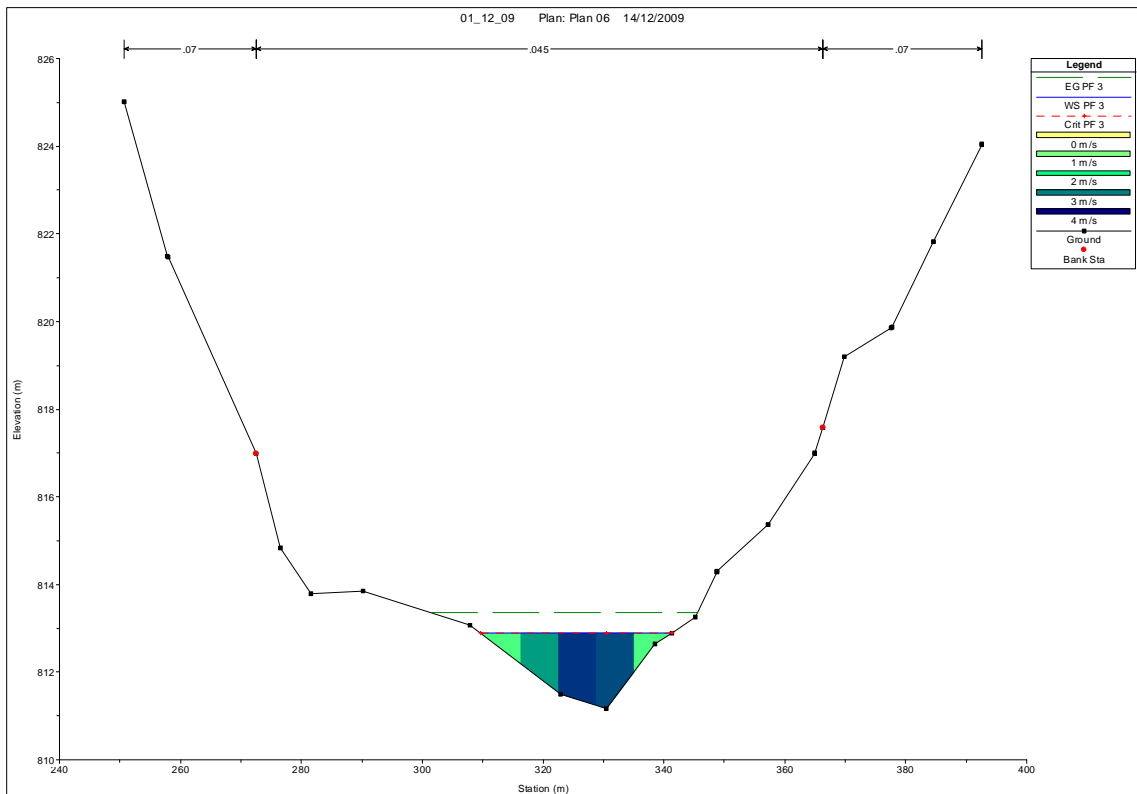




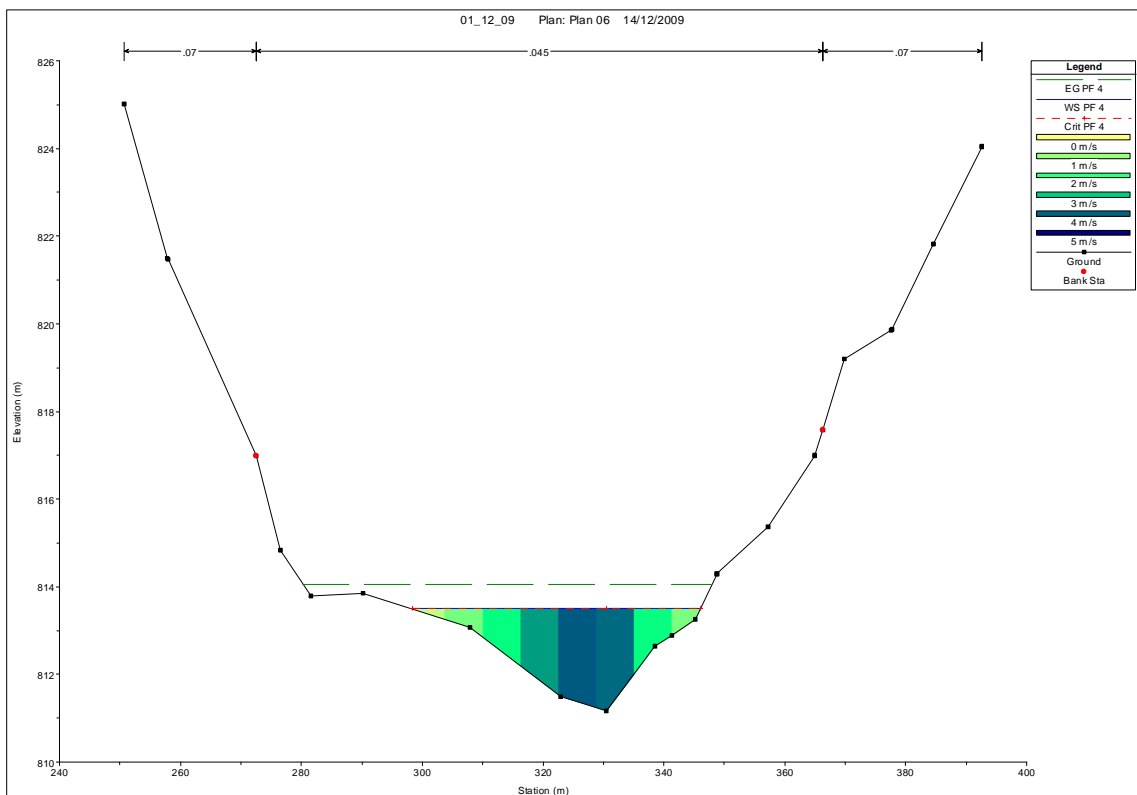
**Seção 93.8, Perfil 1.**



**Seção 93.8, Perfil 2.**

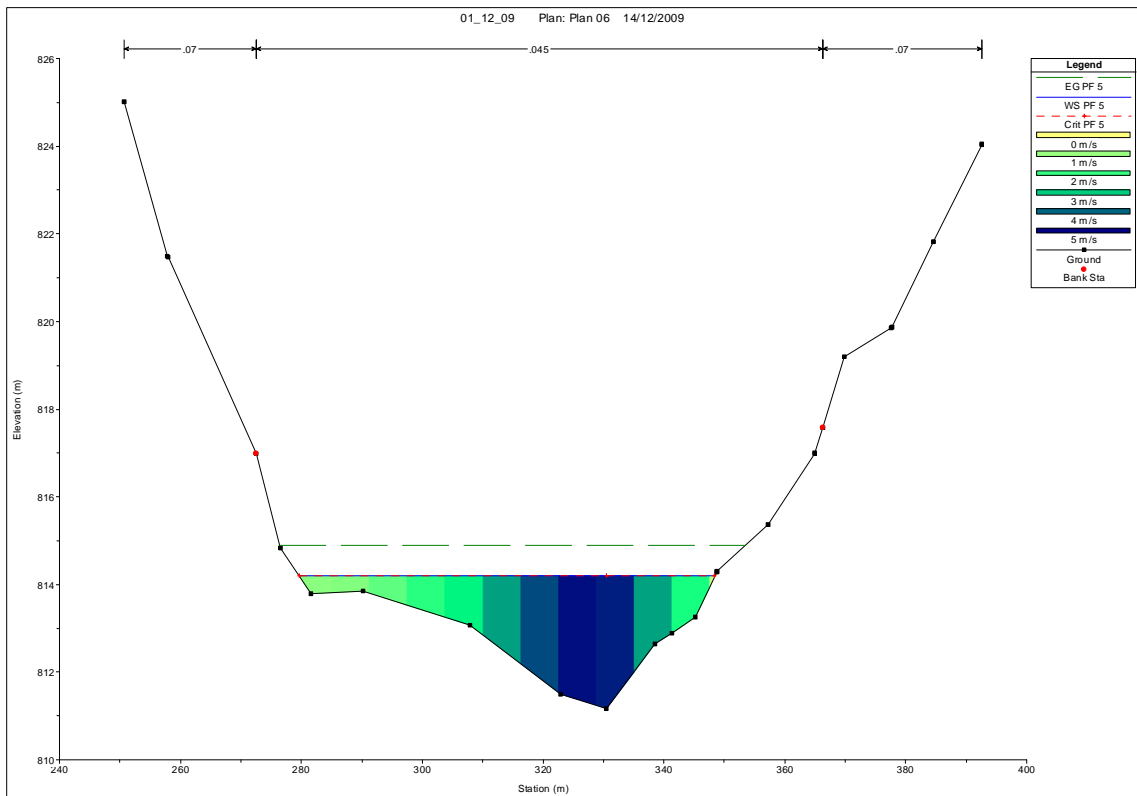


**Seção 93.8, Perfil 3.**

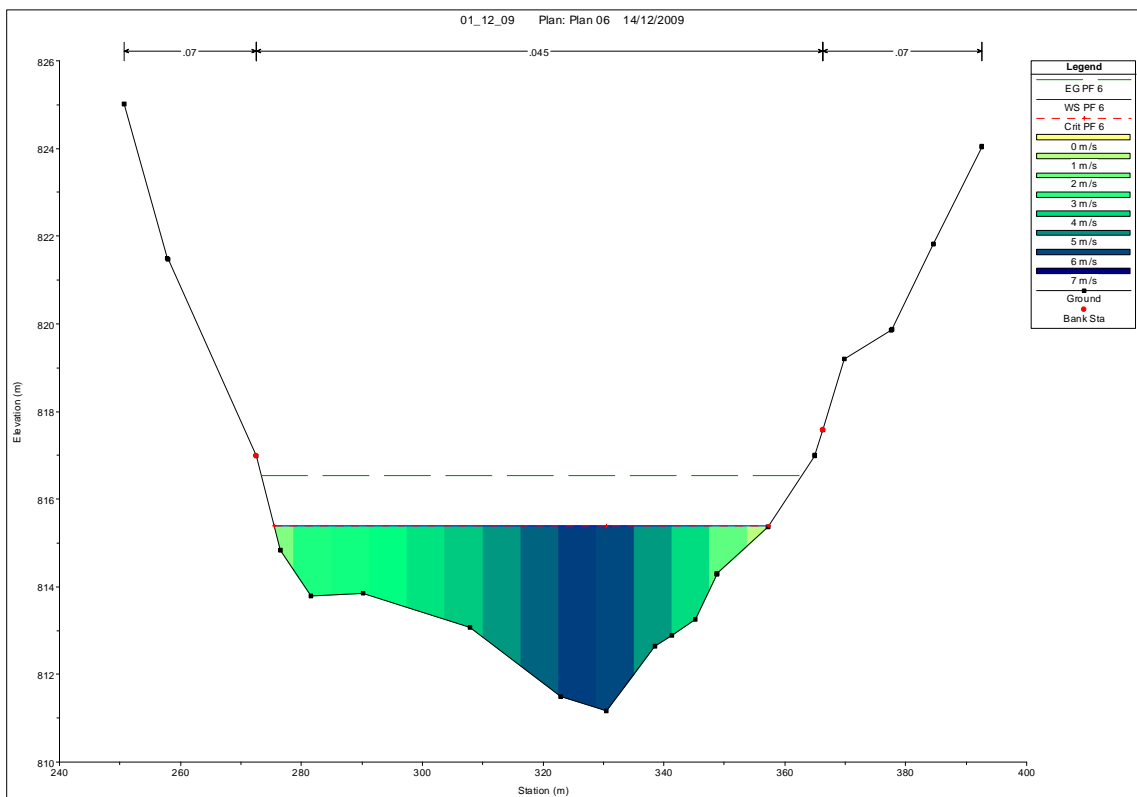


**Seção 93.8, Perfil 4.**

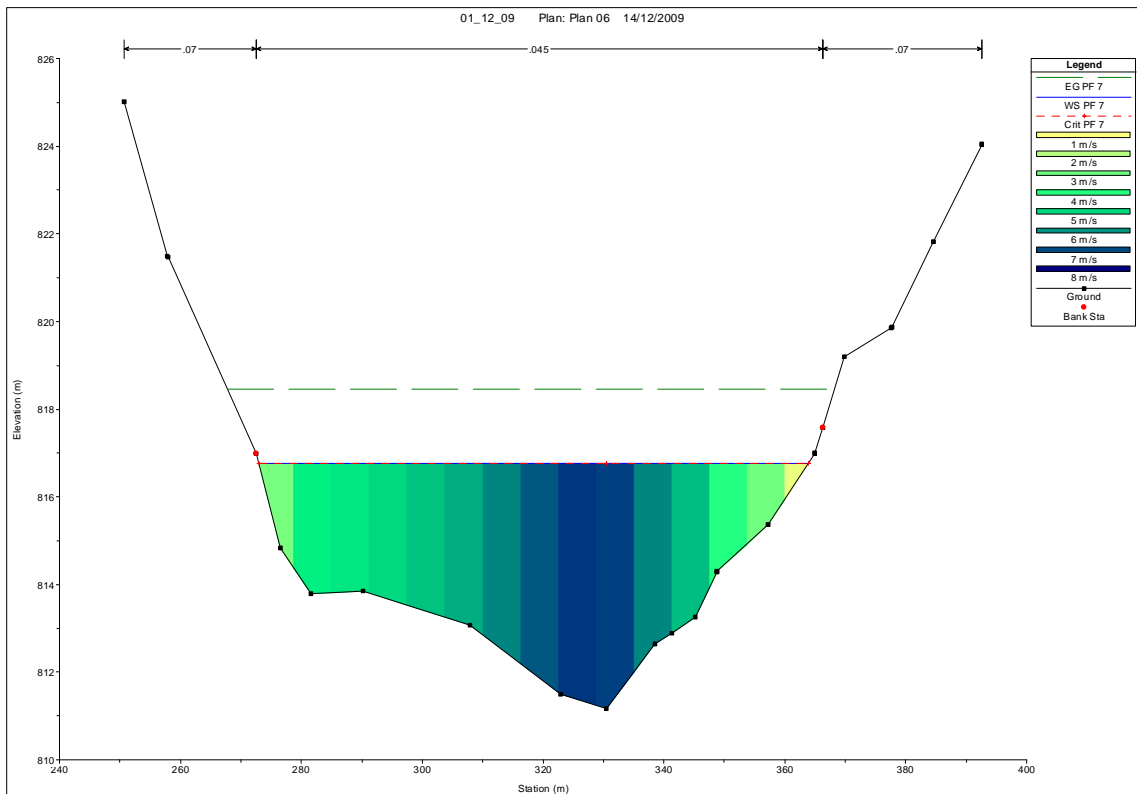




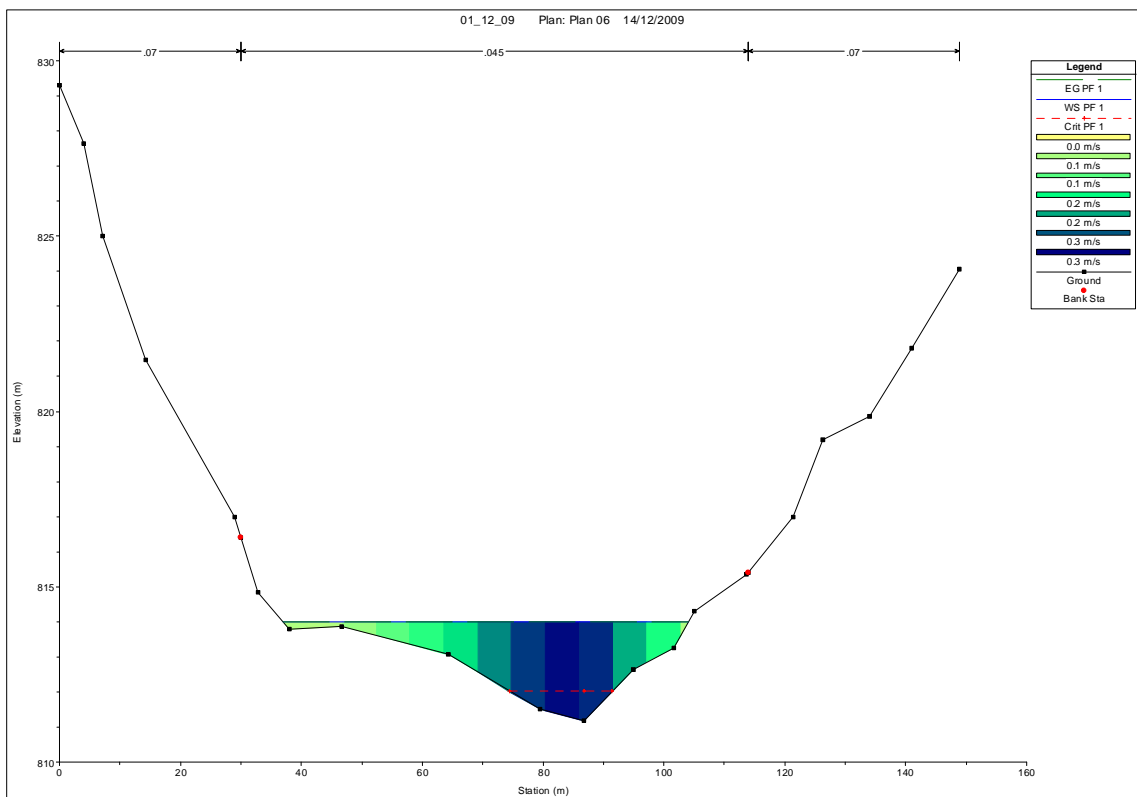
**Seção 93.8, Perfil 5.**



**Seção 93.8, Perfil 6.**

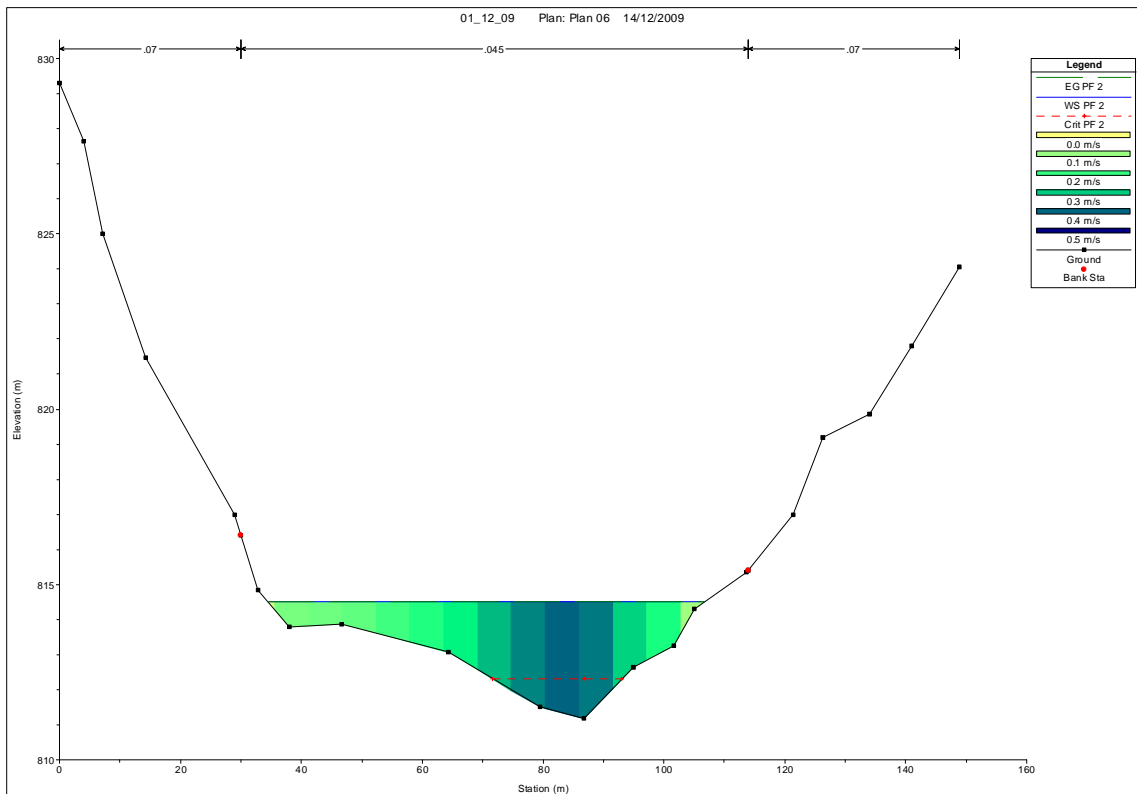


**Seção 93.8, Perfil 7.**

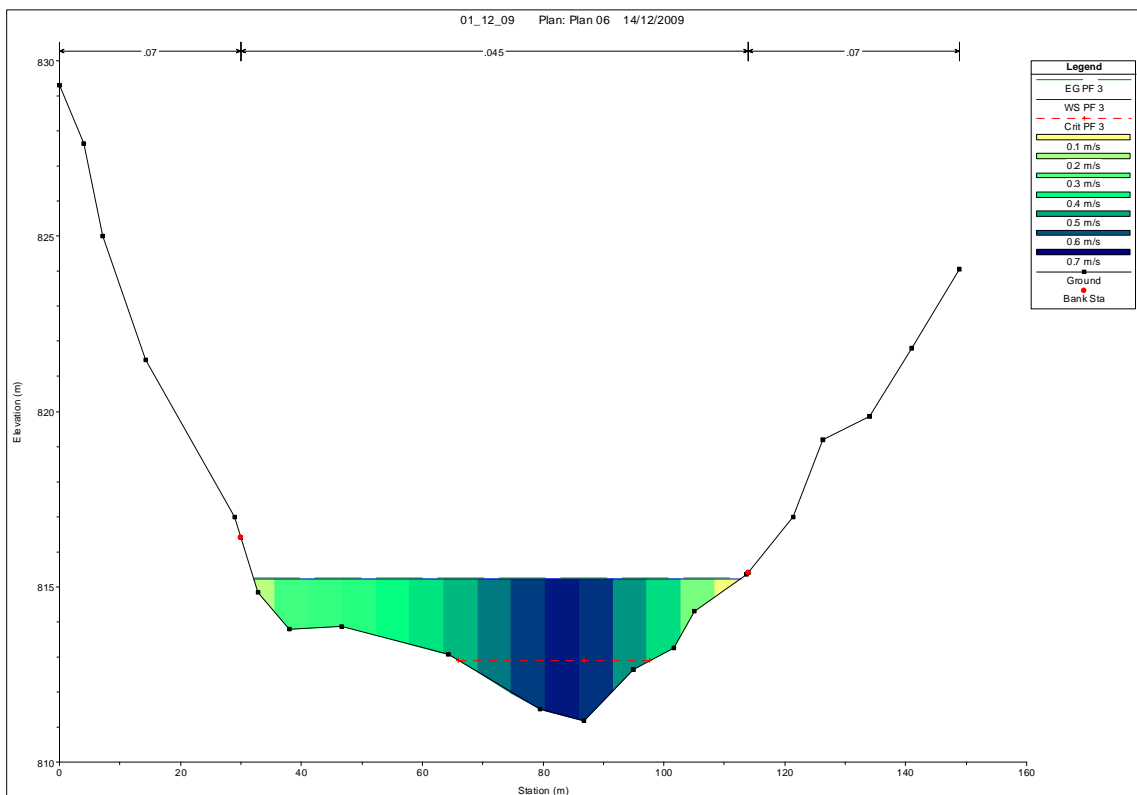


**Seção 95.6, Perfil 1.**

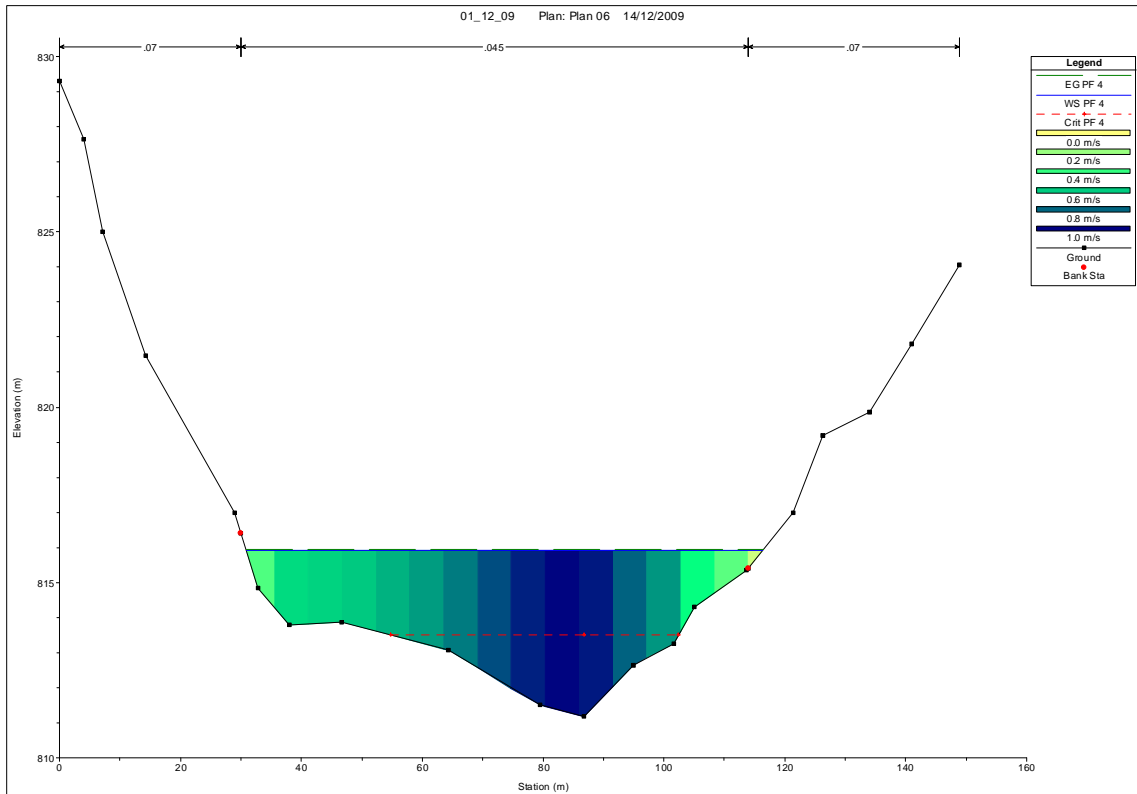




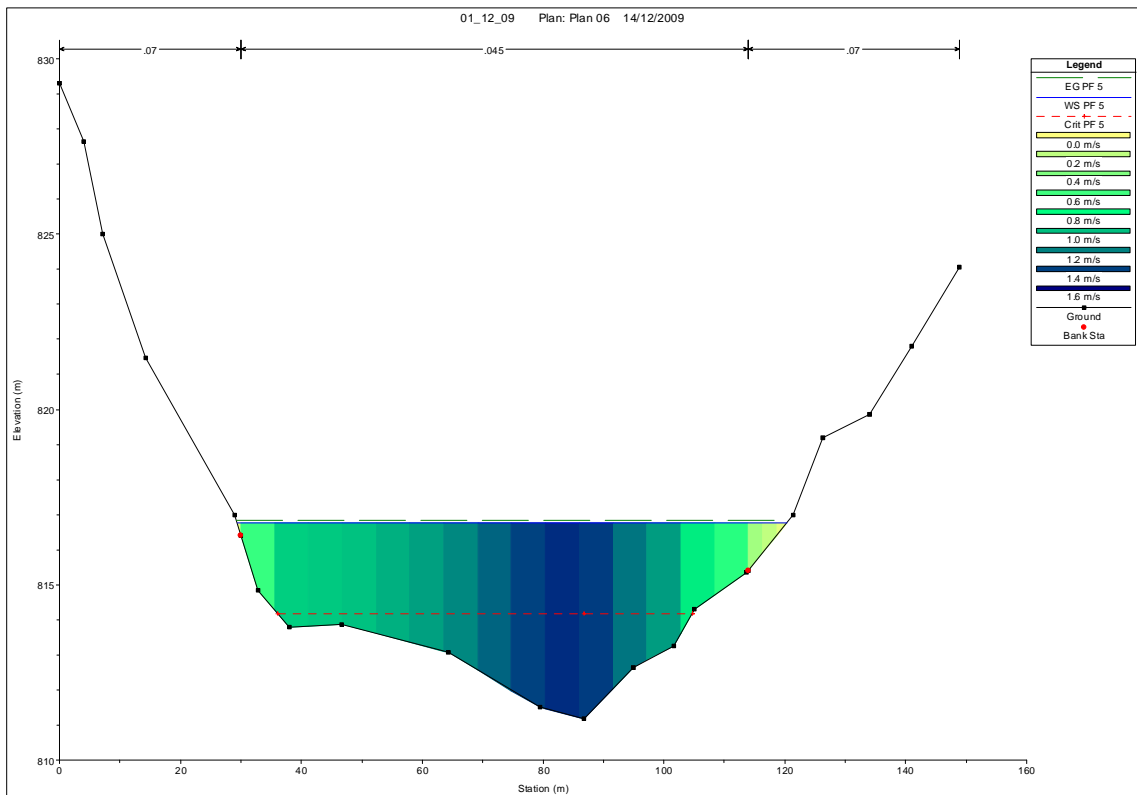
**Seção 95.6, Perfil 2.**



**Seção 95.6, Perfil 3.**

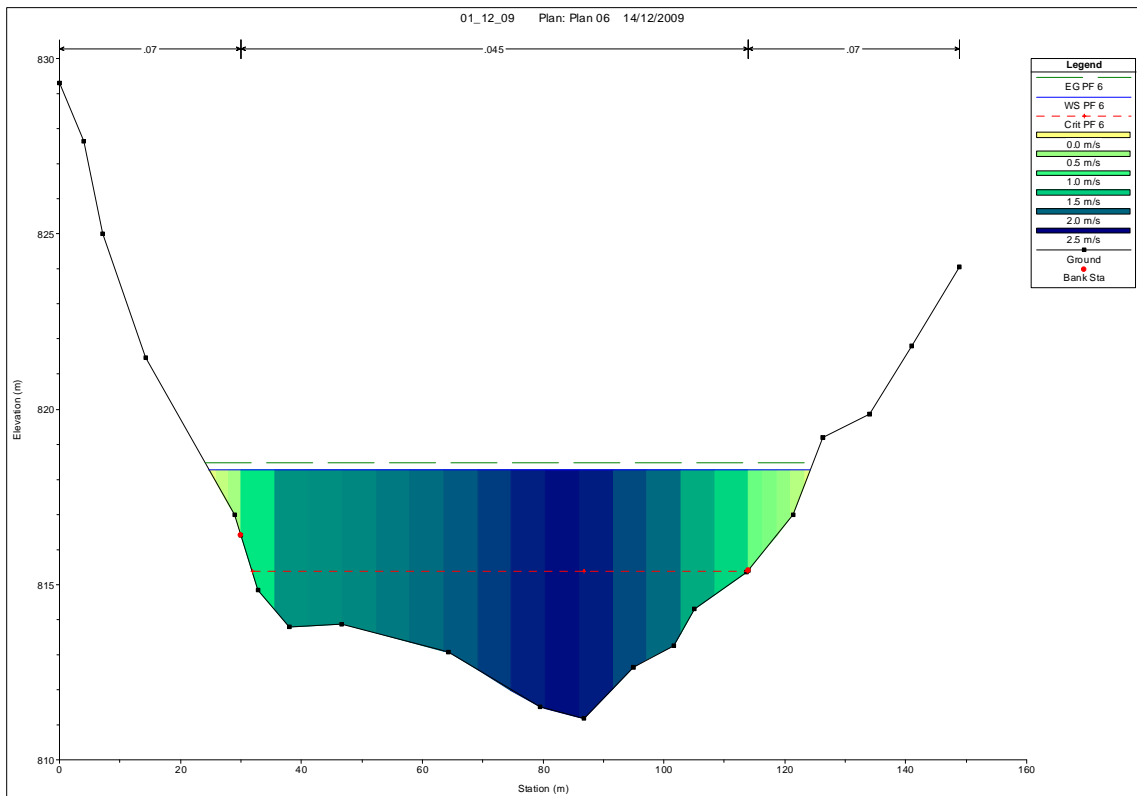


**Seção 95.6, Perfil 4.**

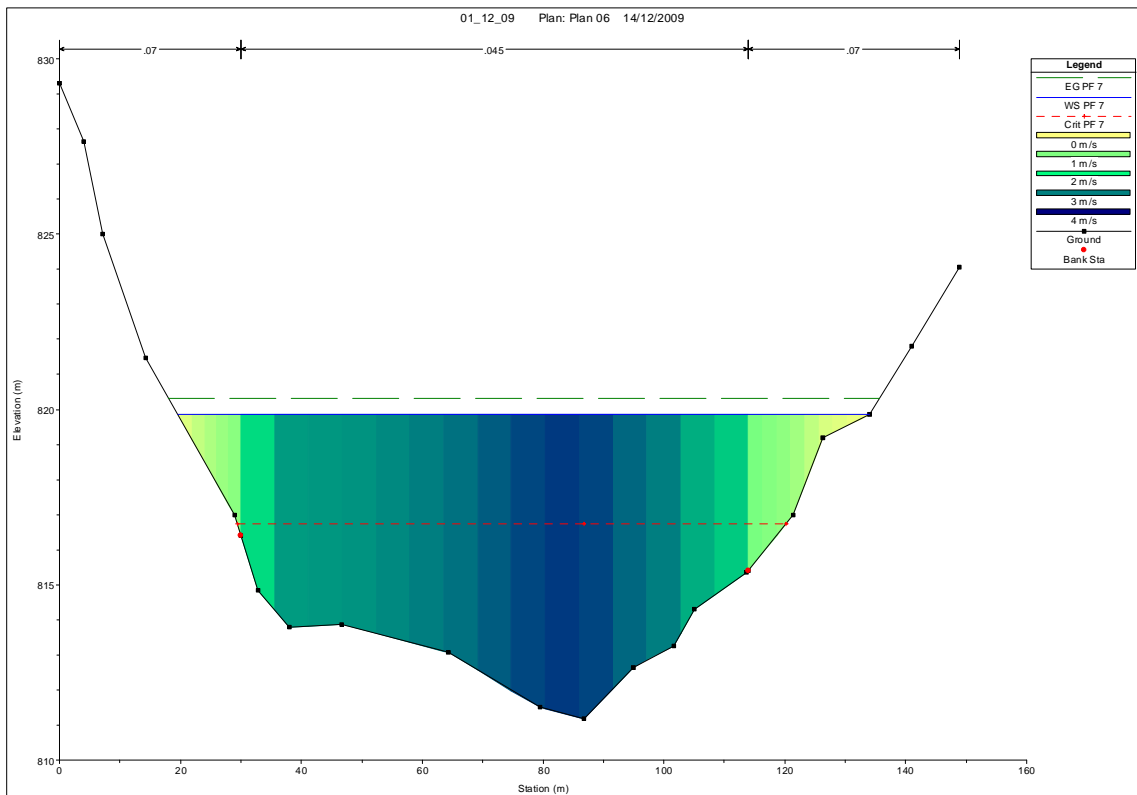


**Seção 95.6, Perfil 5.**

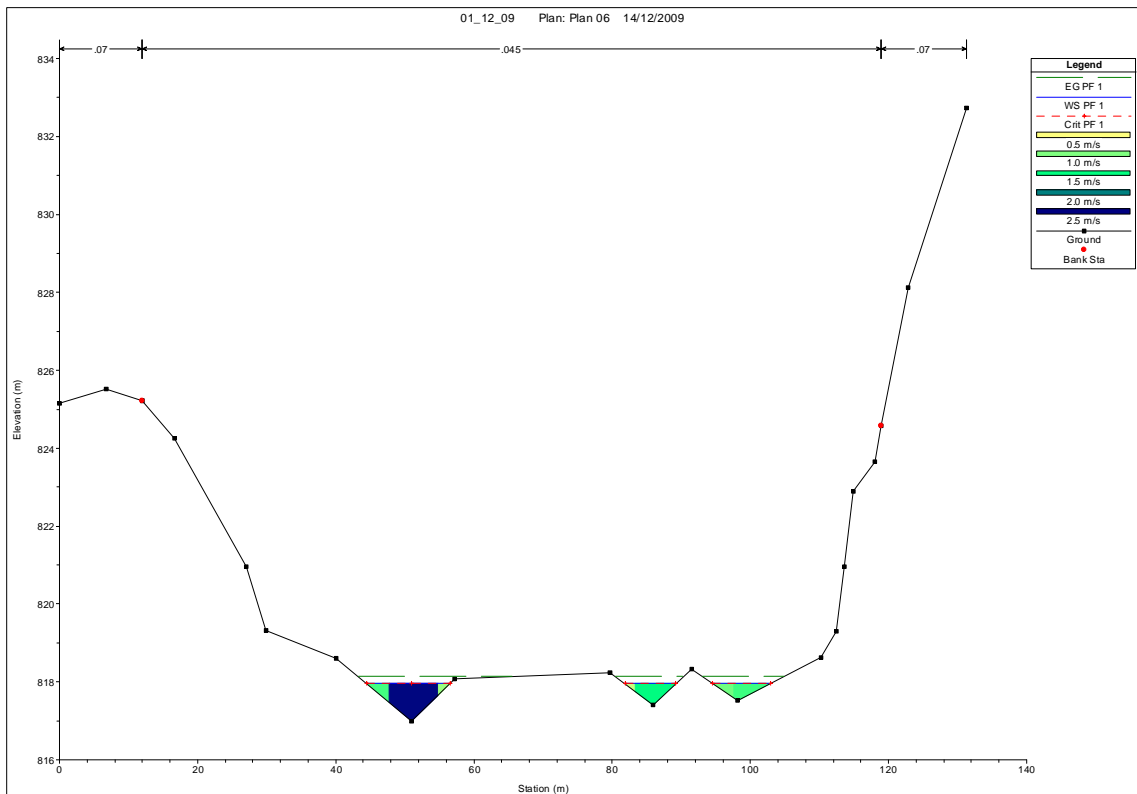




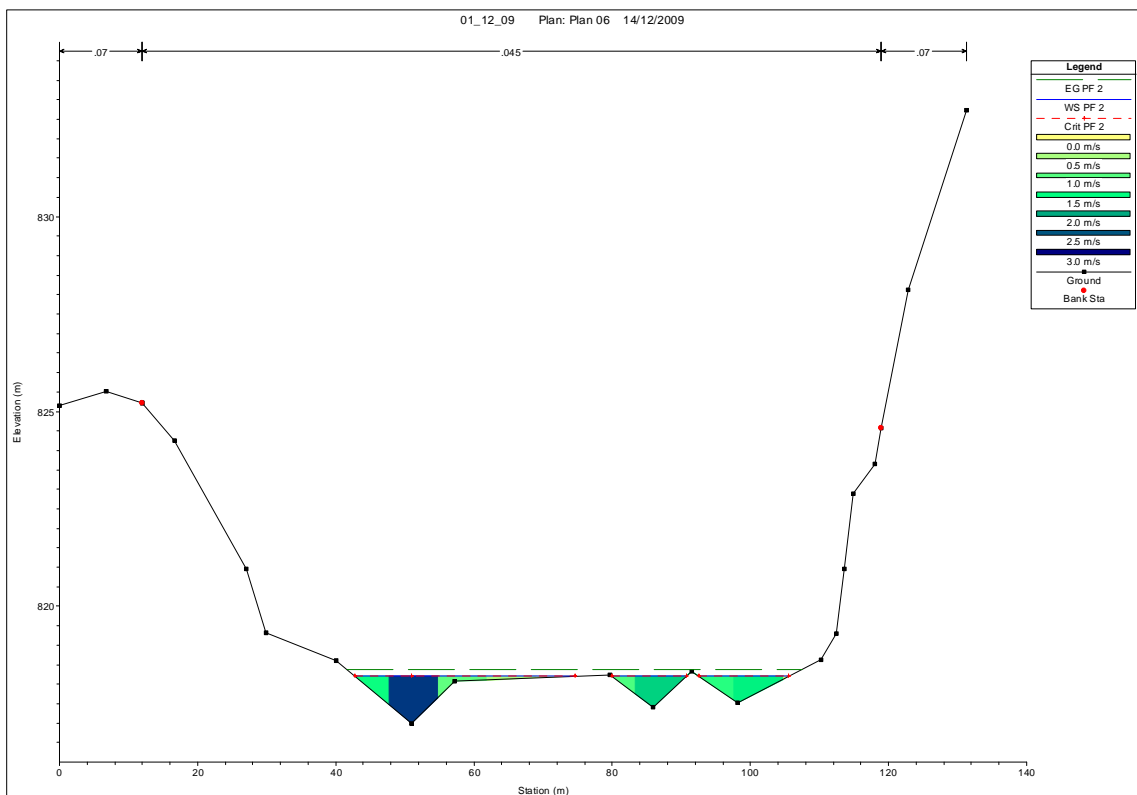
**Seção 95.6, Perfil 6.**



**Seção 95.6, Perfil 7.**

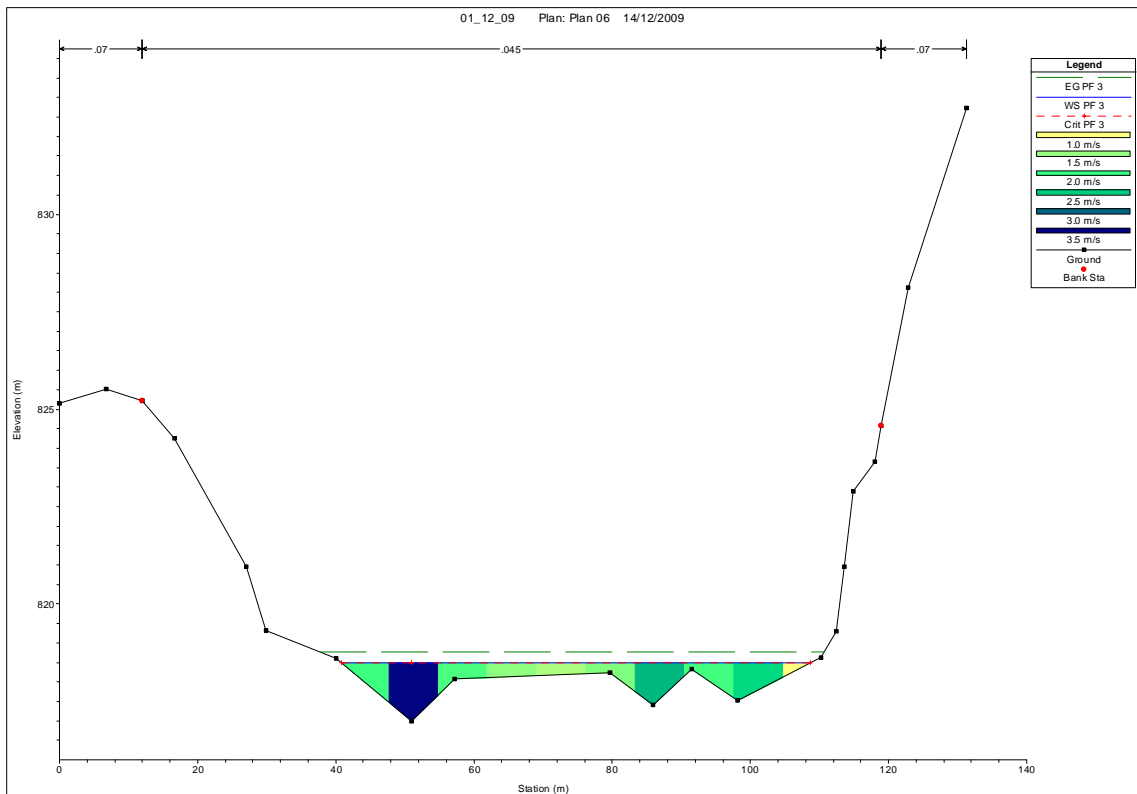


**Seção 97.8, Perfil 1.**

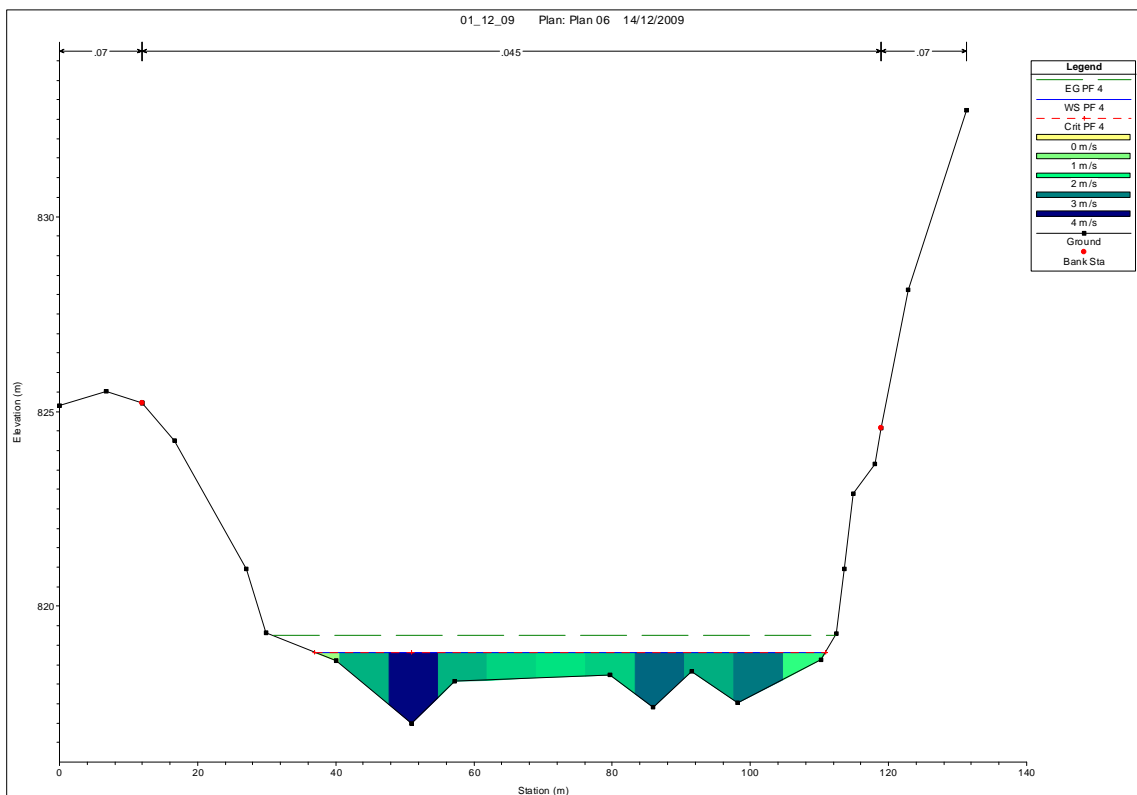


**Seção 97.8, Perfil 2.**

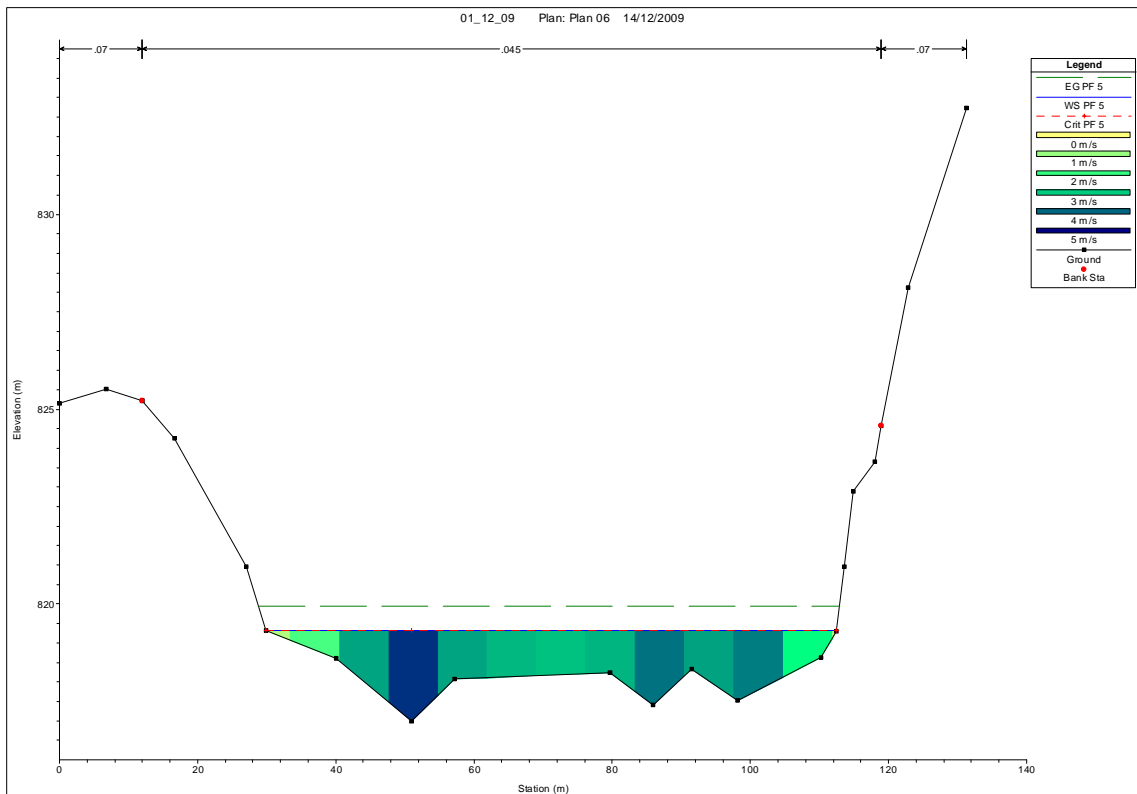




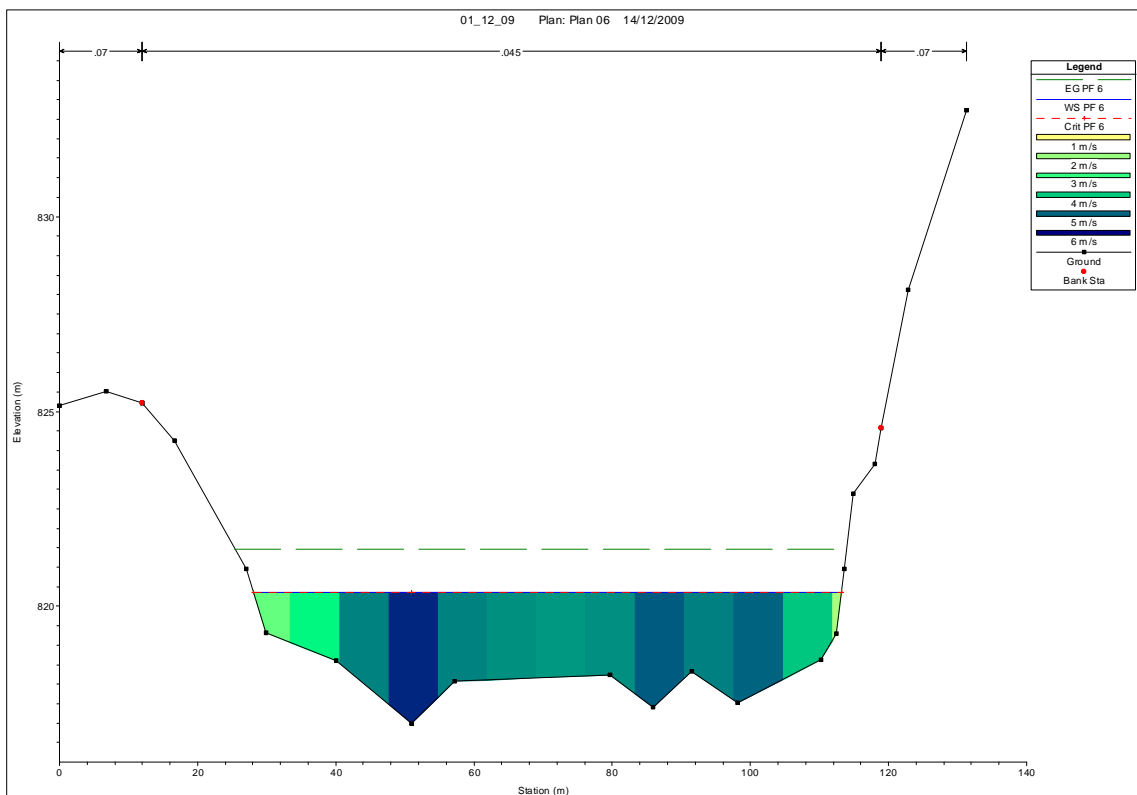
**Seção 97.8, Perfil 3.**



**Seção 97.8, Perfil 4.**

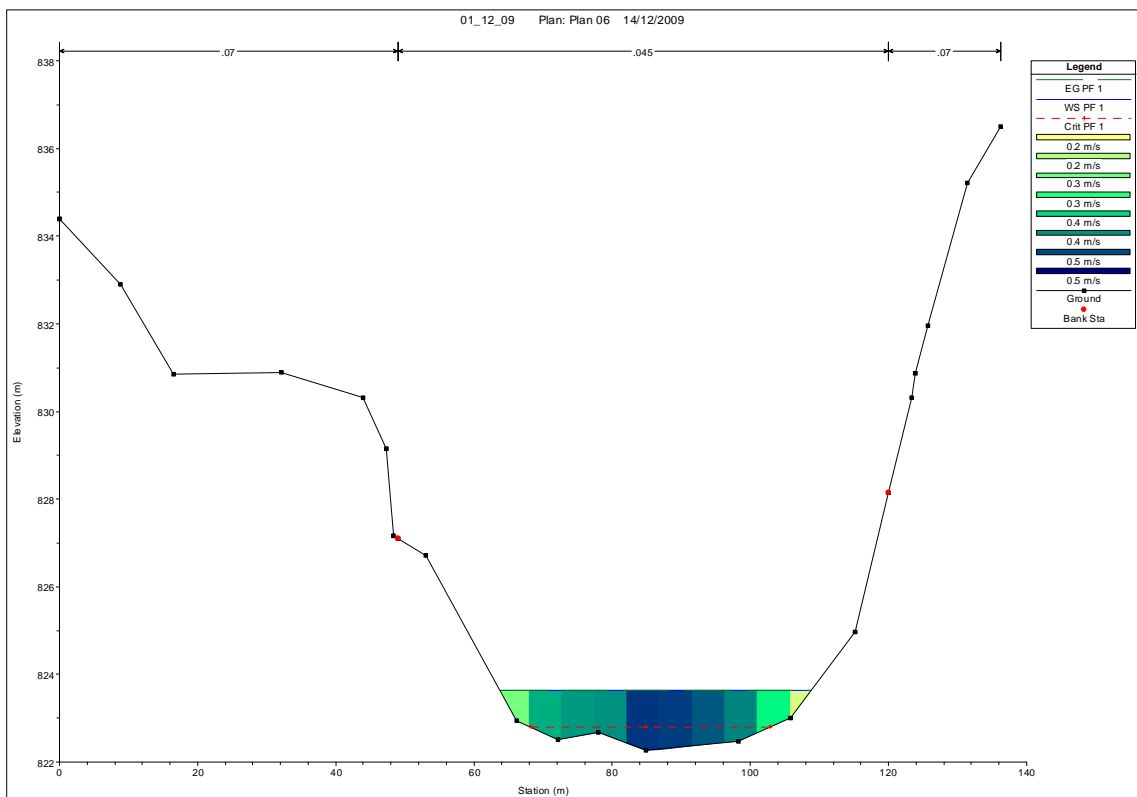
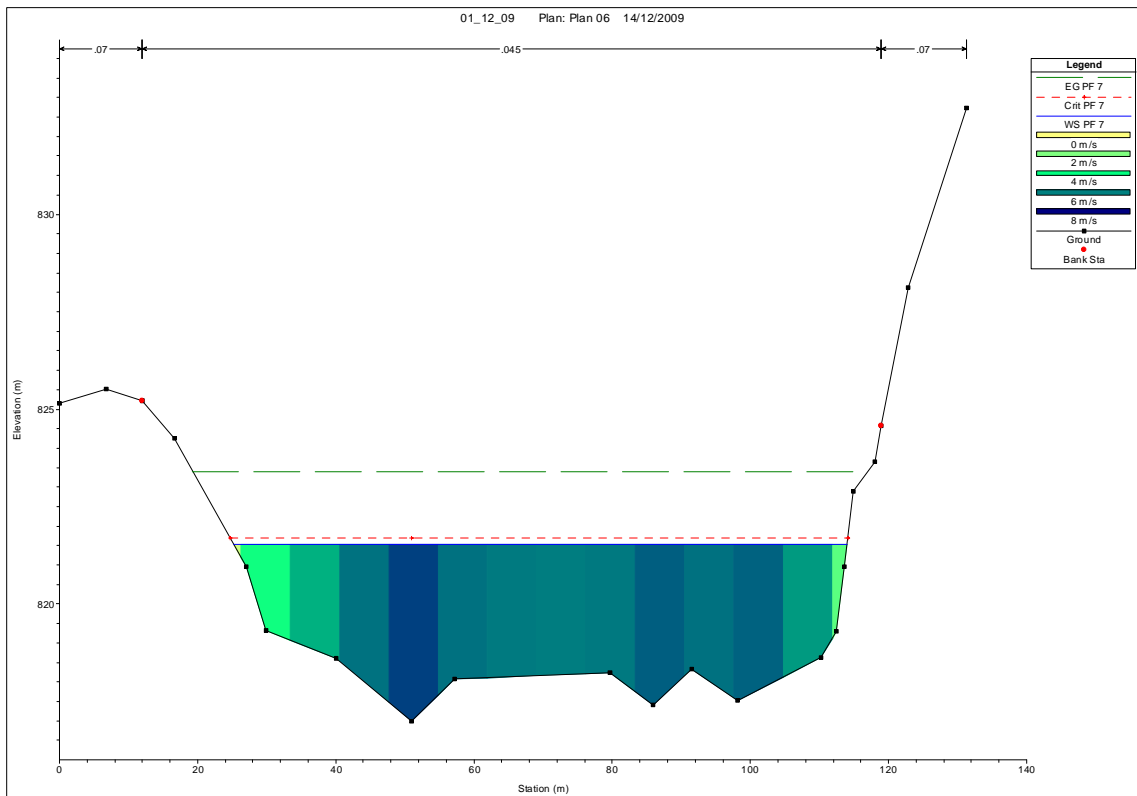


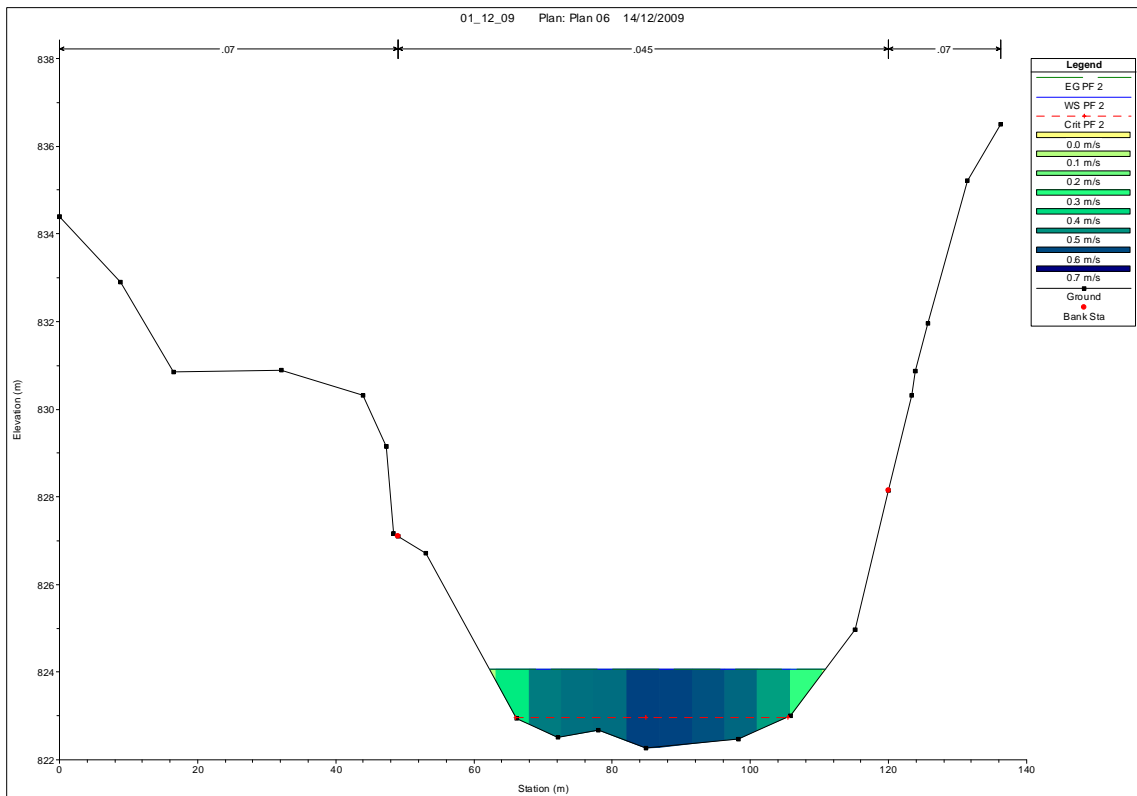
**Seção 97.8, Perfil 5.**



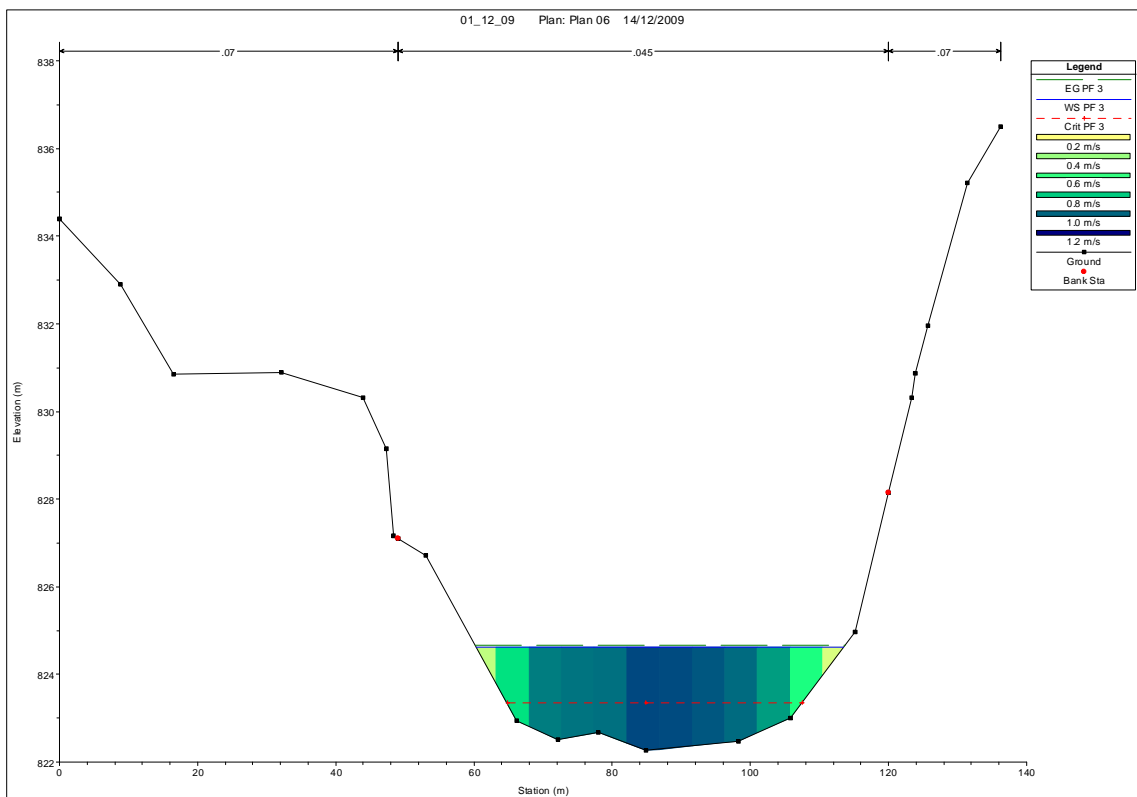
**Seção 97.8, Perfil 6.**





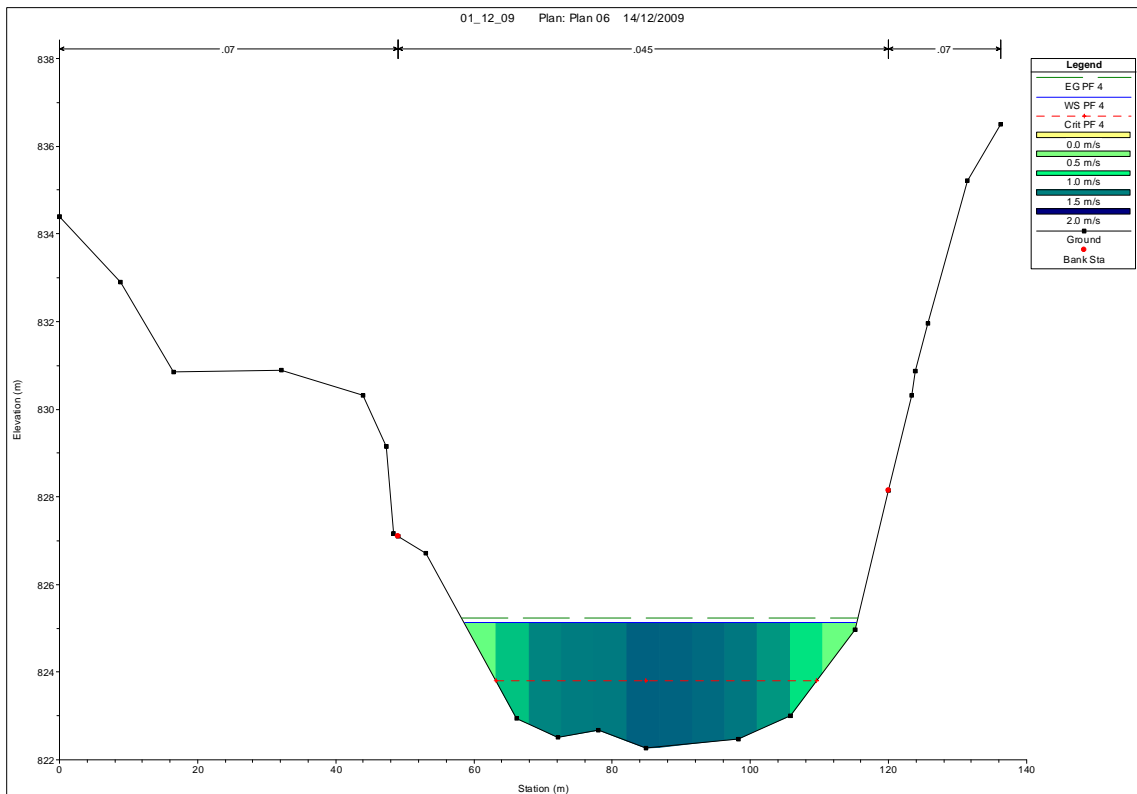


**Seção 99.3, Perfil 2.**

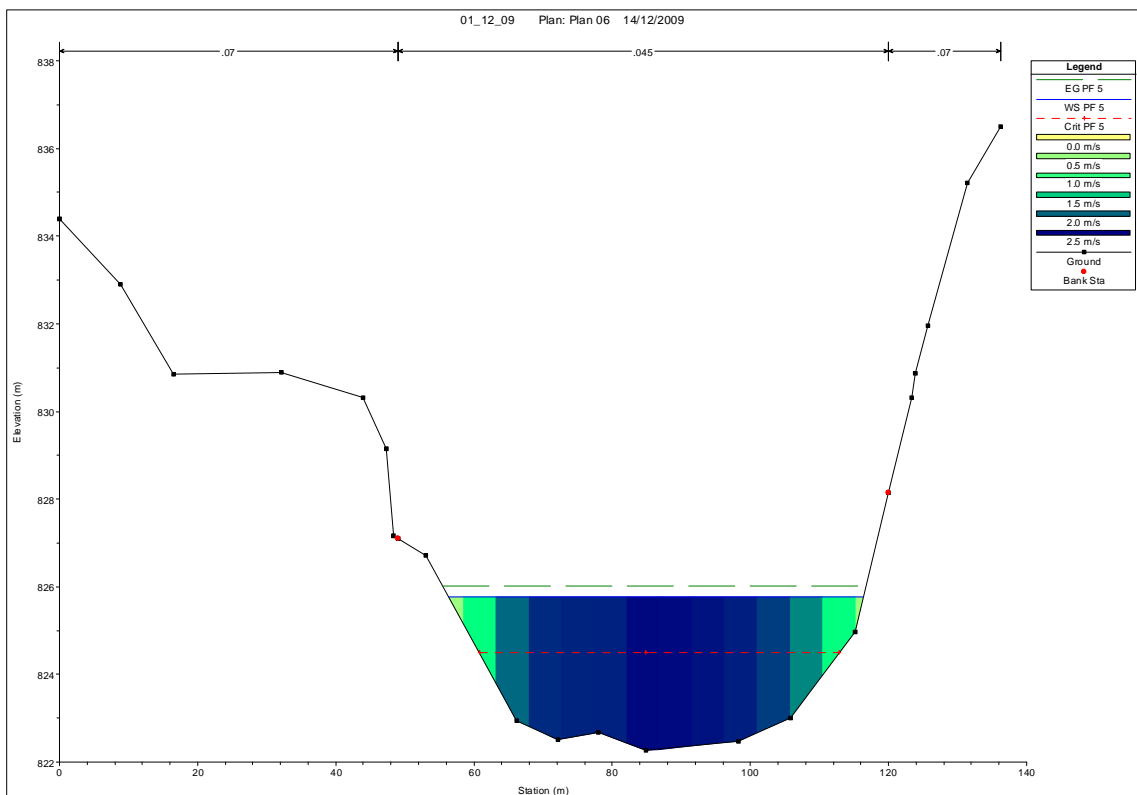


**Seção 99.3, Perfil 3.**

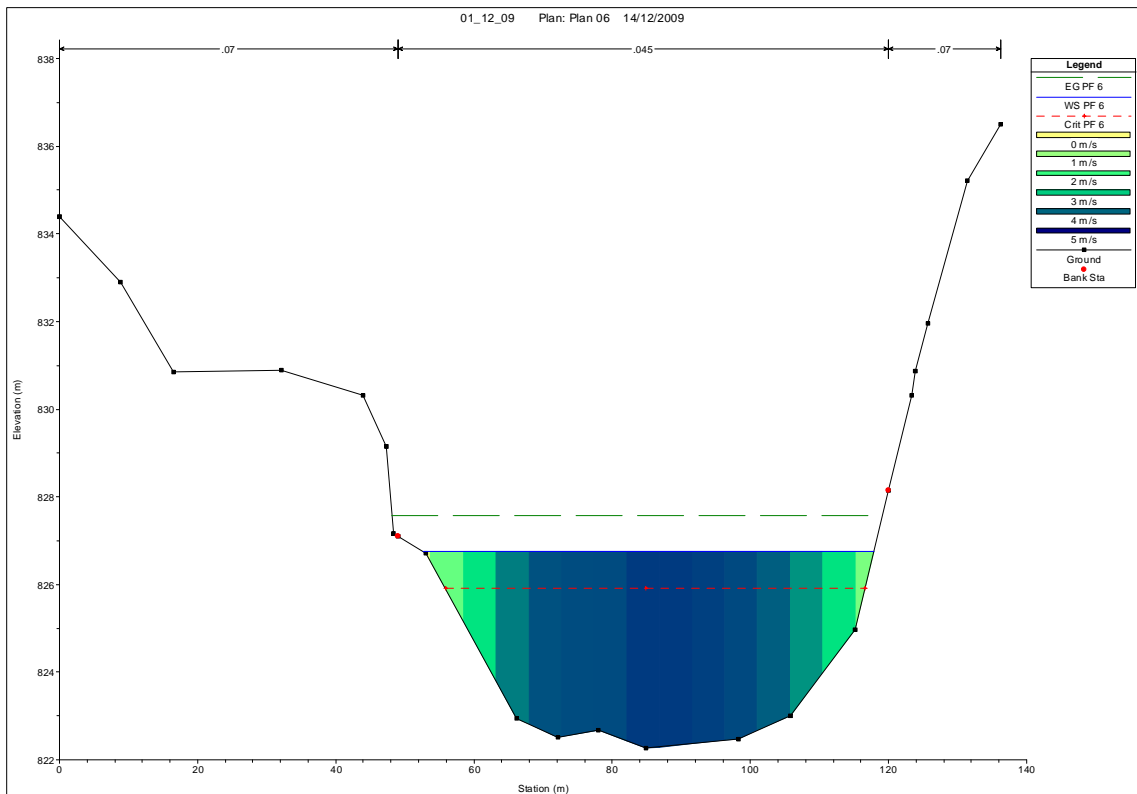




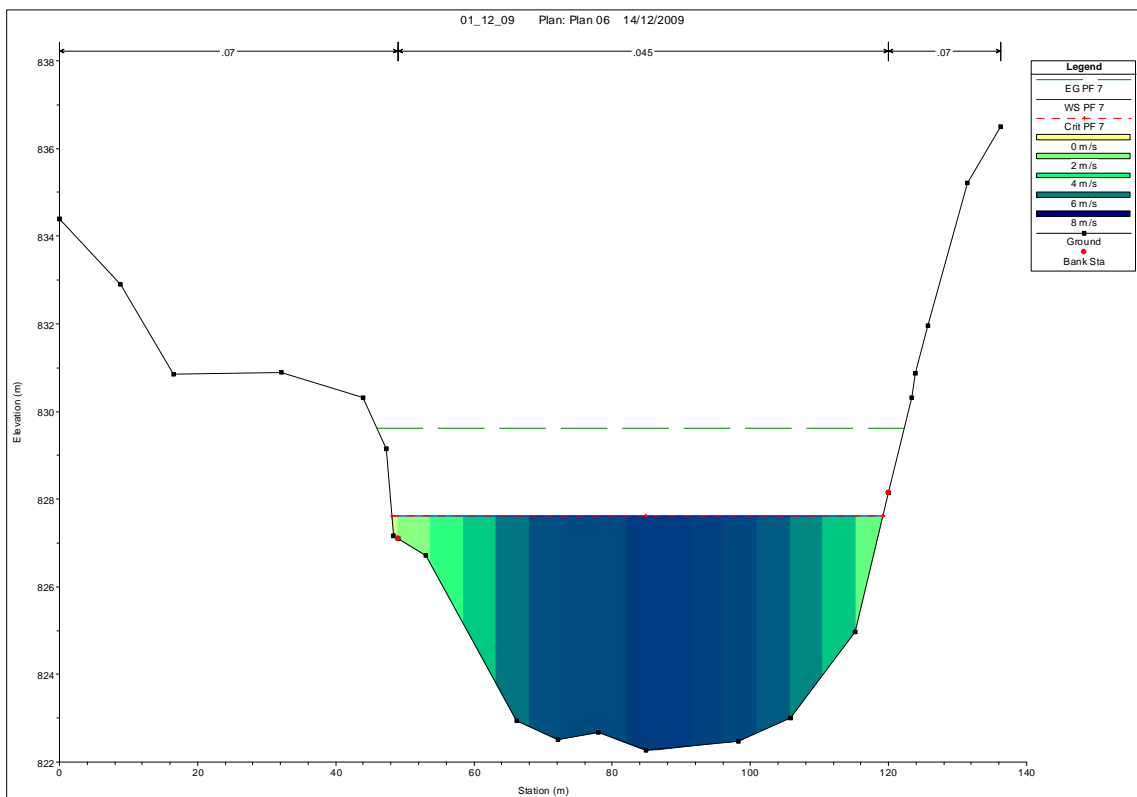
**Seção 99.3, Perfil 4.**



**Seção 99.3, Perfil 5.**

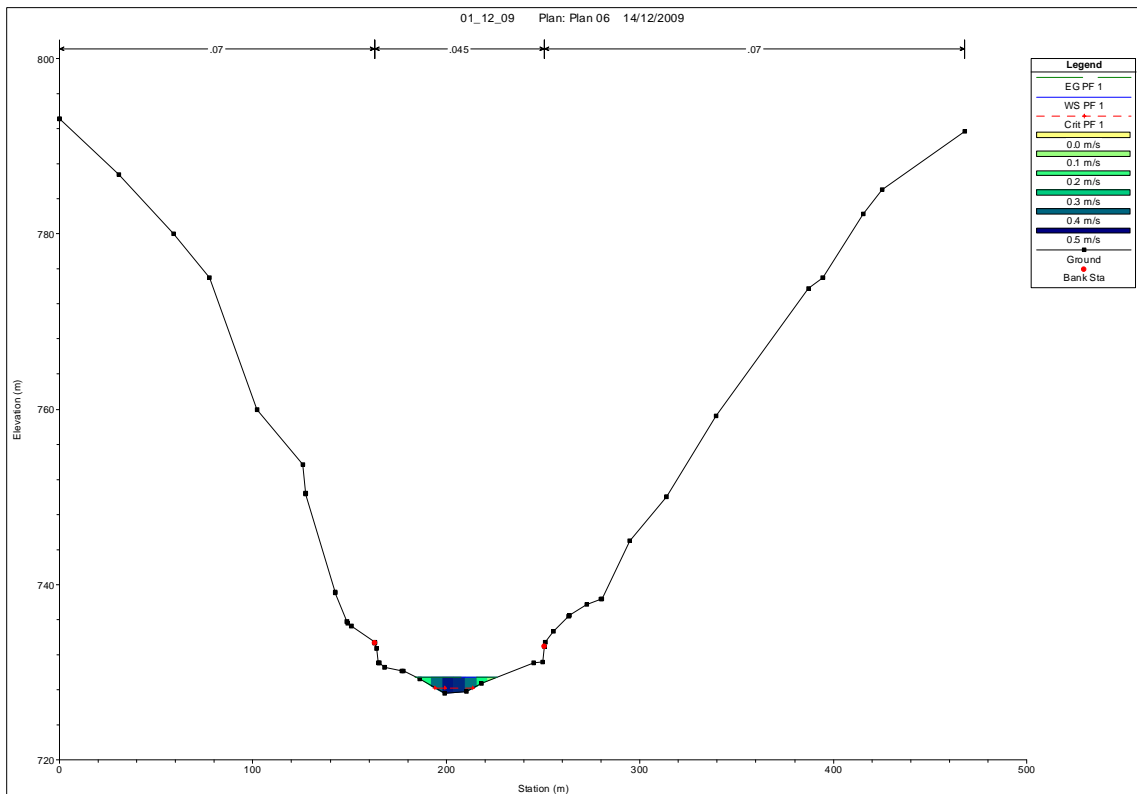


**Seção 99.3, Perfil 6.**

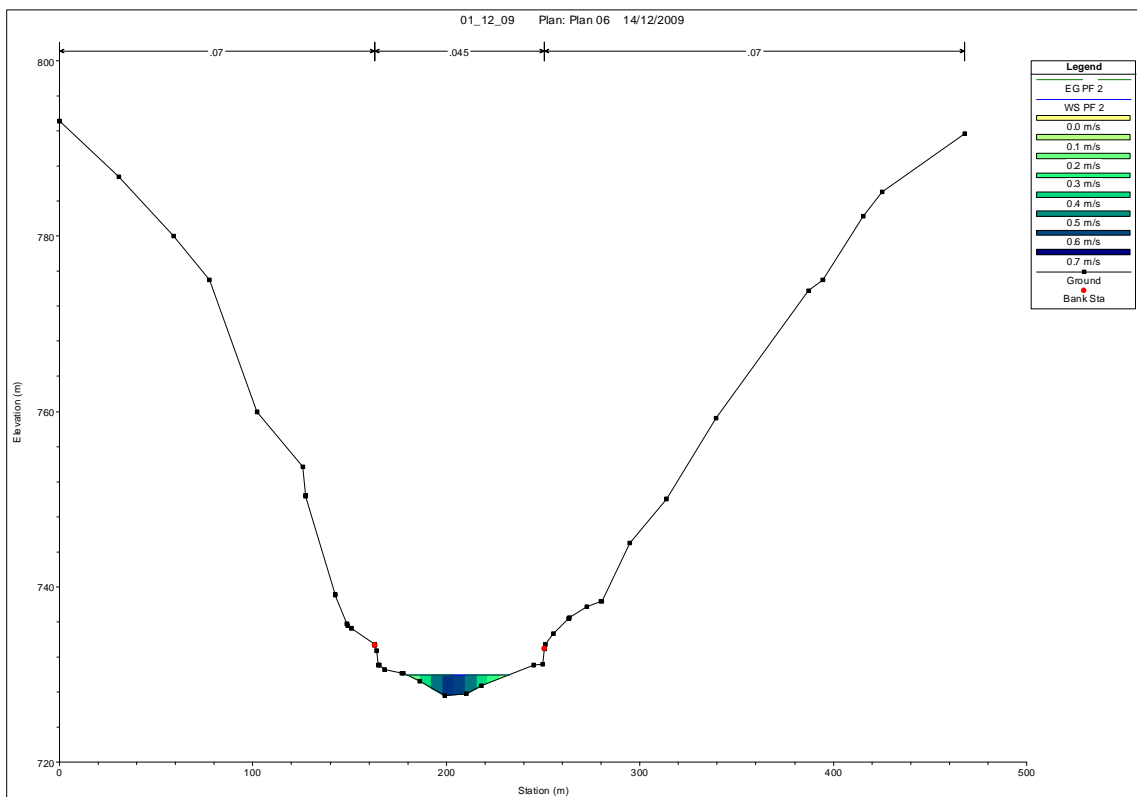


**Seção 99.3, Perfil 7.**

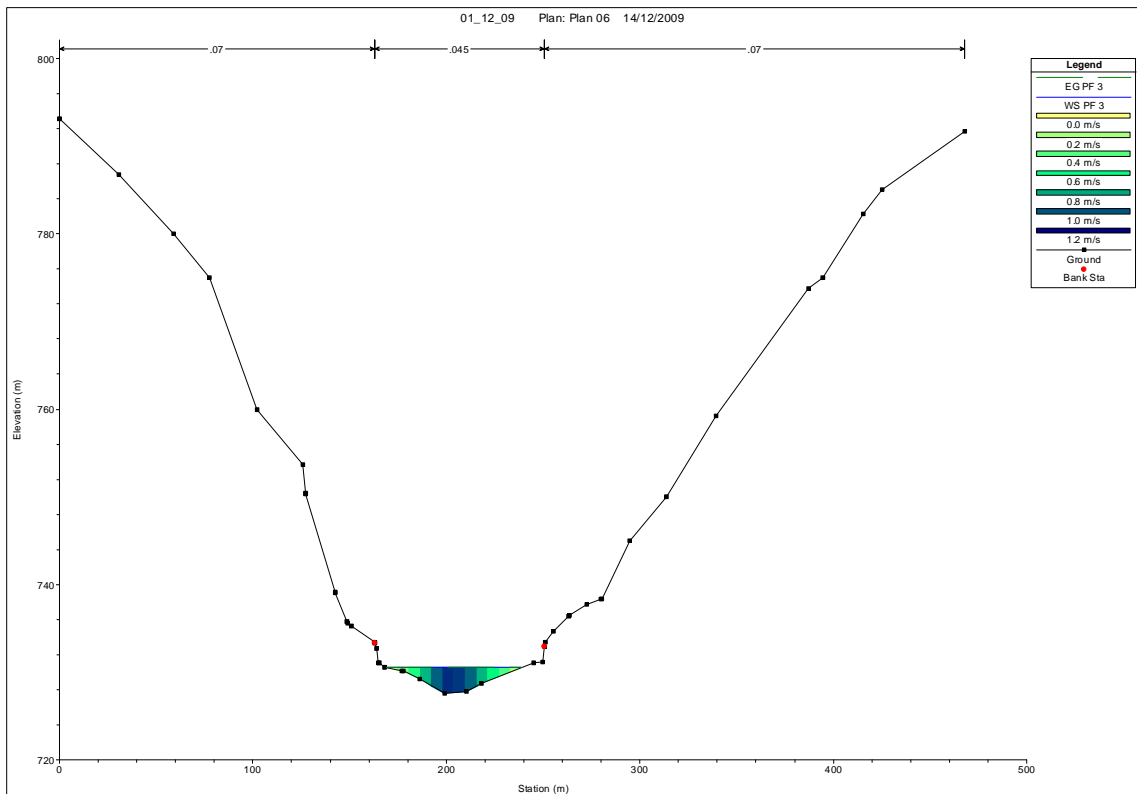




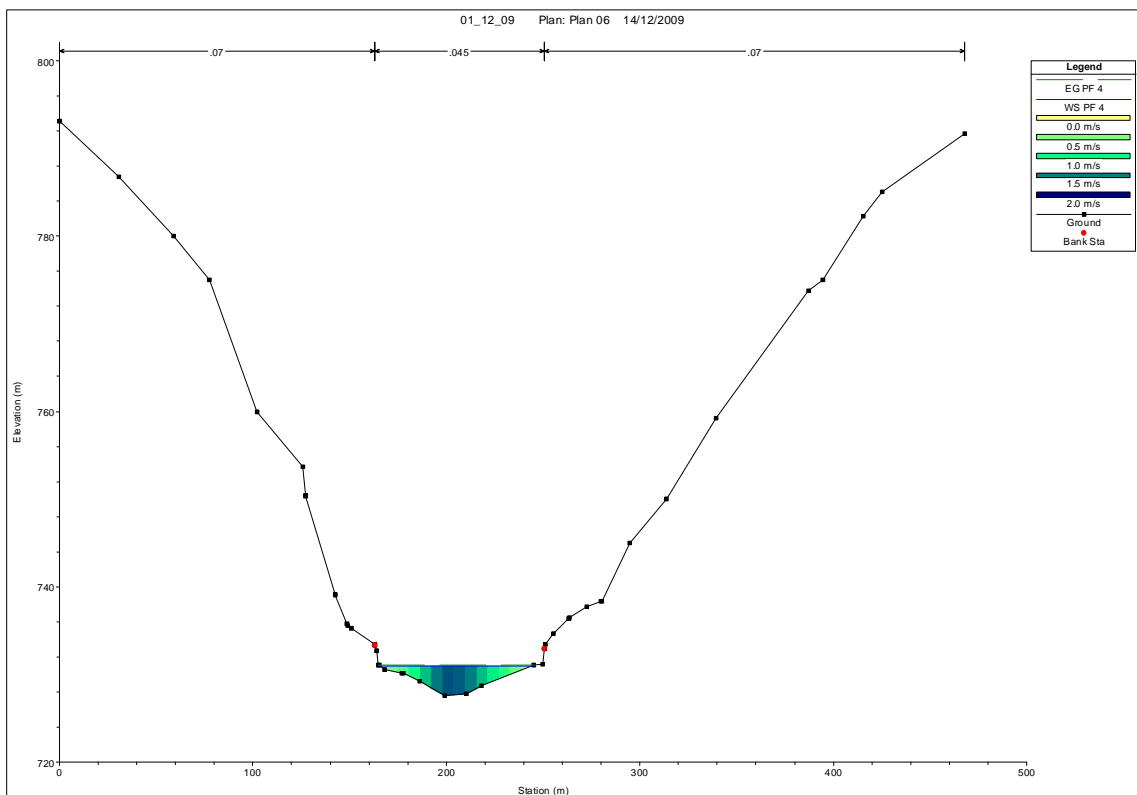
**Seção 2.5, Perfil 1.**



**Seção 2.5, Perfil 2.**

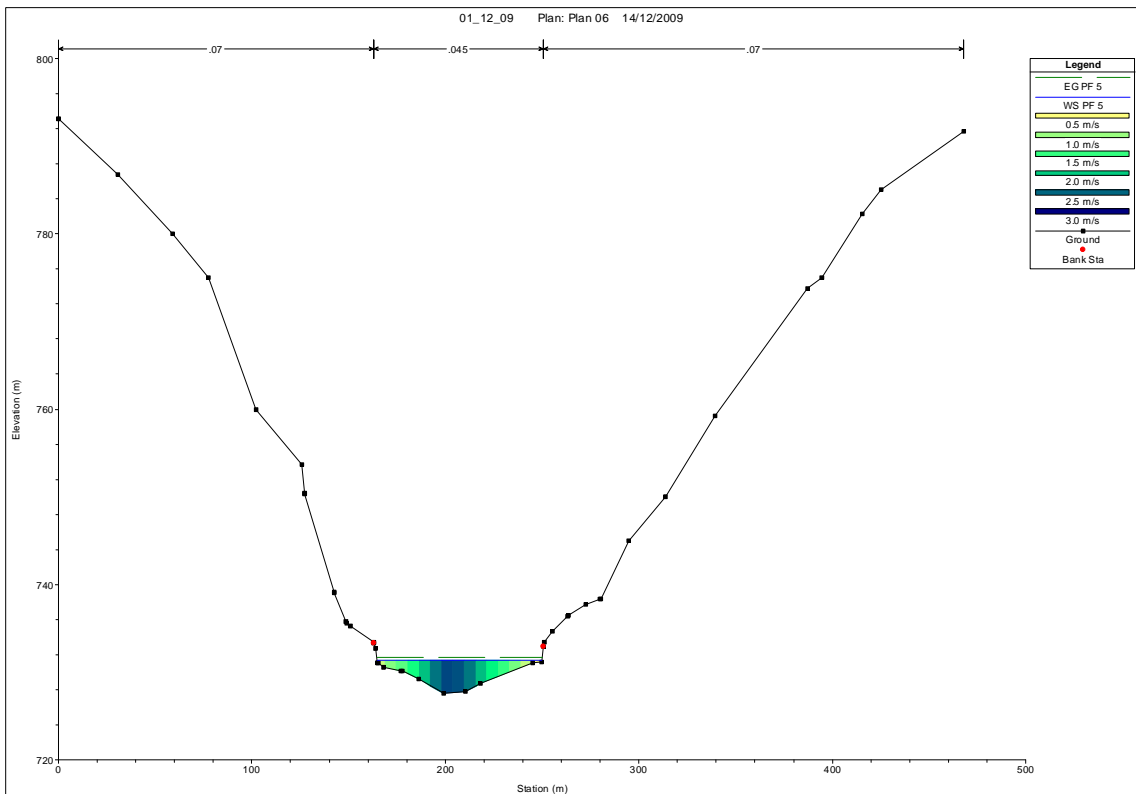


**Seção 2.5, Perfil 3.**

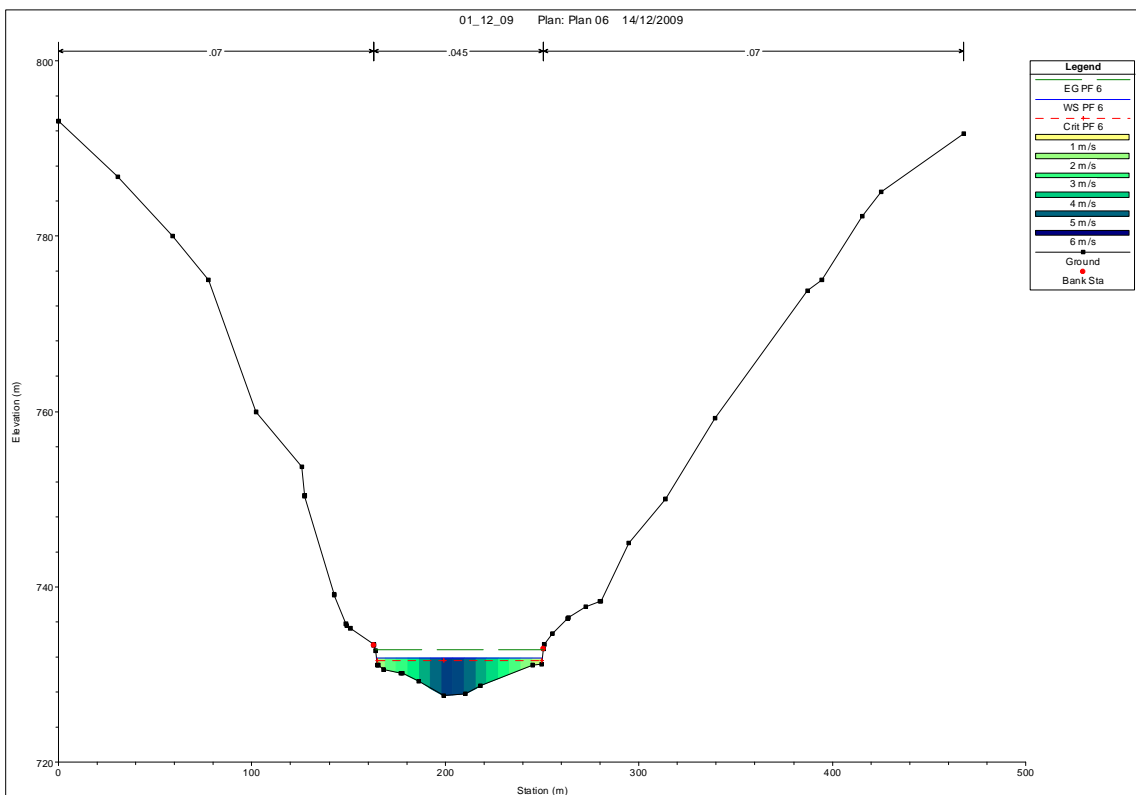


**Seção 2.5, Perfil 4.**

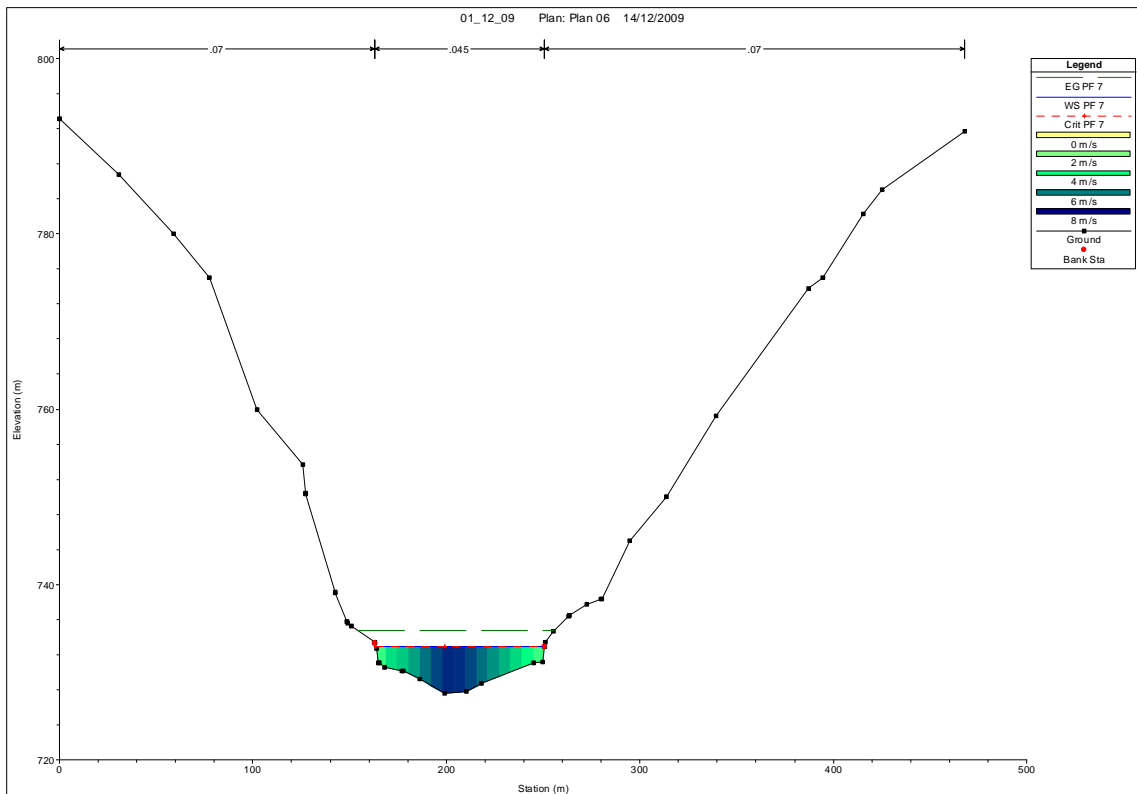




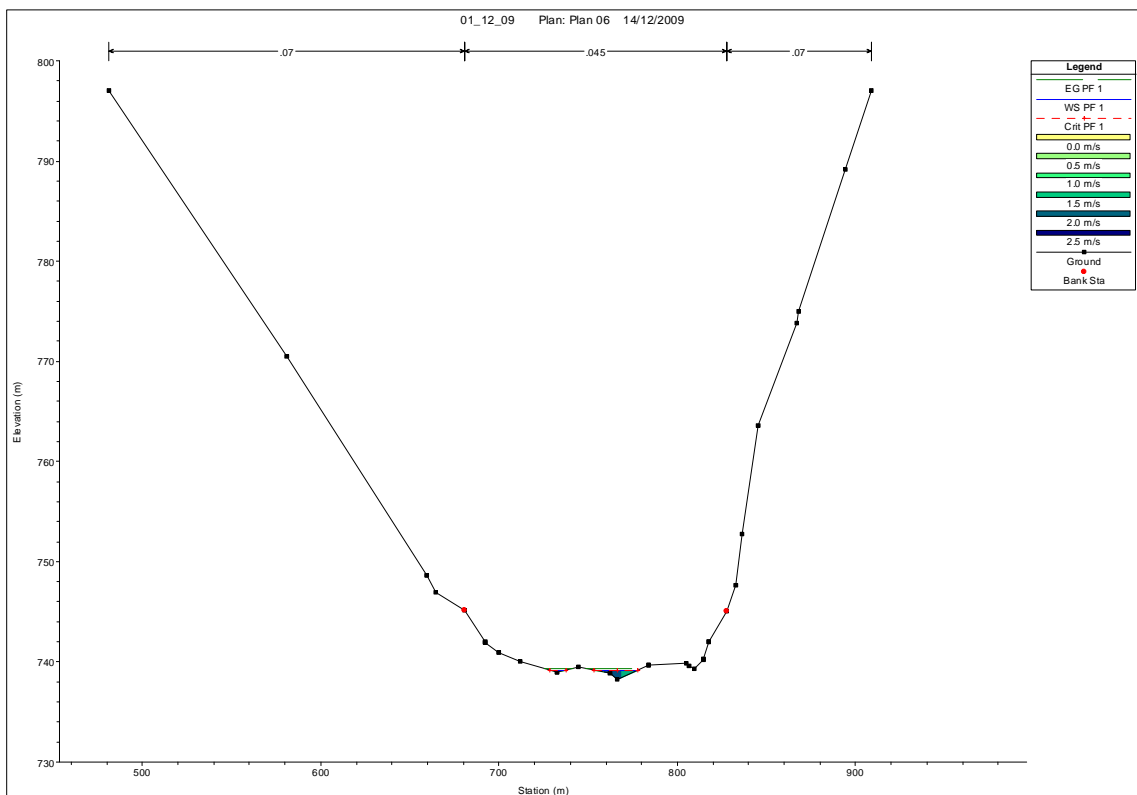
Seção 2.5, Perfil 5.



Seção 2.5, Perfil 6.

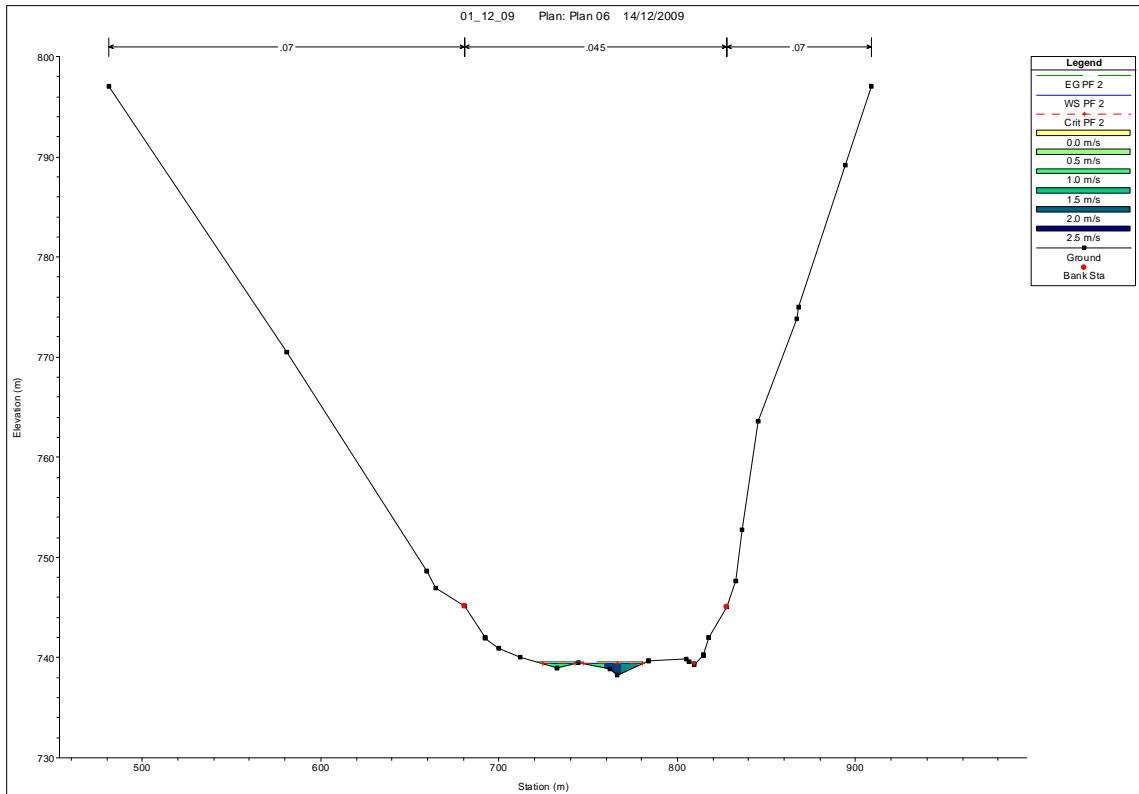


**Seção 2.5, Perfil 7.**

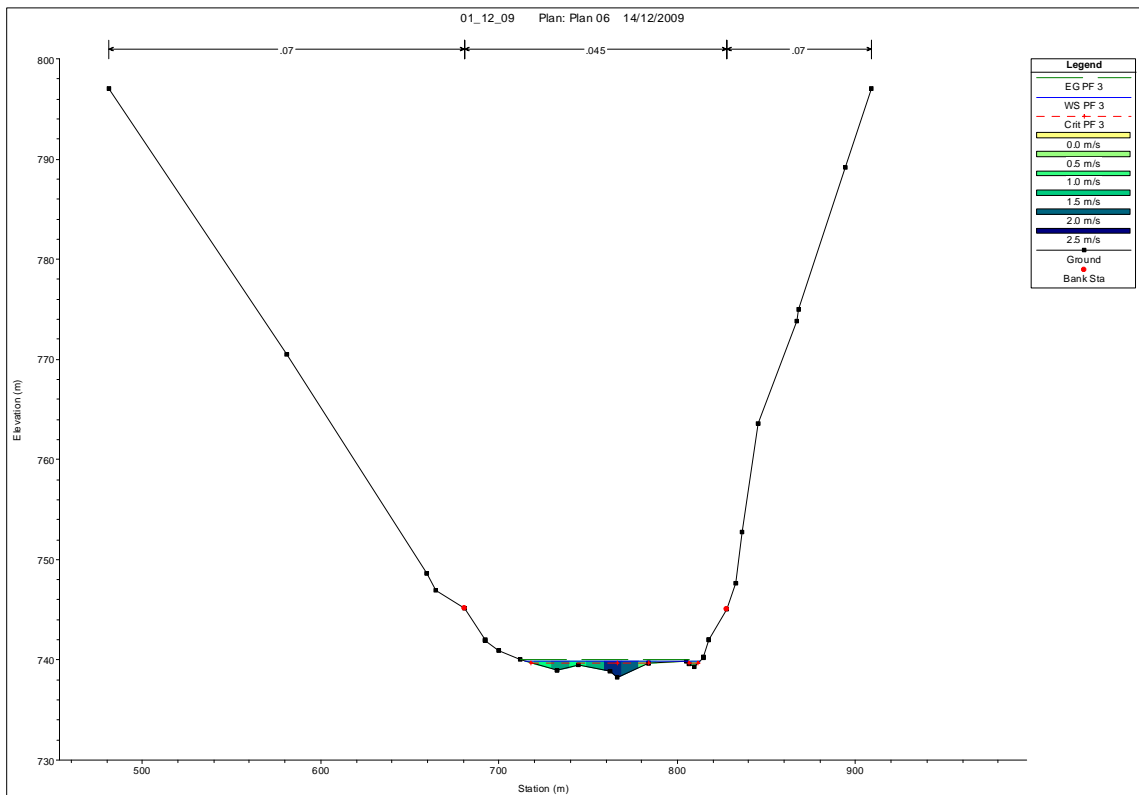


**Seção 5.7, Perfil 1.**

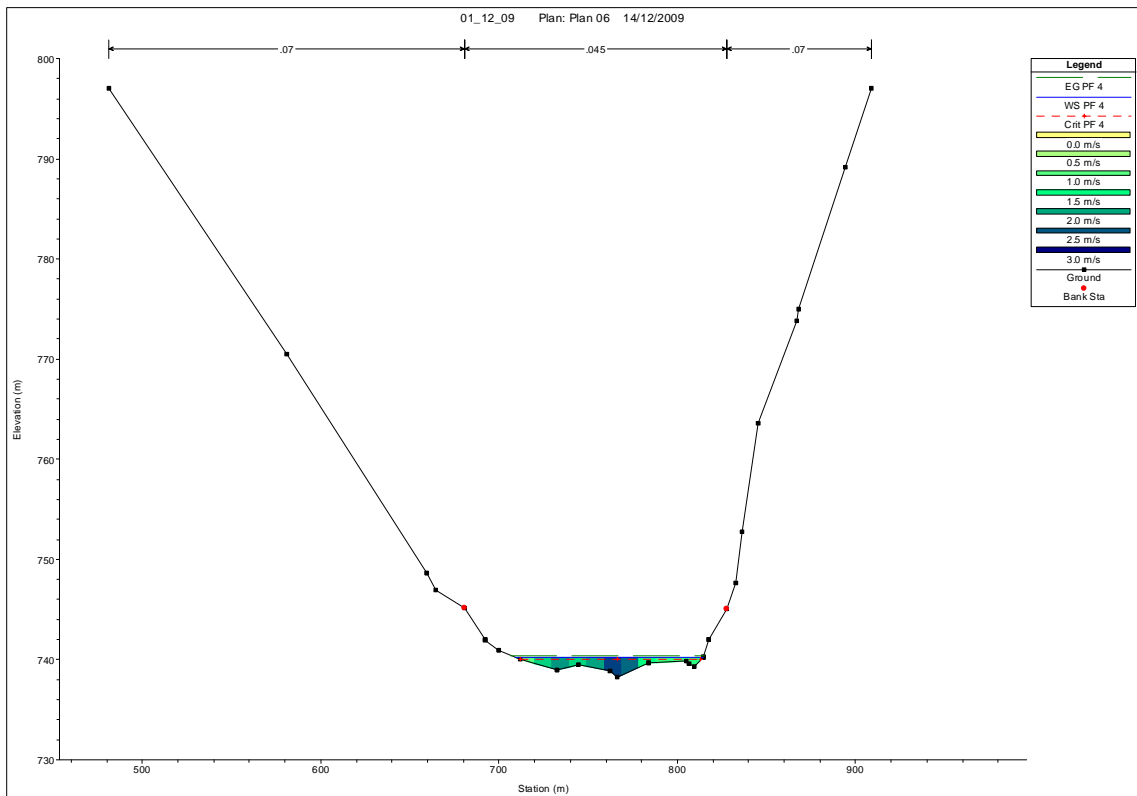




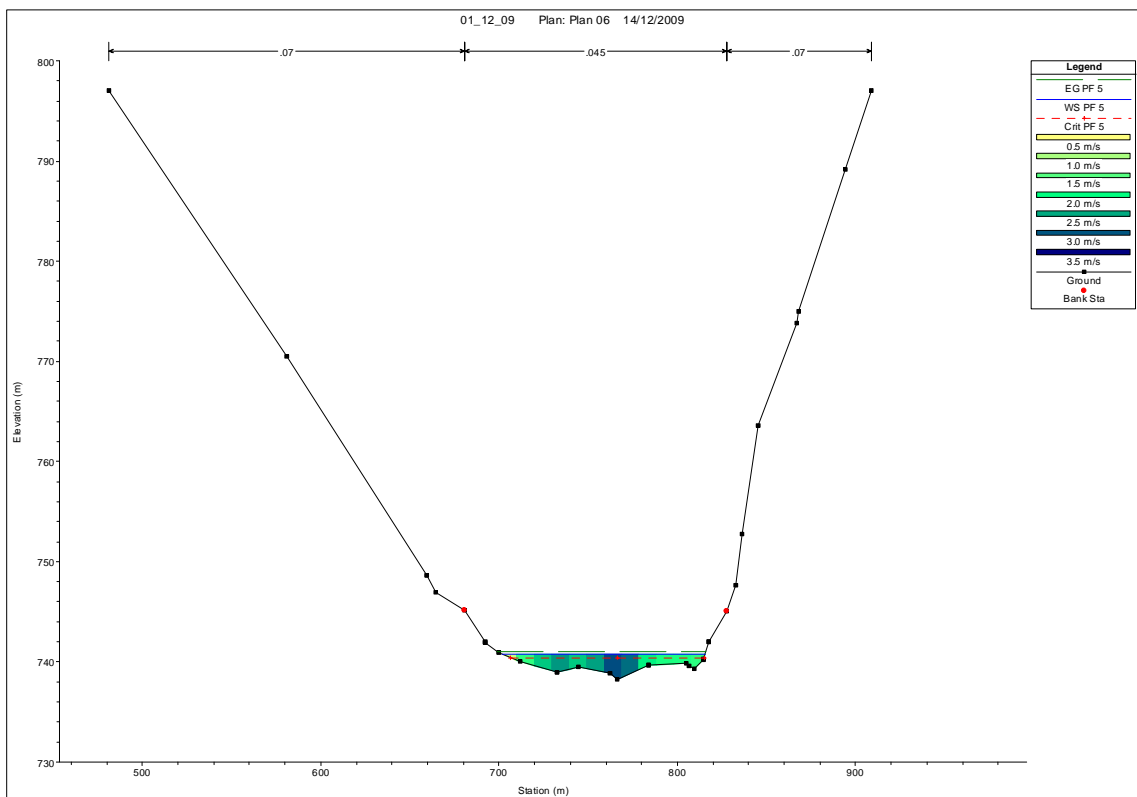
**Seção 5.7, Perfil 2.**



**Seção 5.7, Perfil 3.**

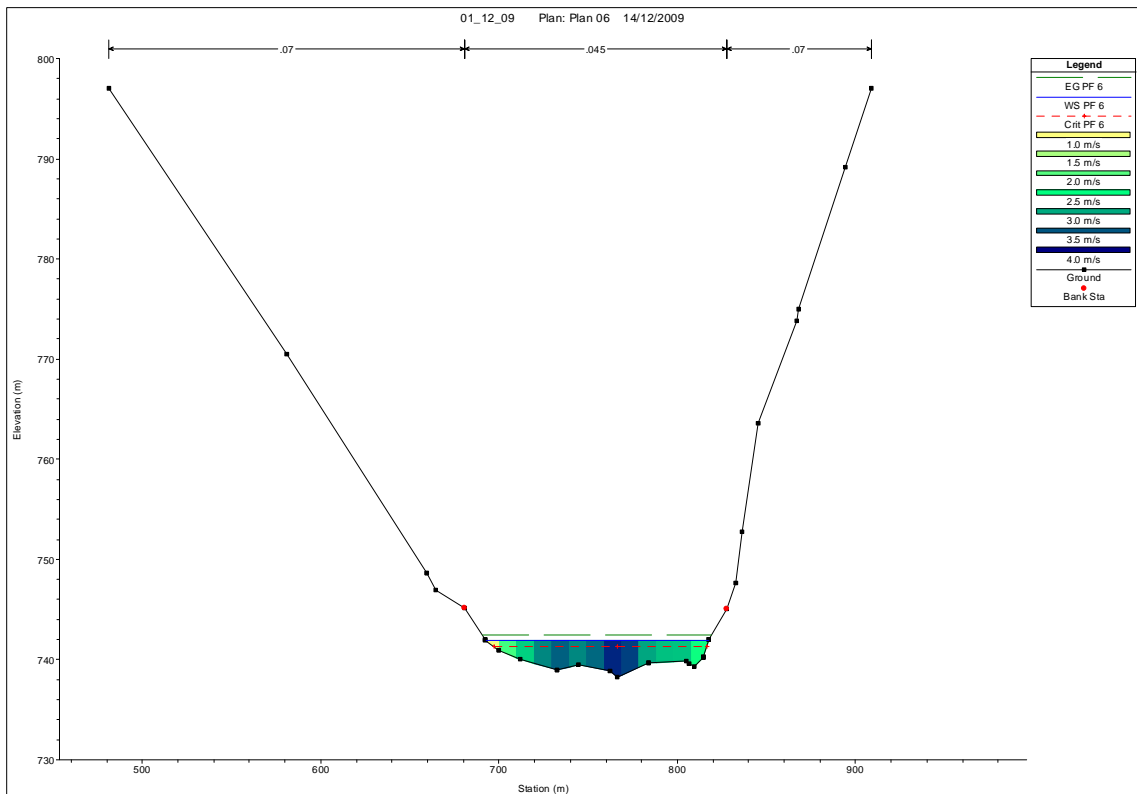


**Seção 5.7, Perfil 4.**

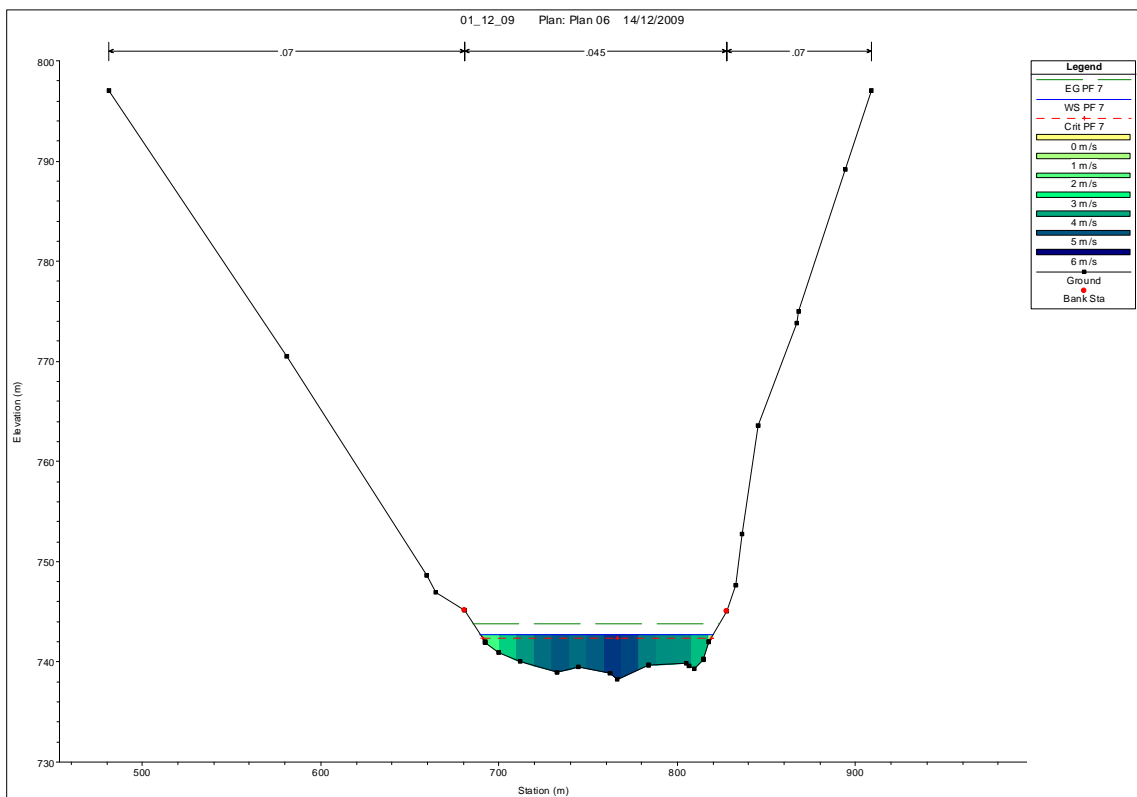


**Seção 5.7, Perfil 5.**

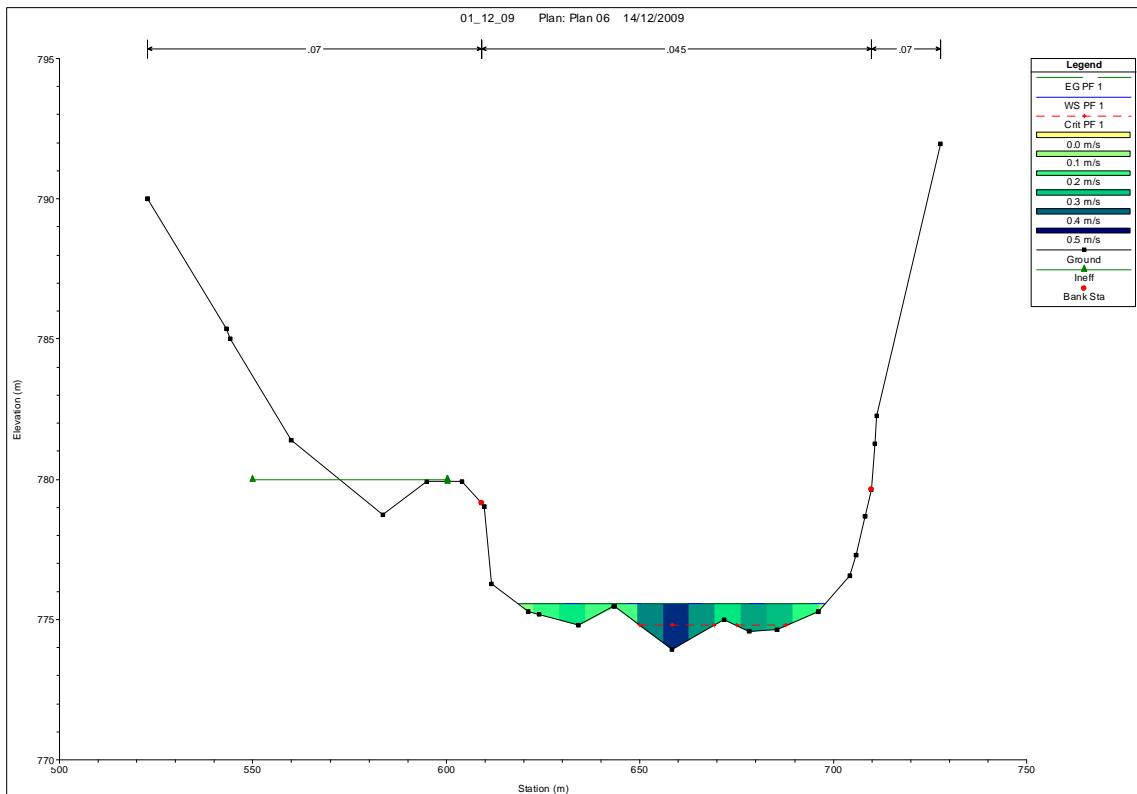




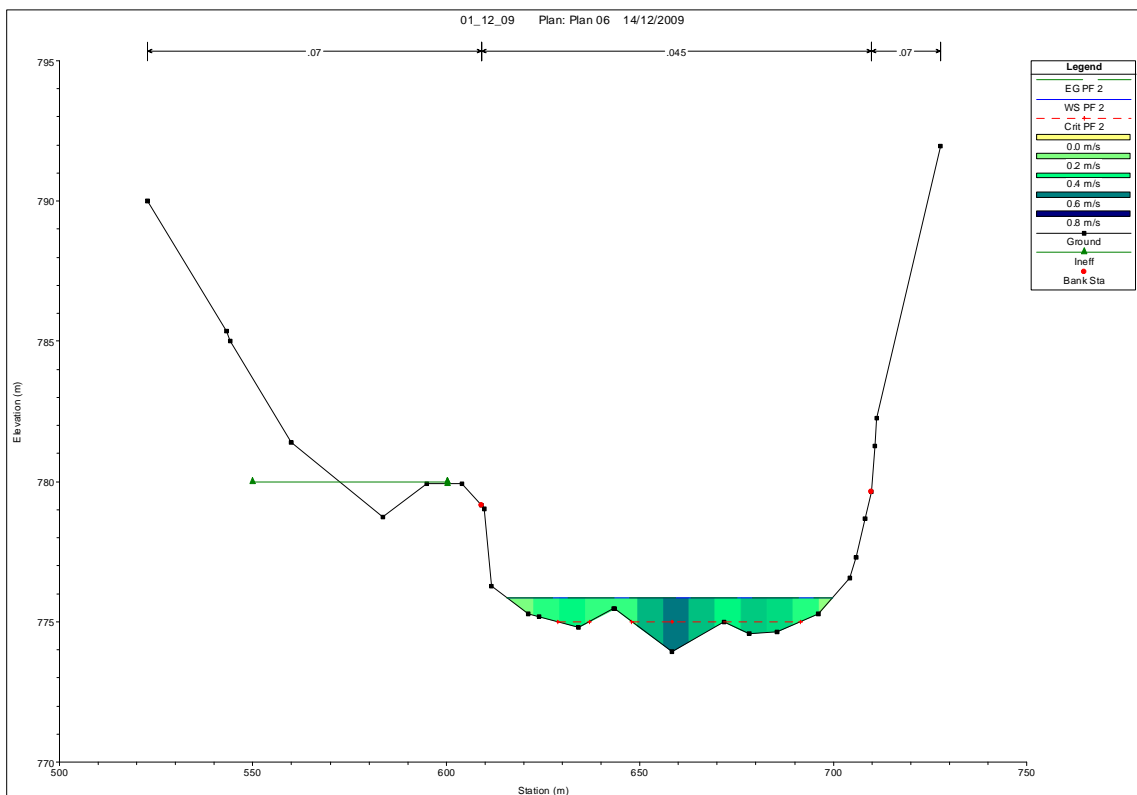
**Seção 5.7, Perfil 6.**



**Seção 5.7, Perfil 7.**

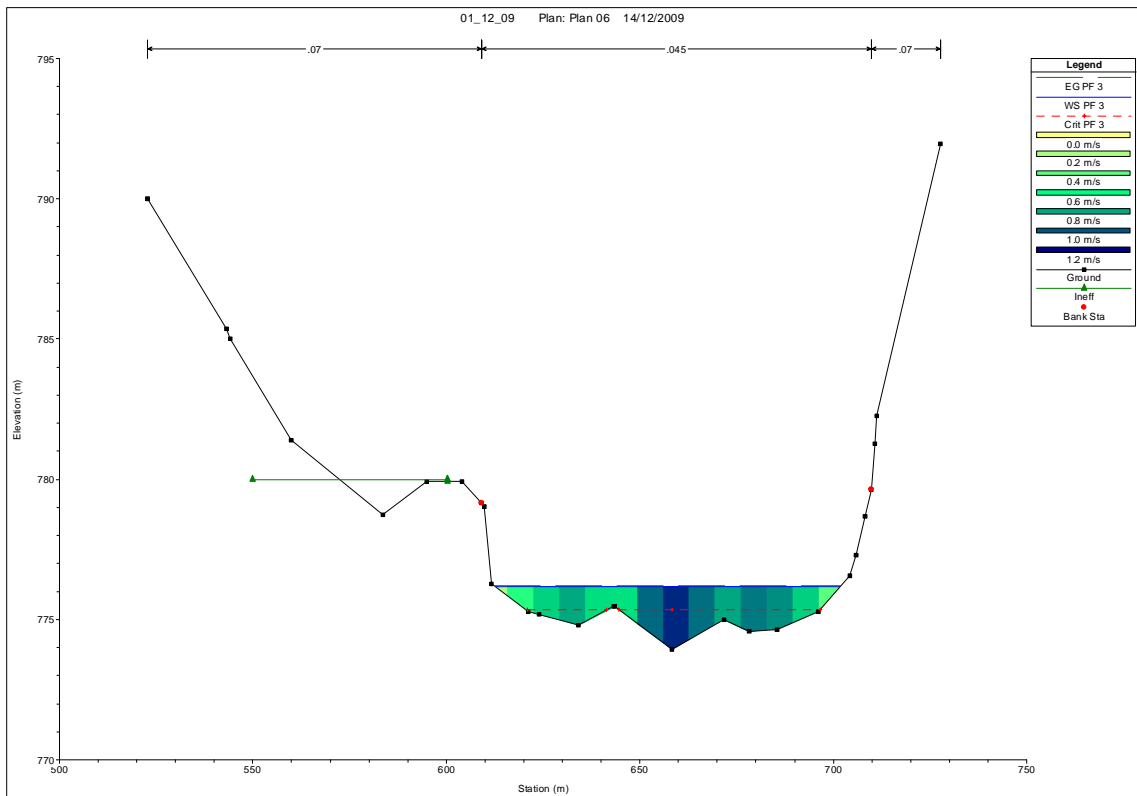


**Seção 16.0, Perfil 1.**

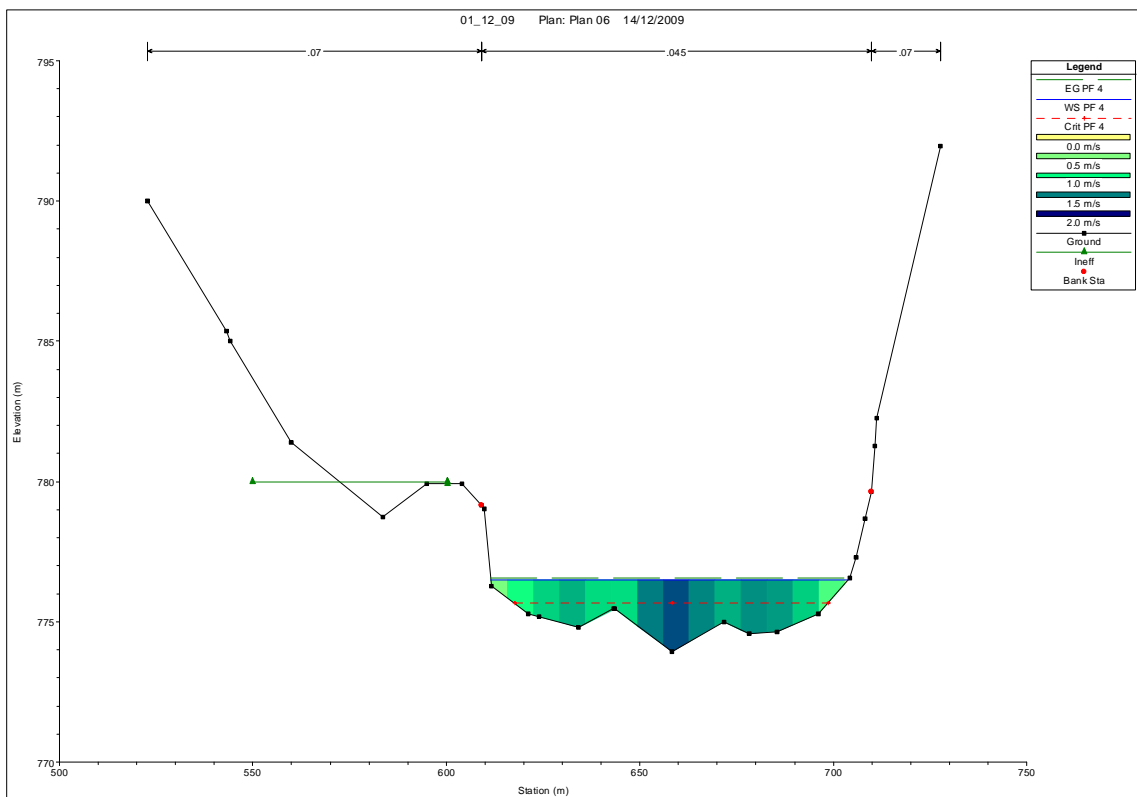


**Seção 16.0, Perfil 2.**

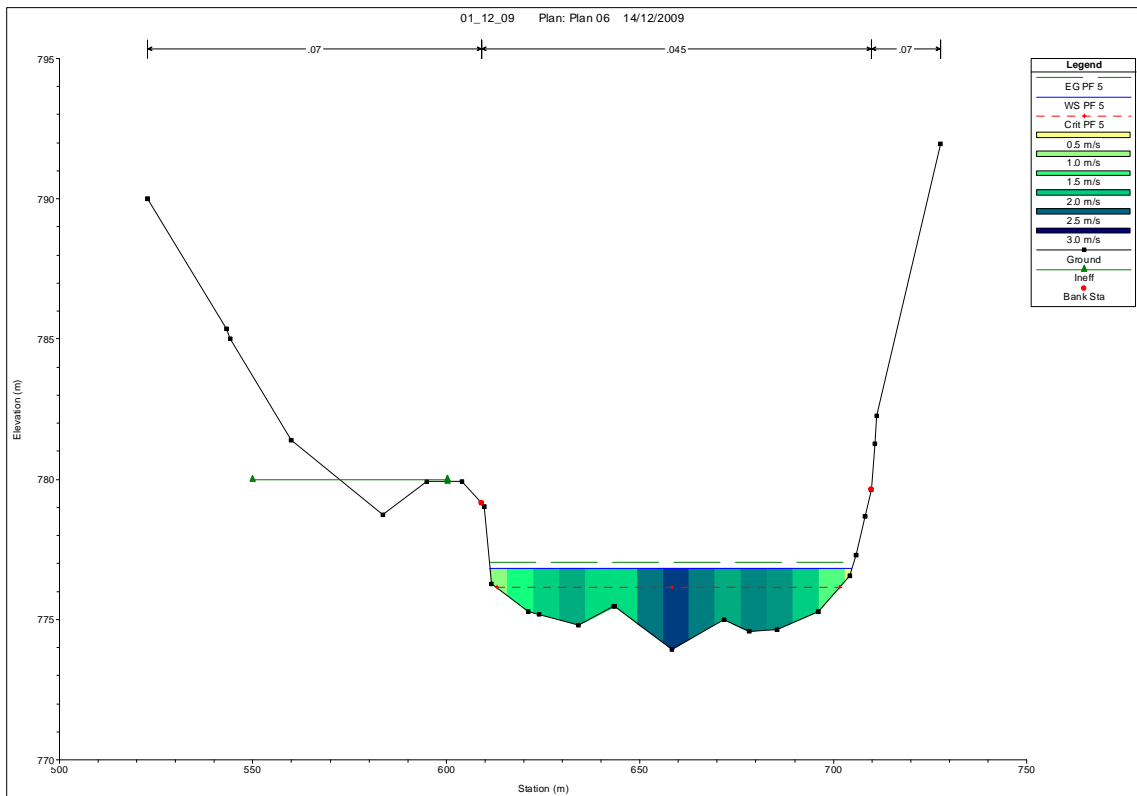




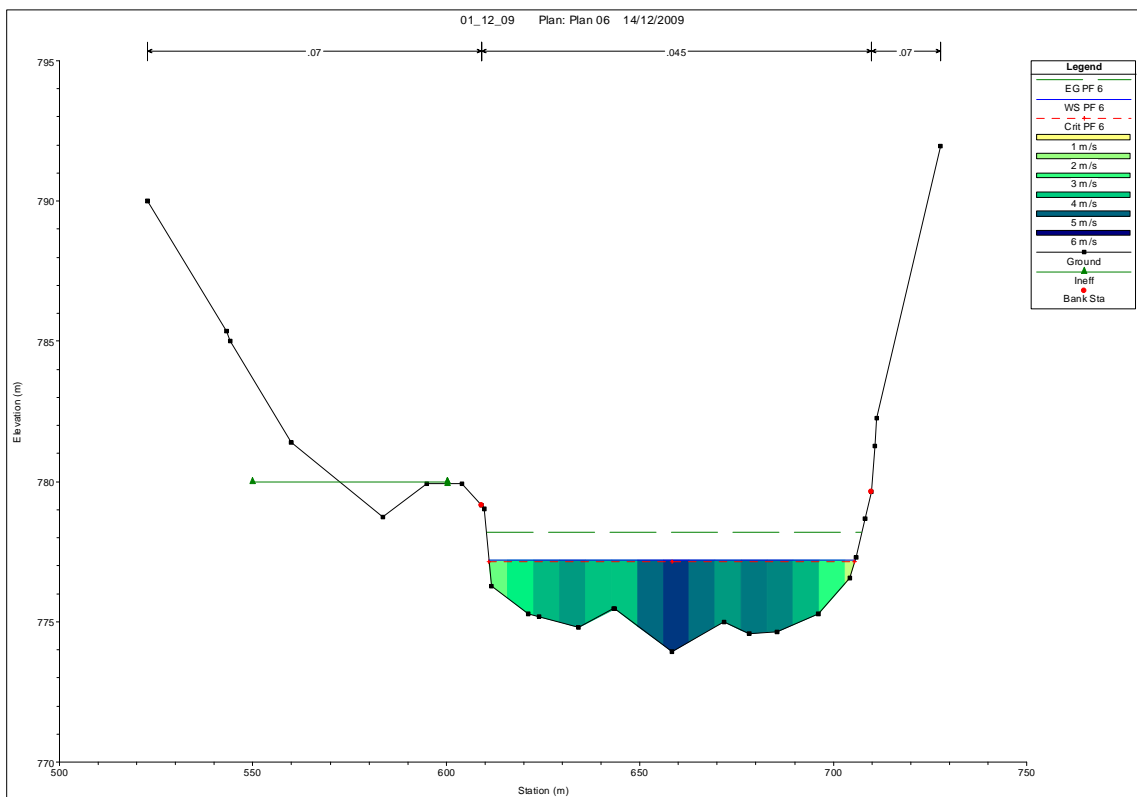
**Seção 16.0, Perfil 3.**



**Seção 16.0, Perfil 4.**

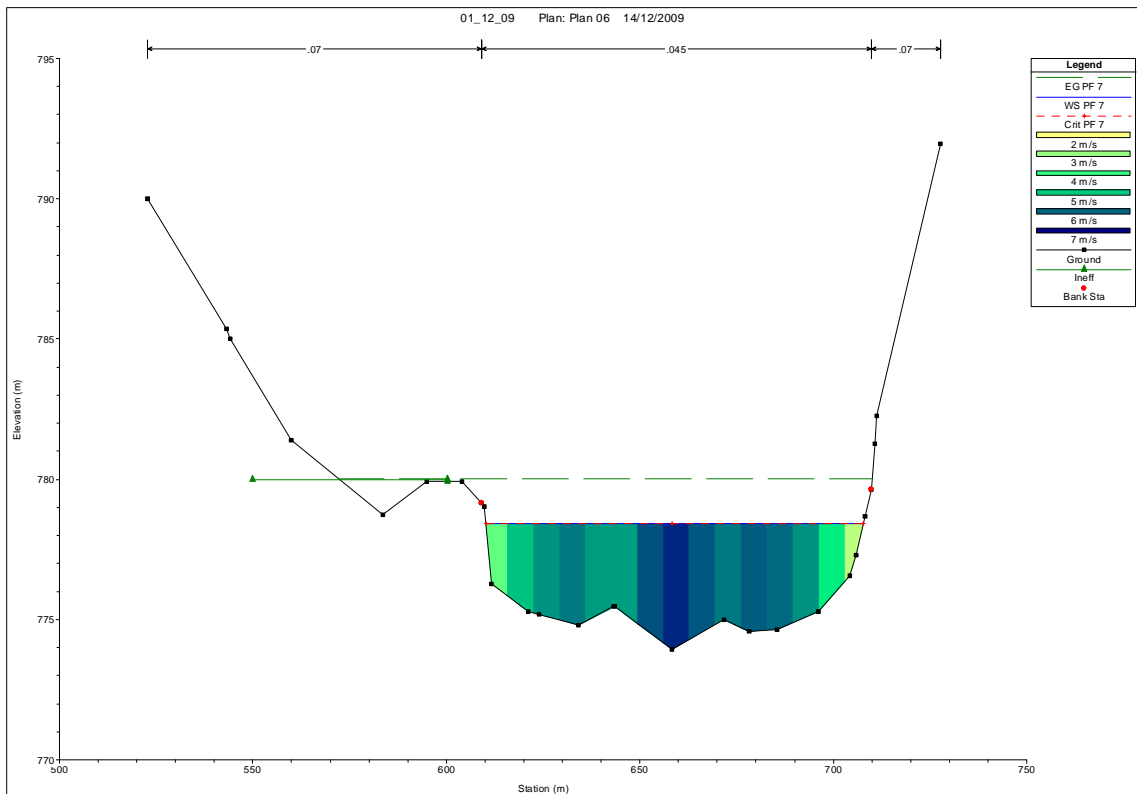


**Seção 16.0, Perfil 5.**

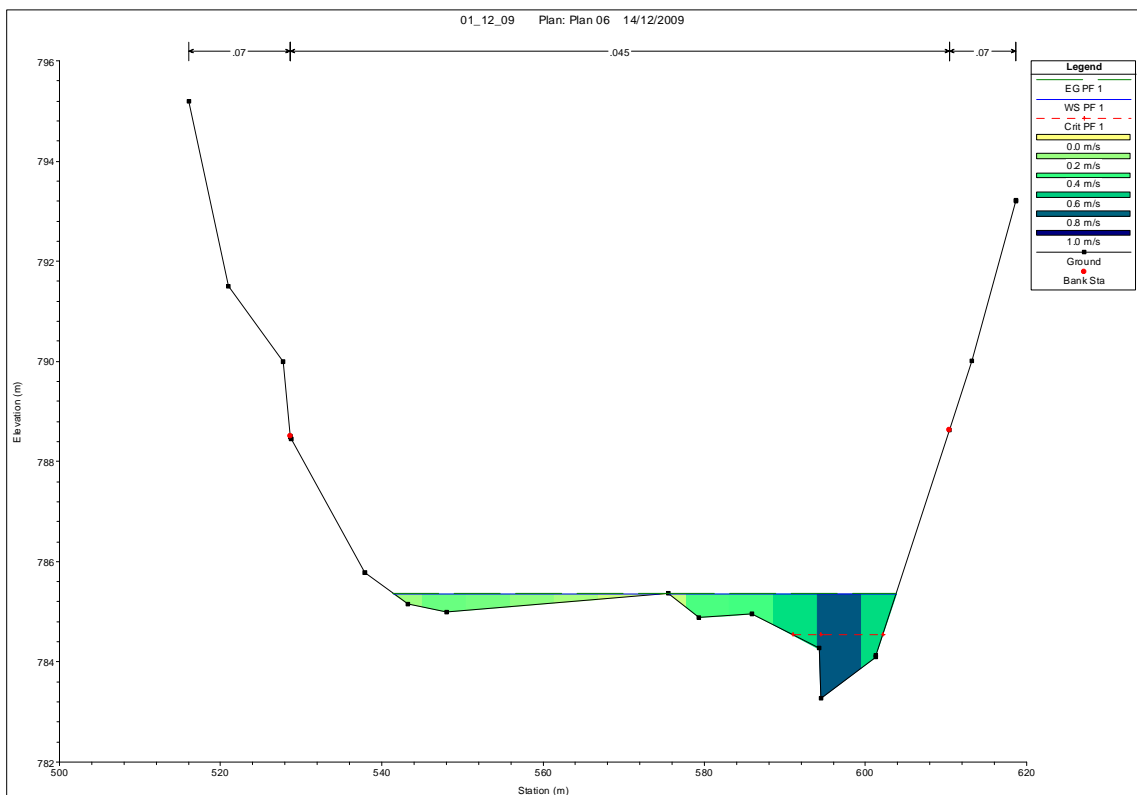


**Seção 16.0, Perfil 6.**

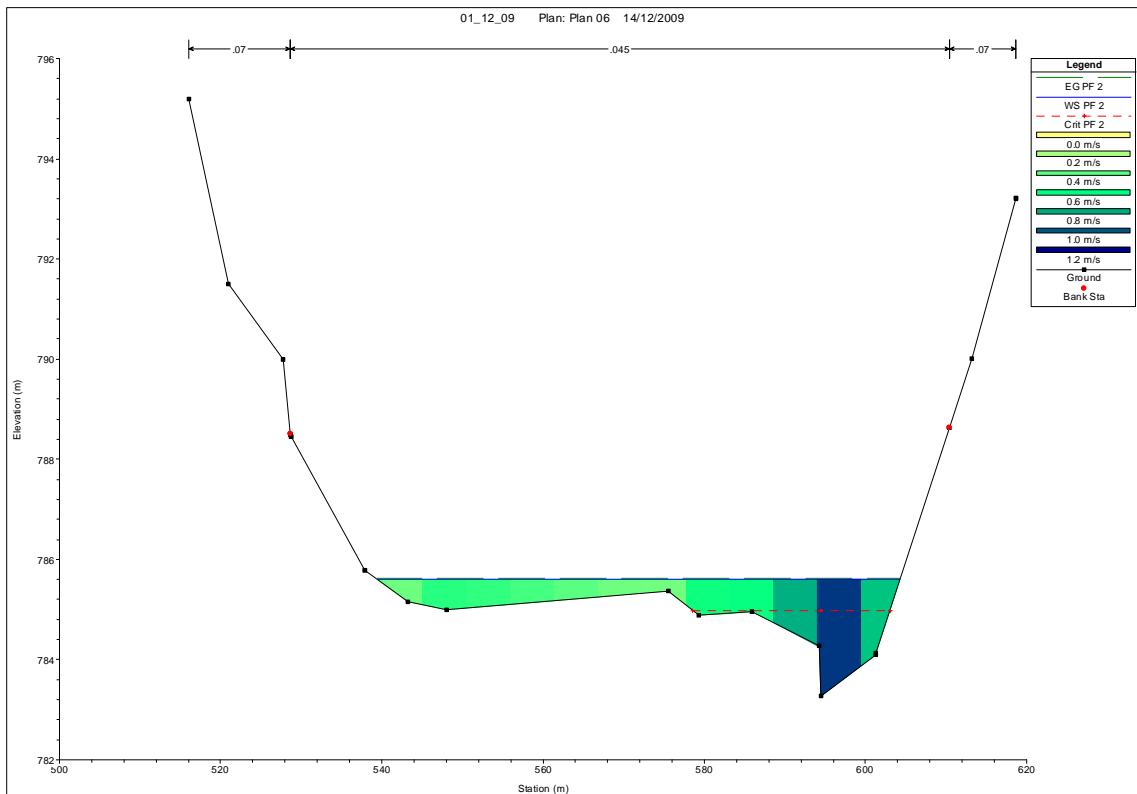




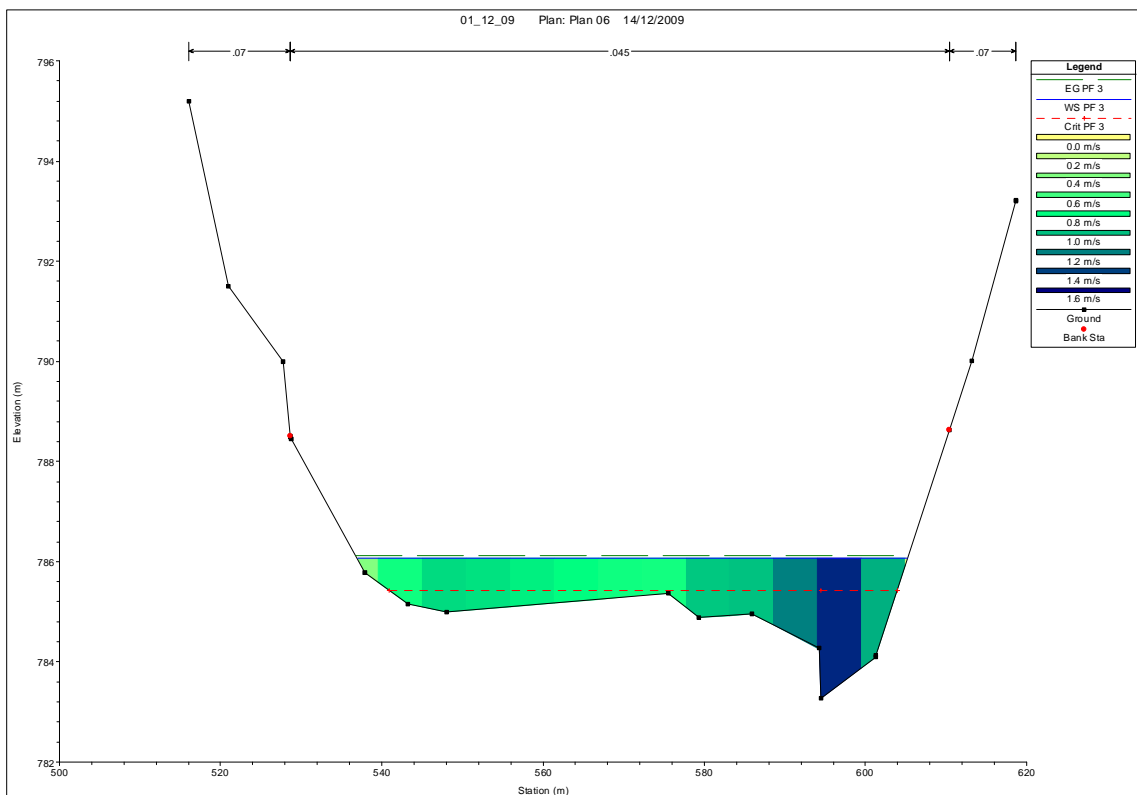
**Seção 16.0, Perfil 7.**



**Seção 21.0, Perfil 1.**

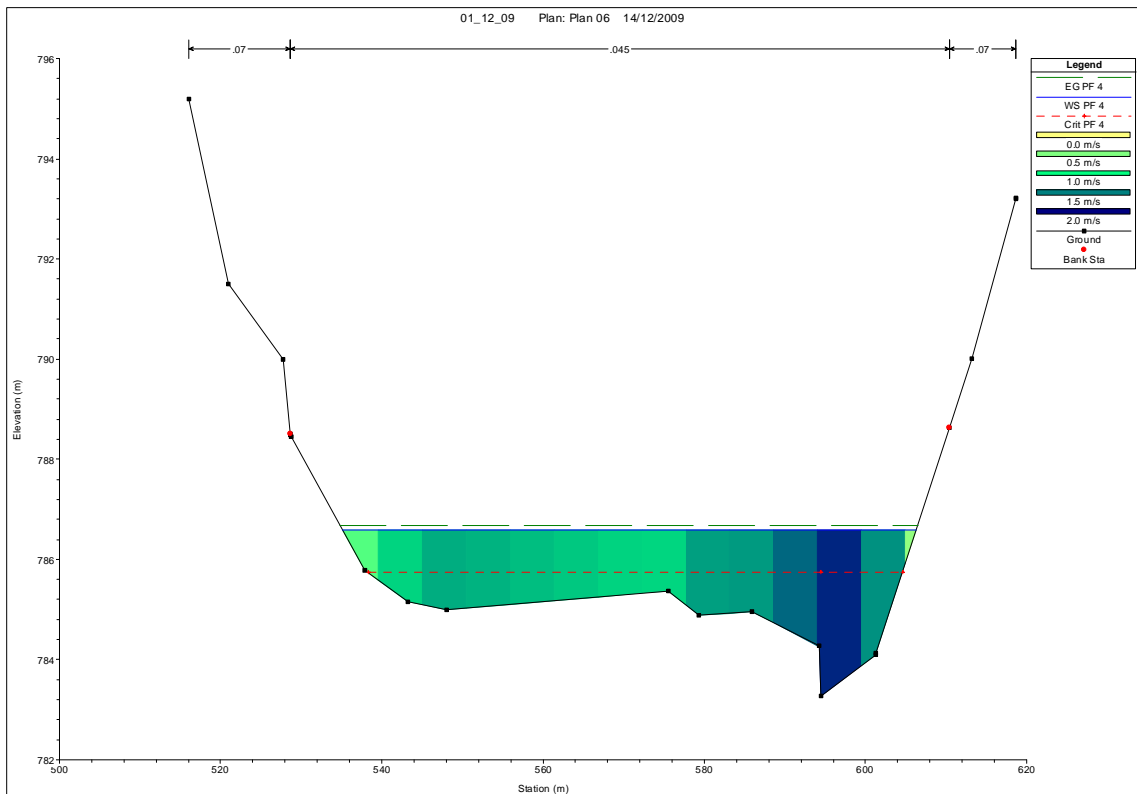


**Seção 21.0, Perfil 2.**

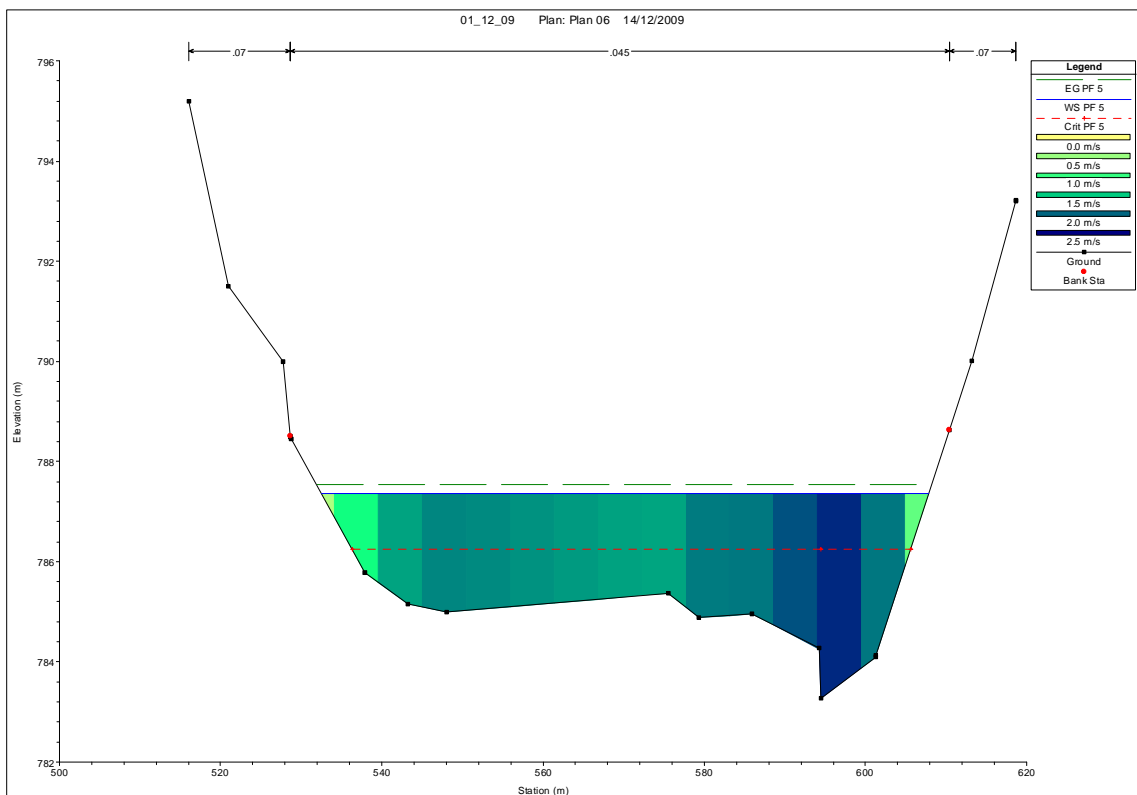


**Seção 21.0, Perfil 3.**

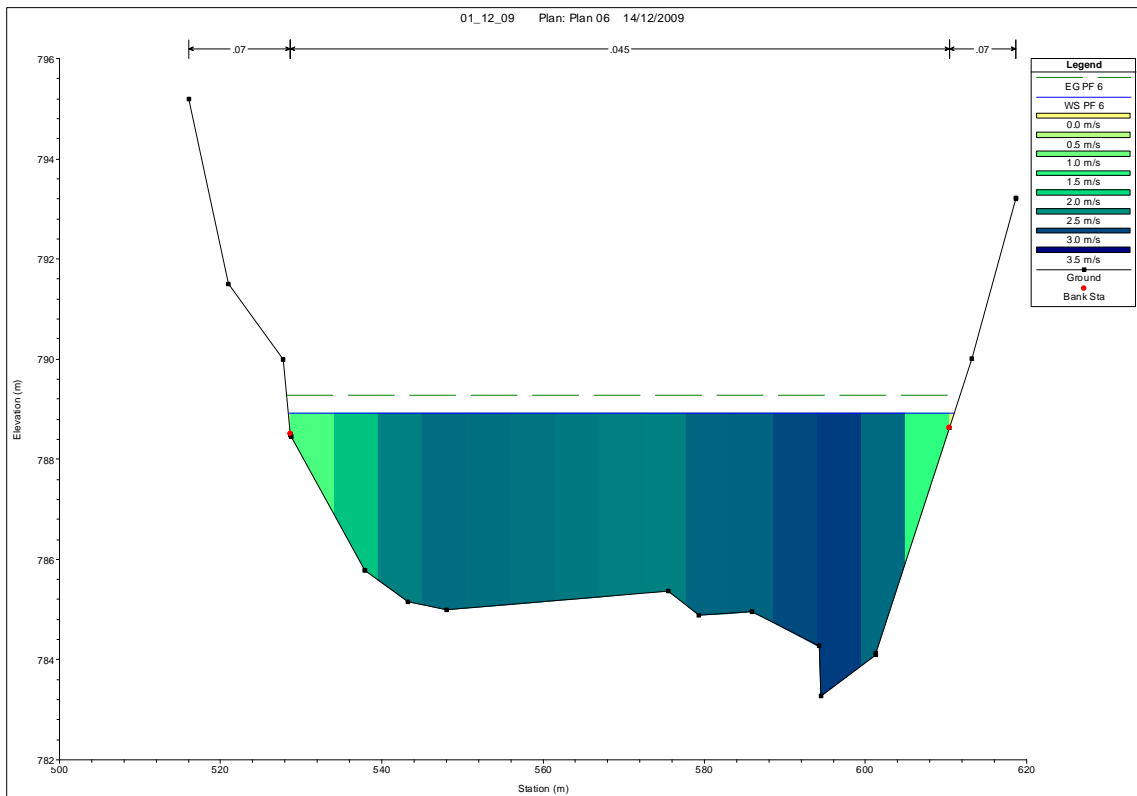




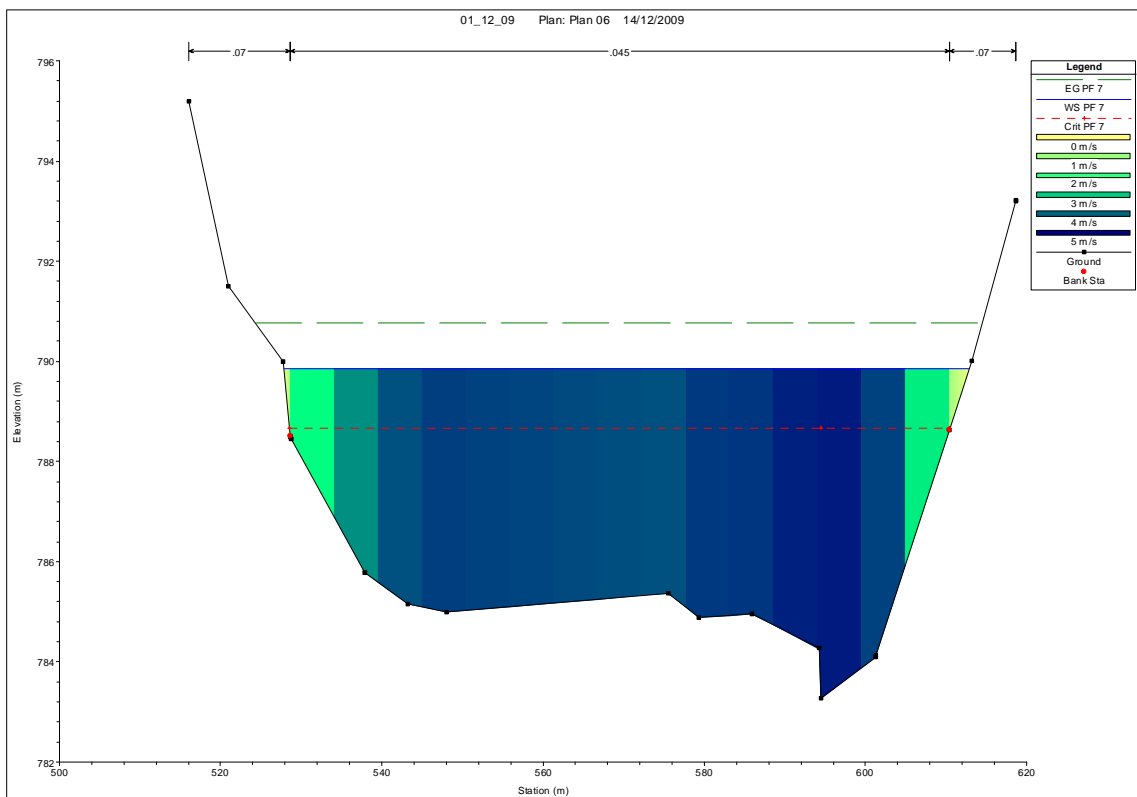
**Seção 21.0, Perfil 4.**



**Seção 21.0, Perfil 5.**

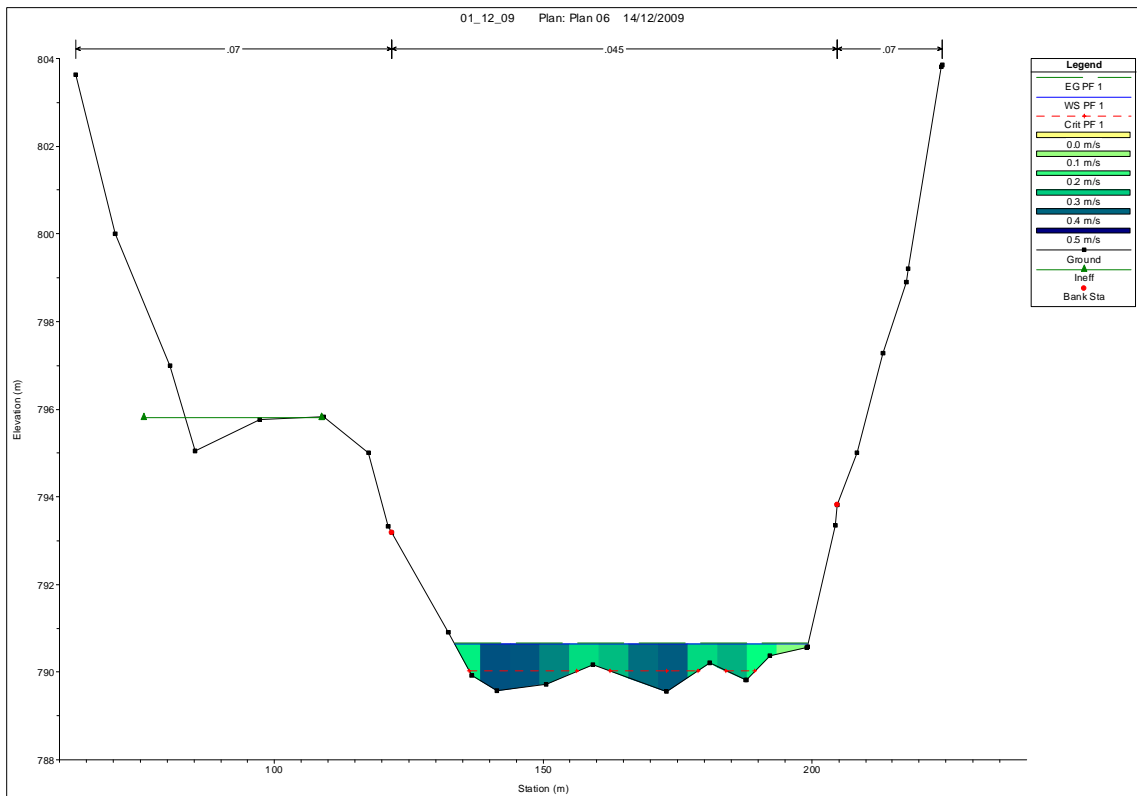


**Seção 21.0, Perfil 6.**

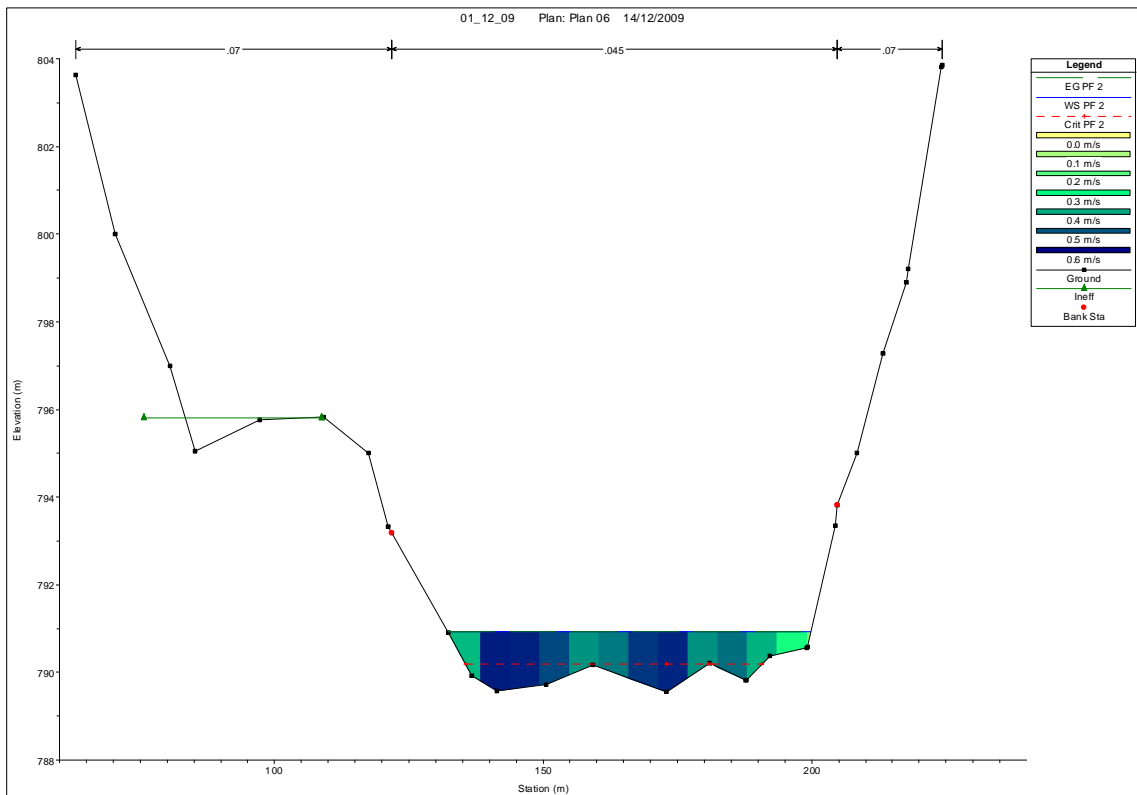


**Seção 21.0, Perfil 7.**

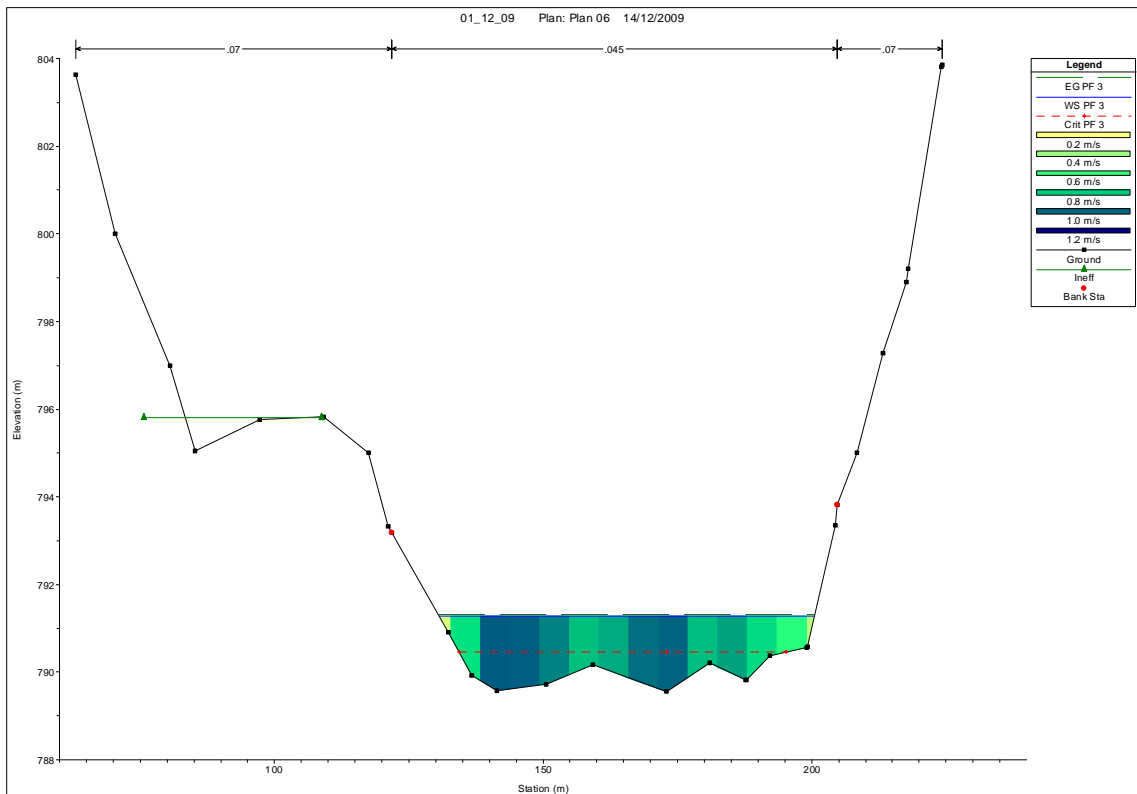




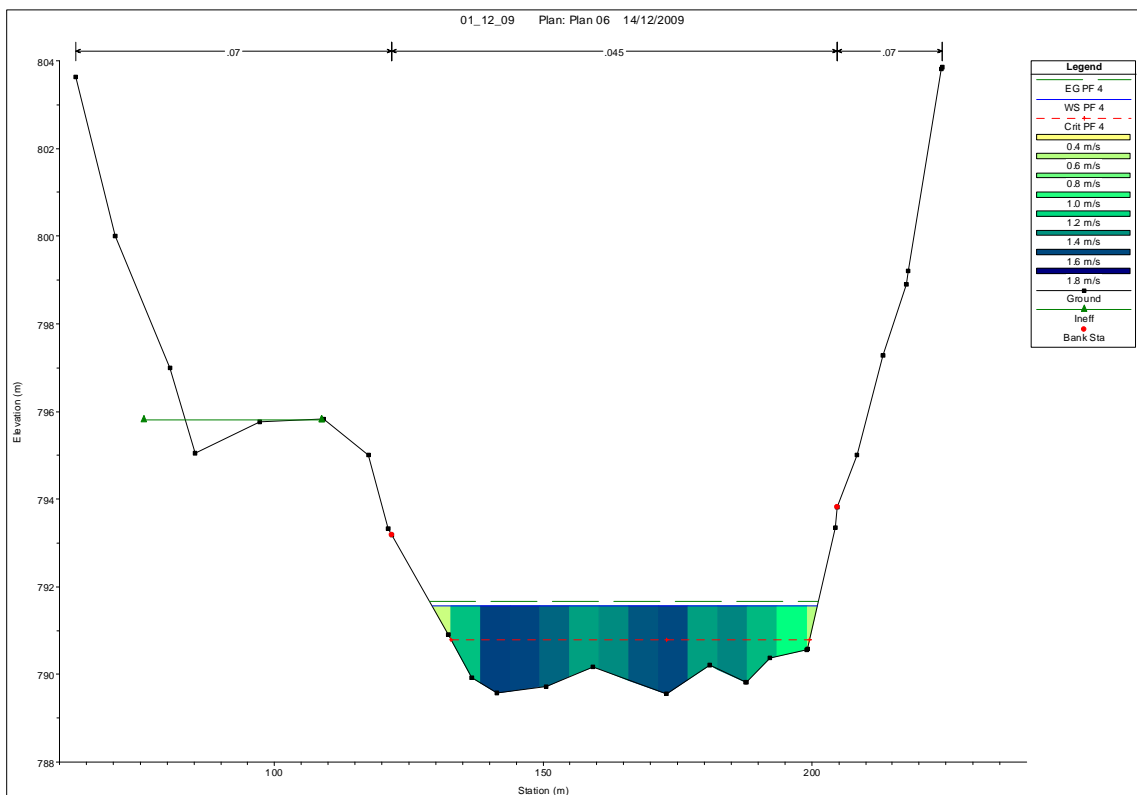
**Seção 23.2, Perfil 1.**



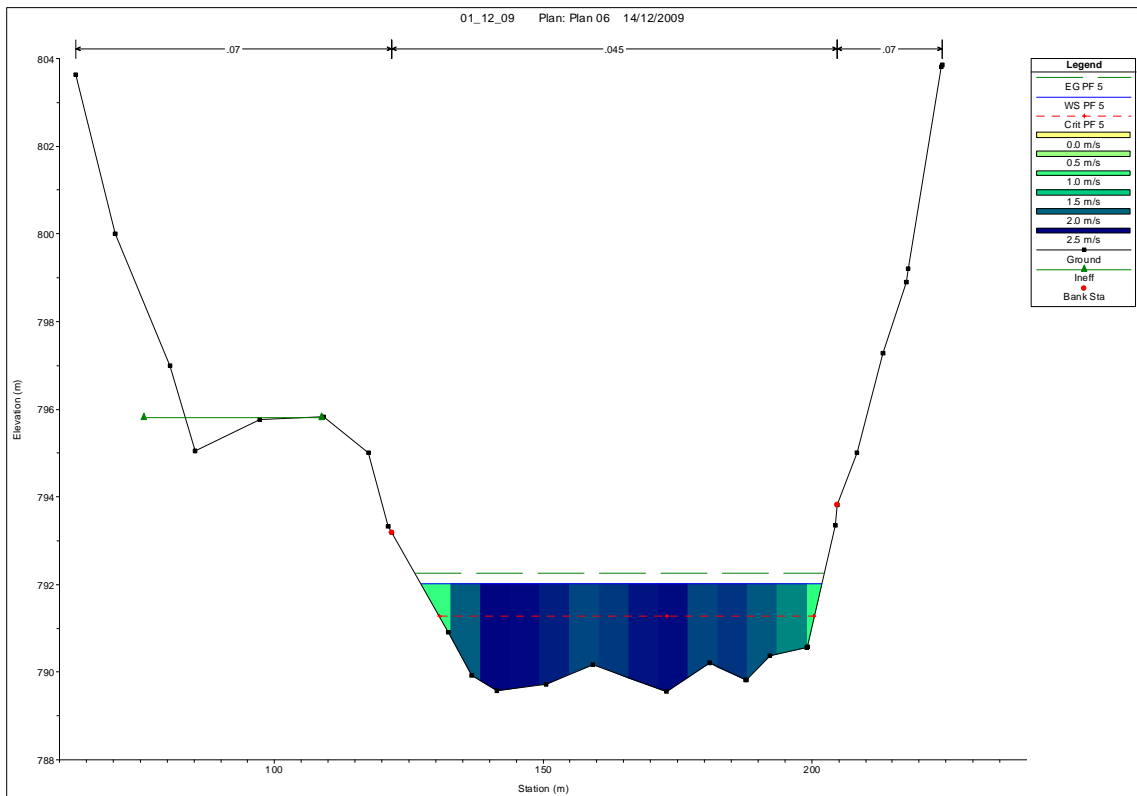
**Seção 23.2, Perfil 2.**



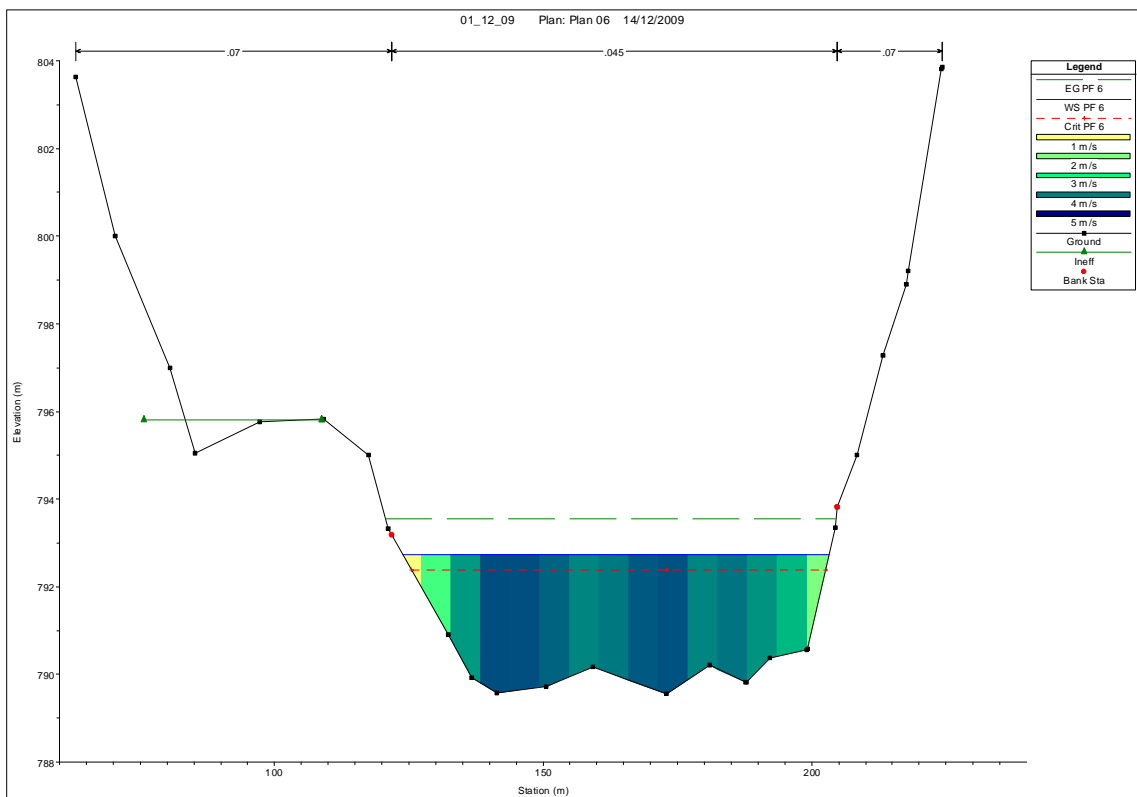
**Seção 23.2, Perfil 3.**



**Seção 23.2, Perfil 4.**

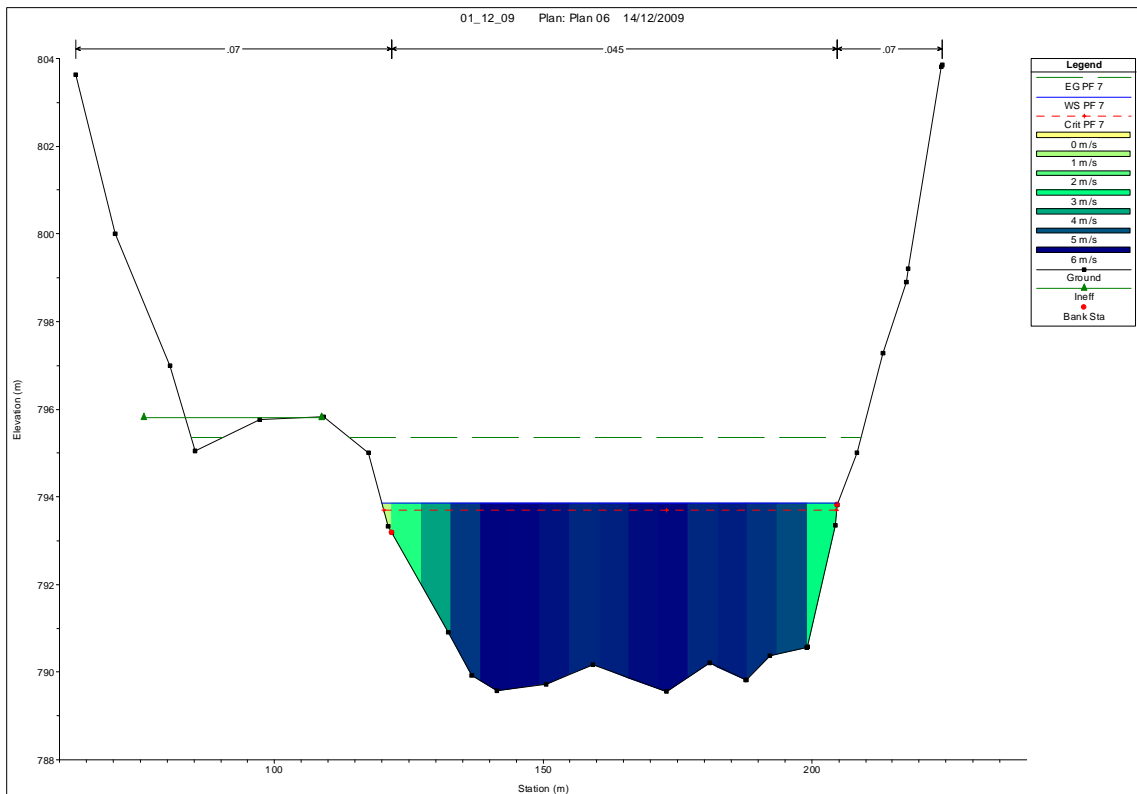


**Seção 23.2, Perfil 5.**

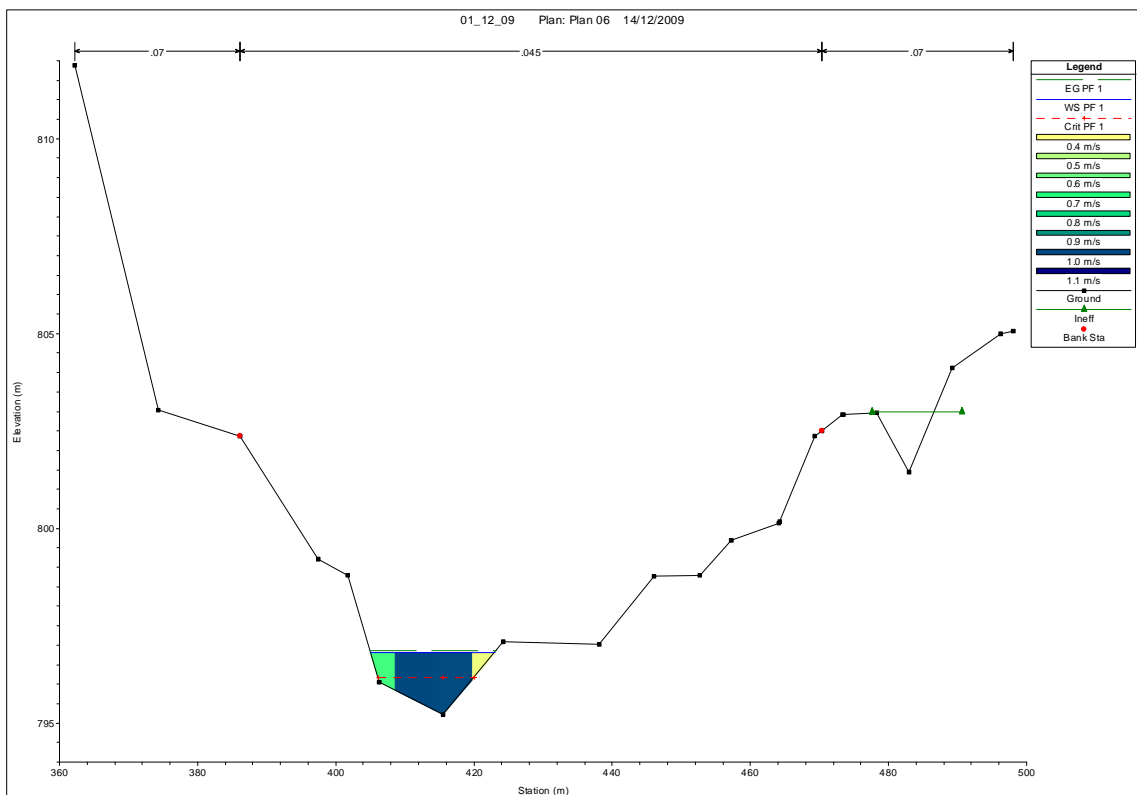


**Seção 23.2, Perfil 6.**

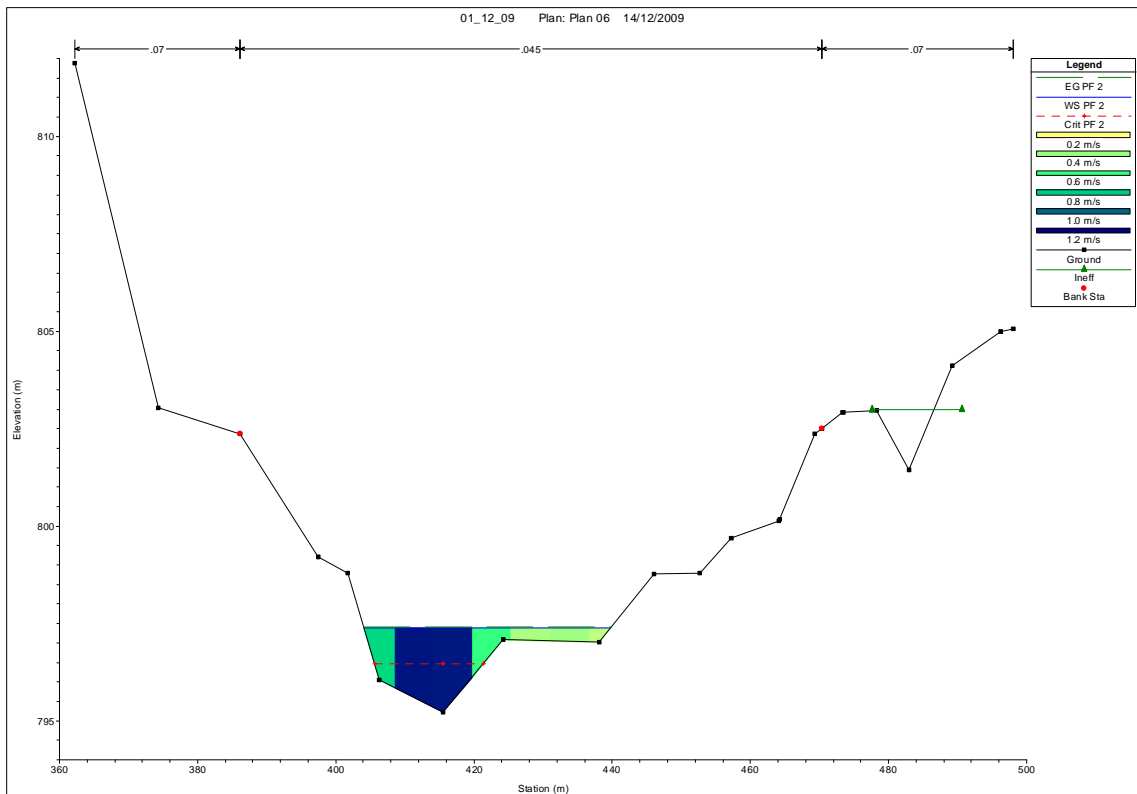




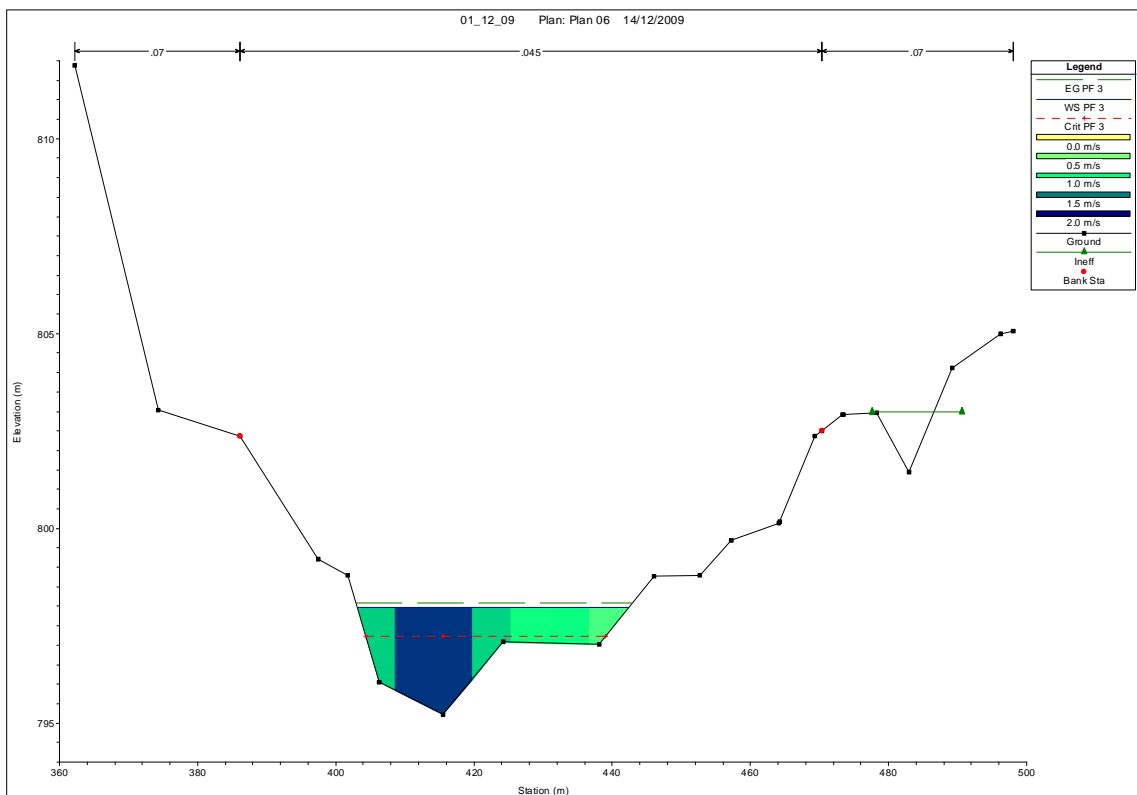
**Seção 23.2, Perfil 7.**



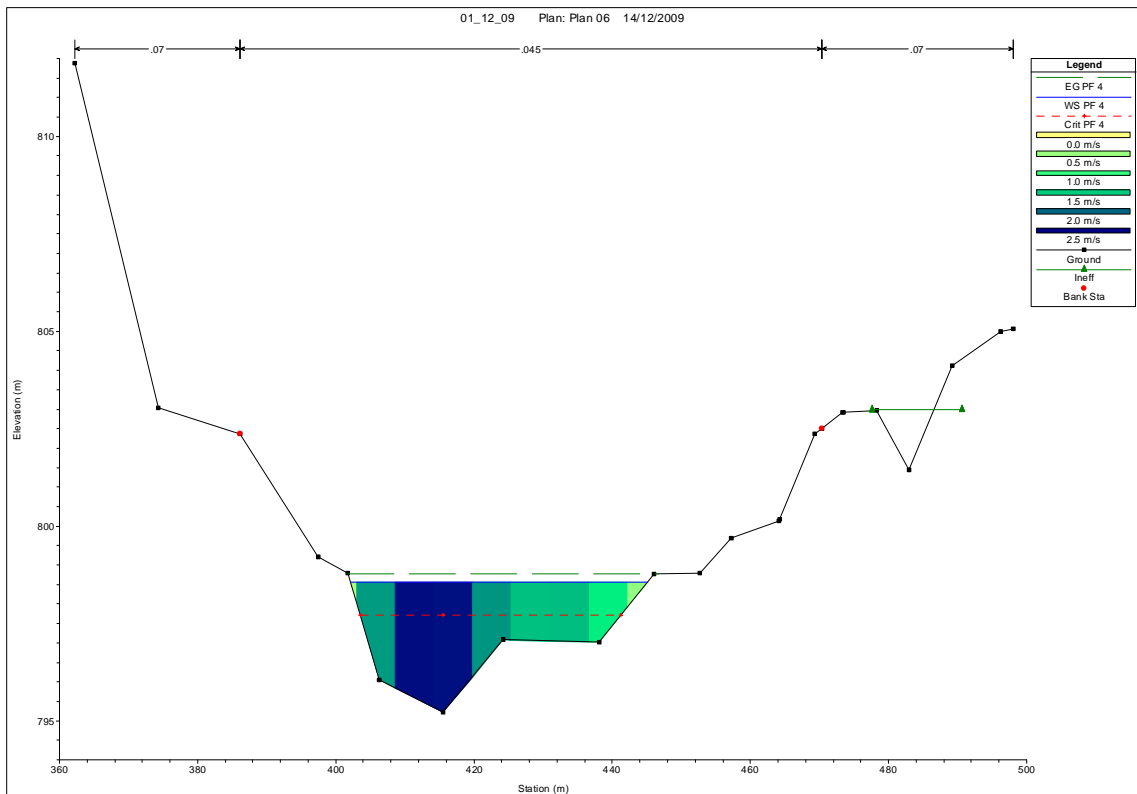
**Seção 25.7, Perfil 1.**



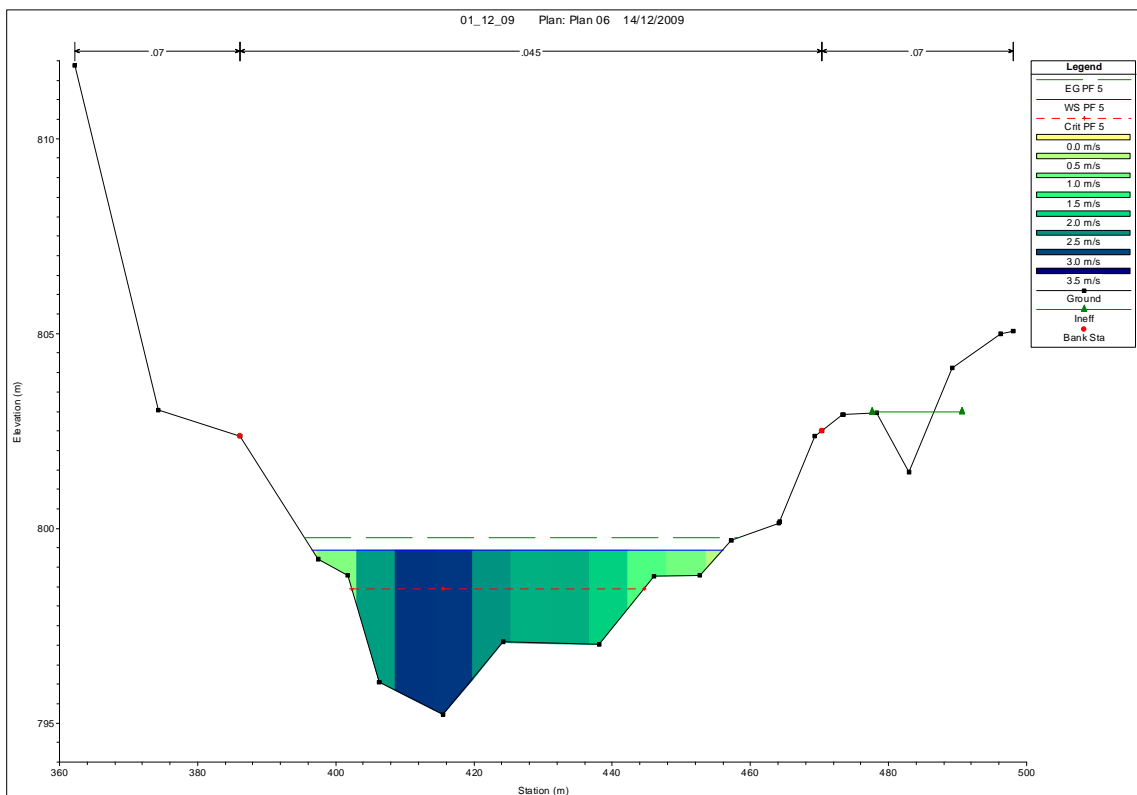
**Seção 25.7, Perfil 2.**



**Seção 25.7, Perfil 3.**

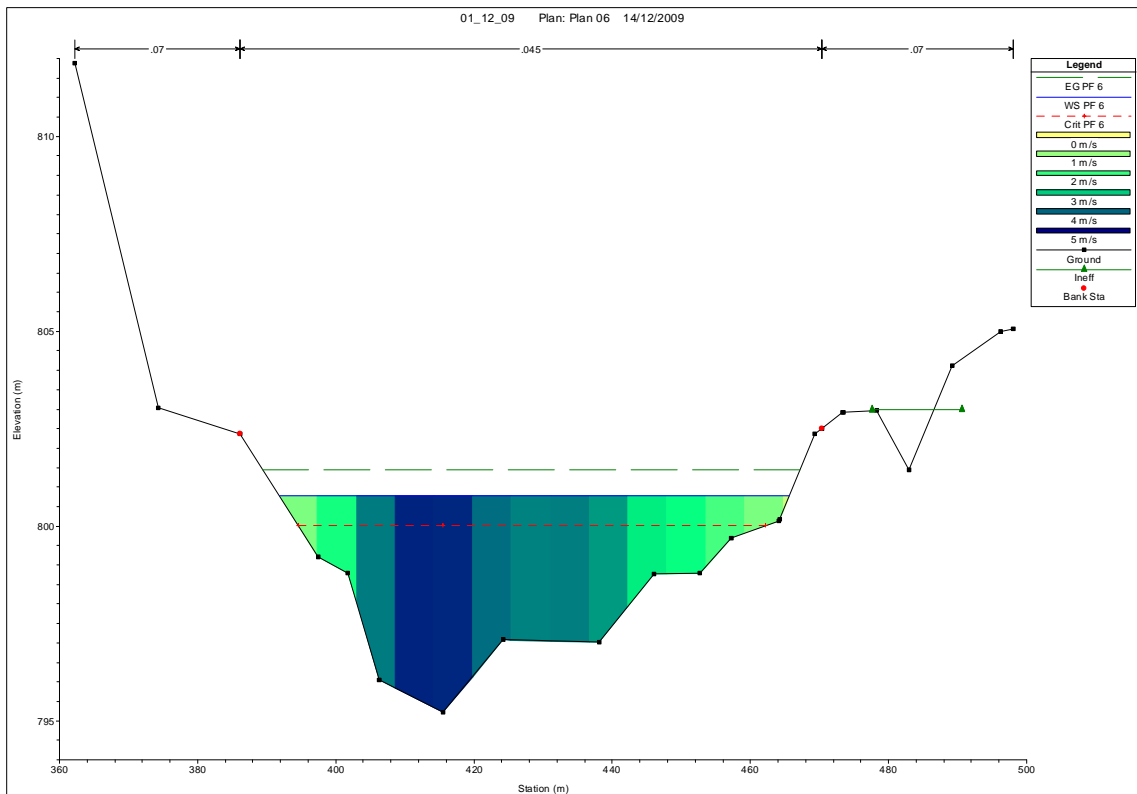


**Seção 25.7, Perfil 4.**

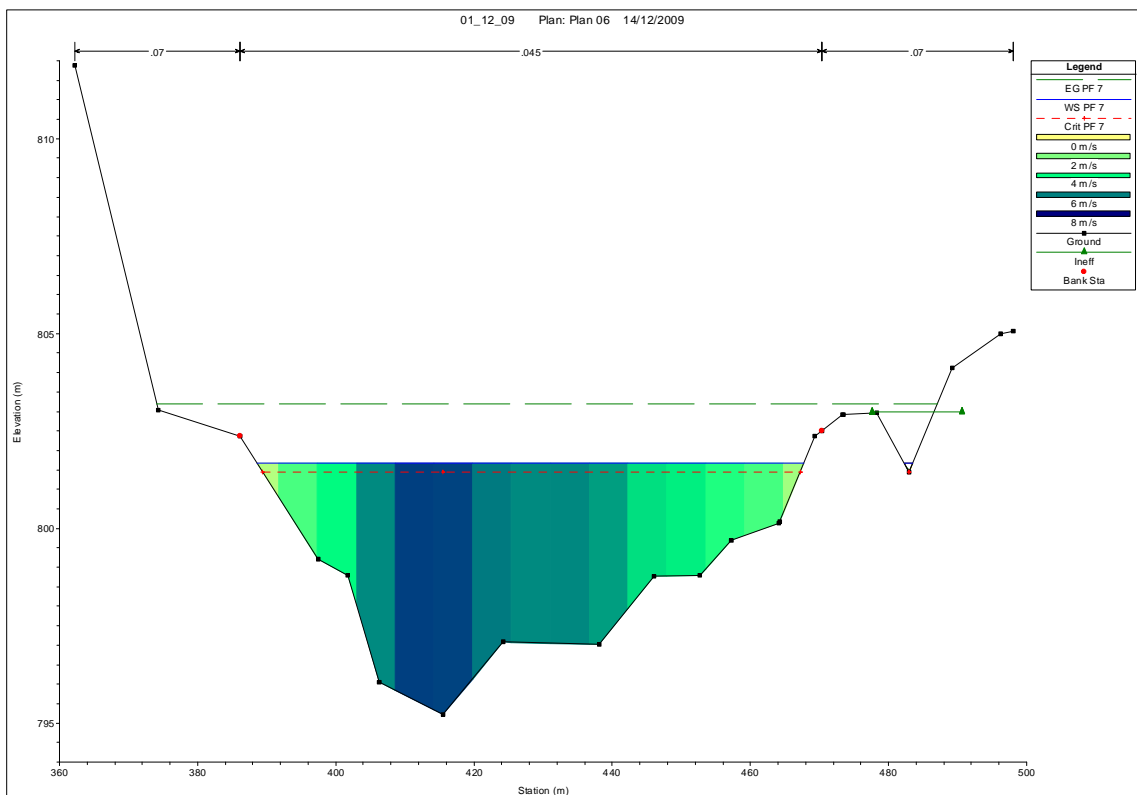


**Seção 25.7, Perfil 5.**

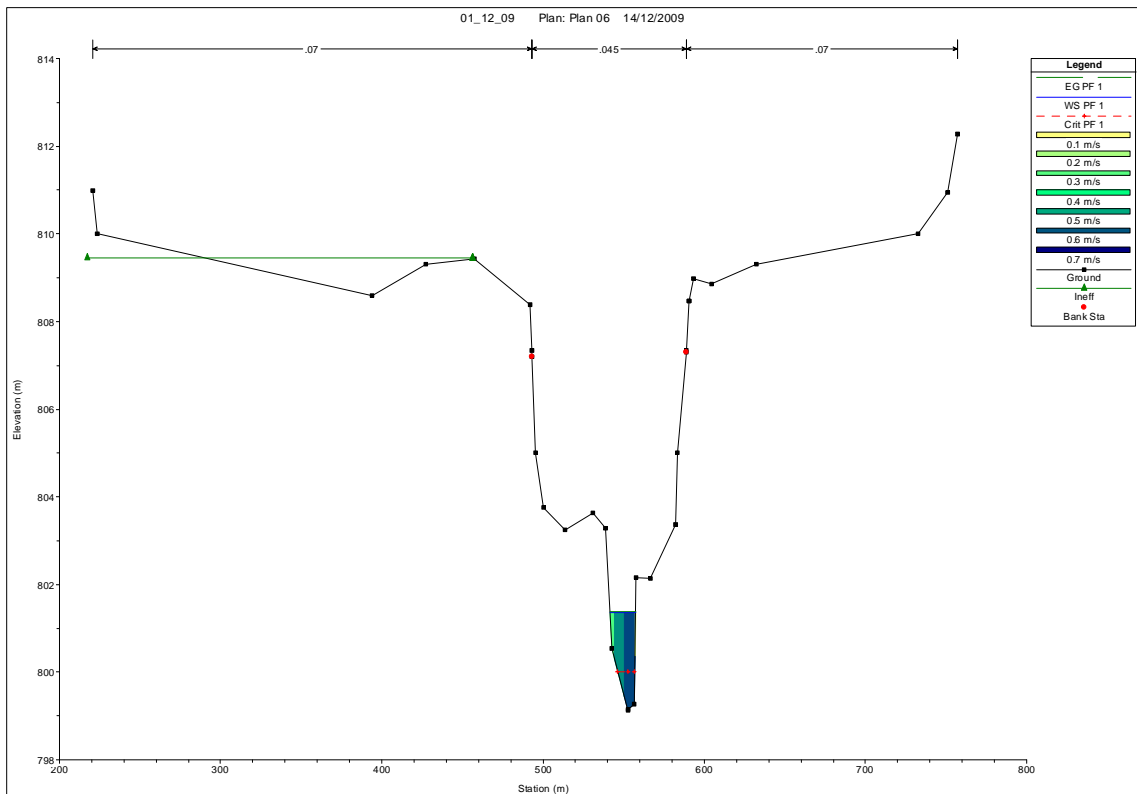




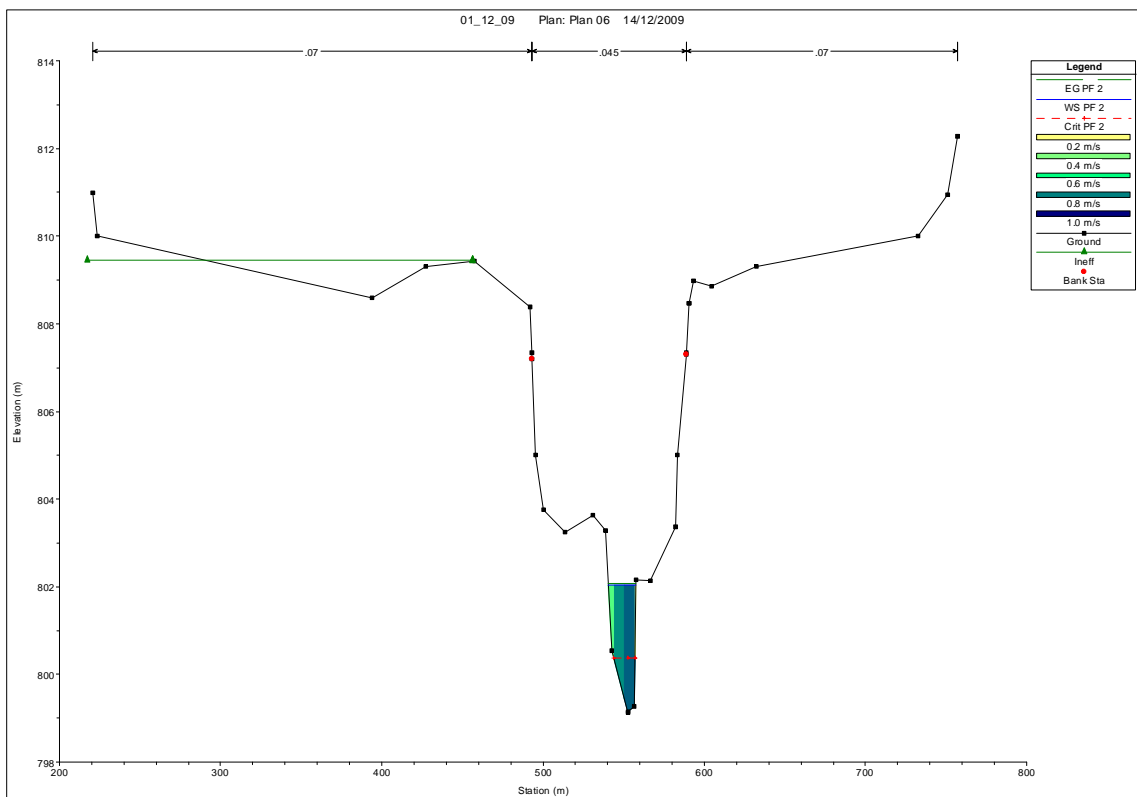
**Seção 25.7, Perfil 6.**



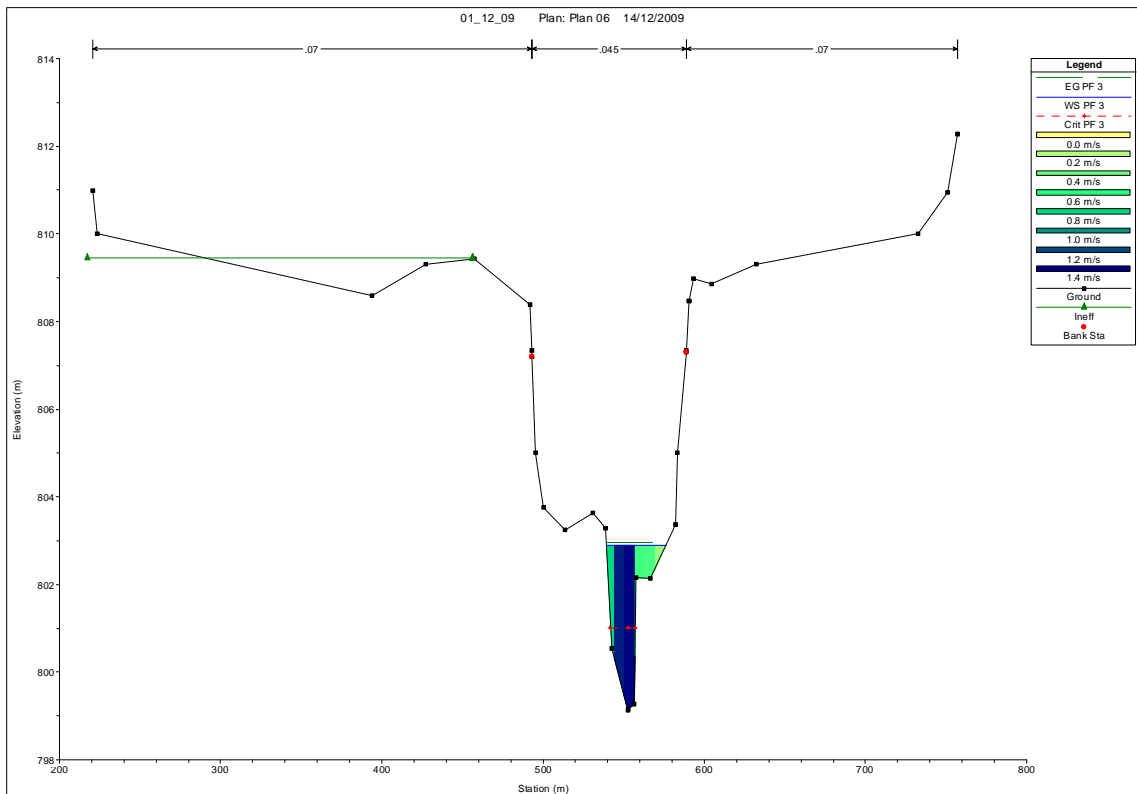
**Seção 25.7, Perfil 7.**



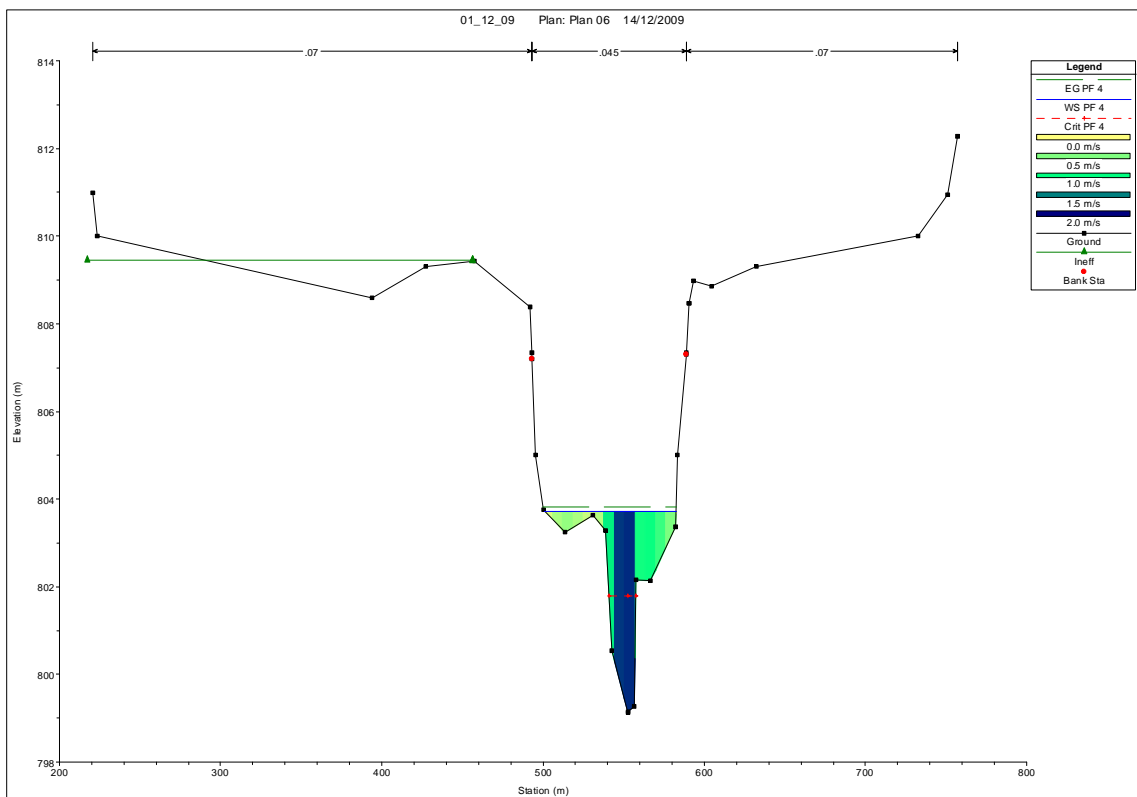
**Seção 27.5, Perfil 1.**



**Seção 27.5, Perfil 2.**

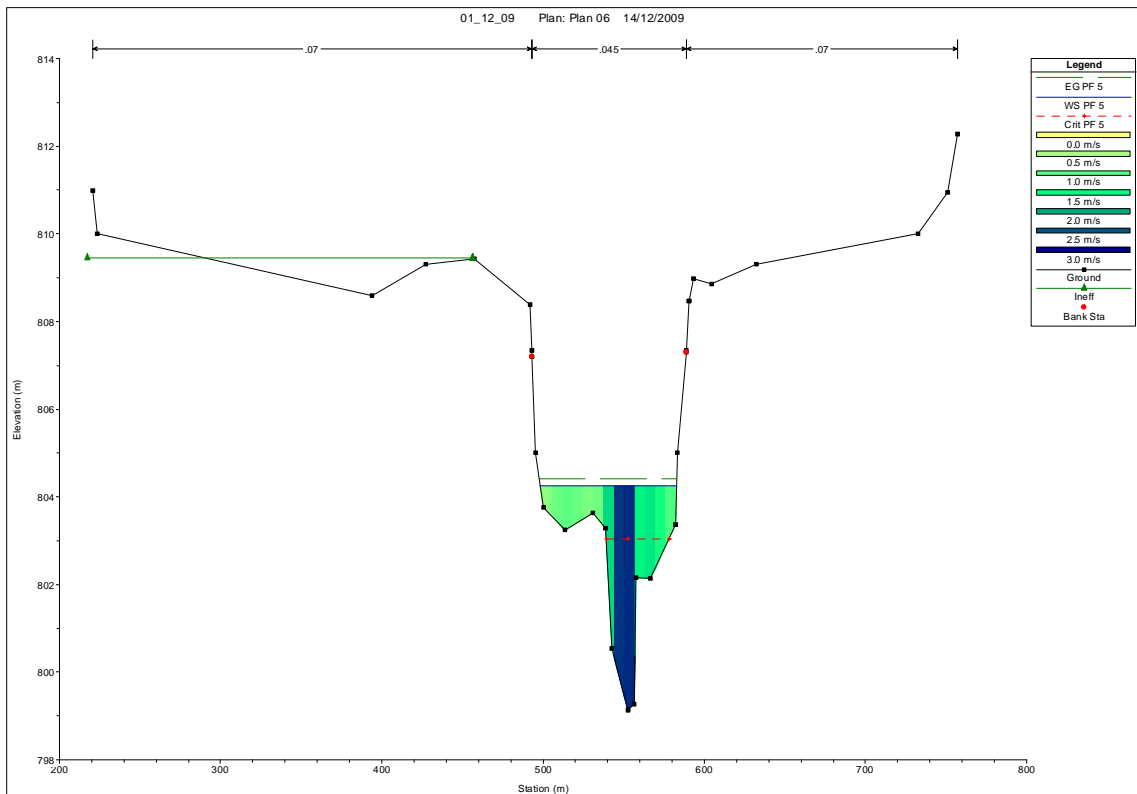


**Seção 27.5, Perfil 3.**

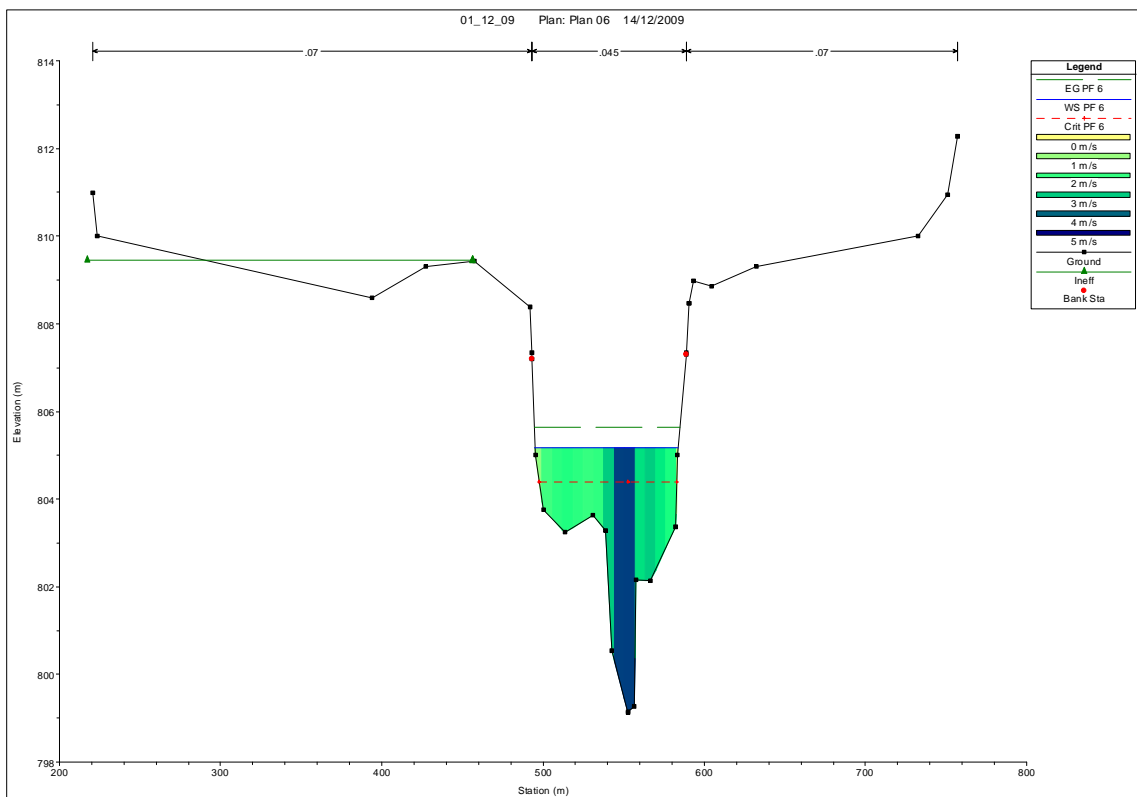


**Seção 27.5, Perfil 4.**

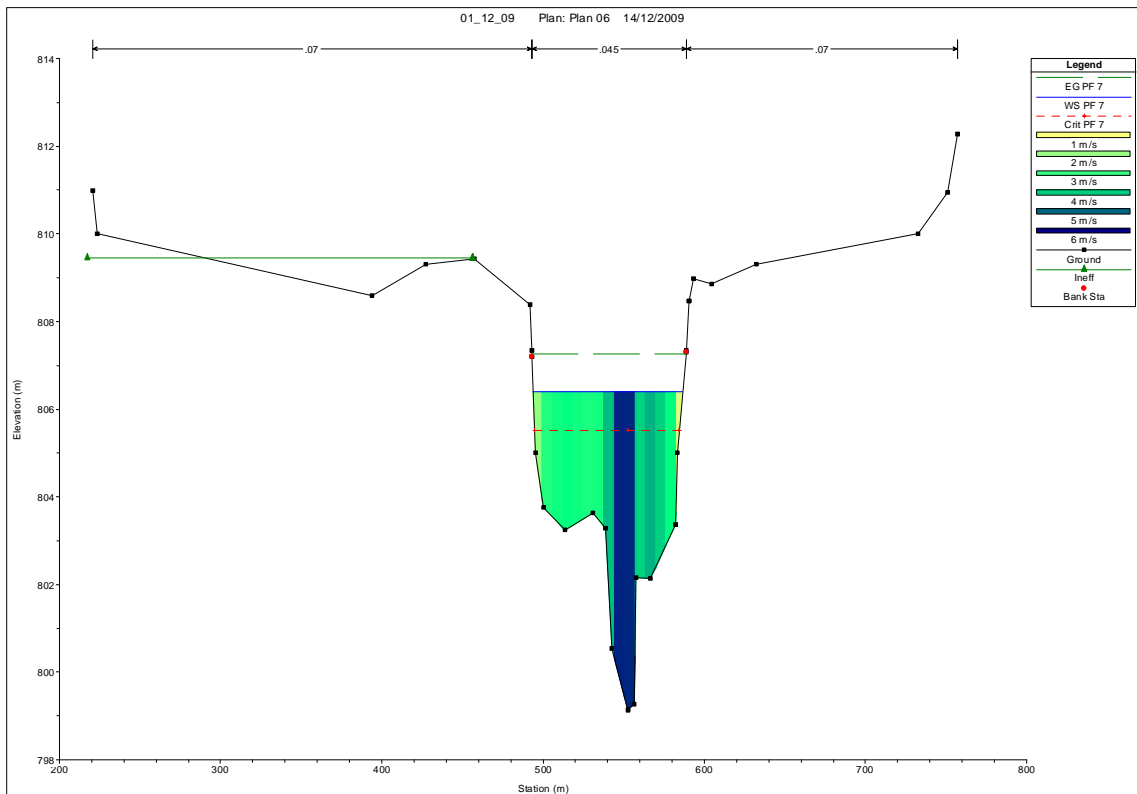




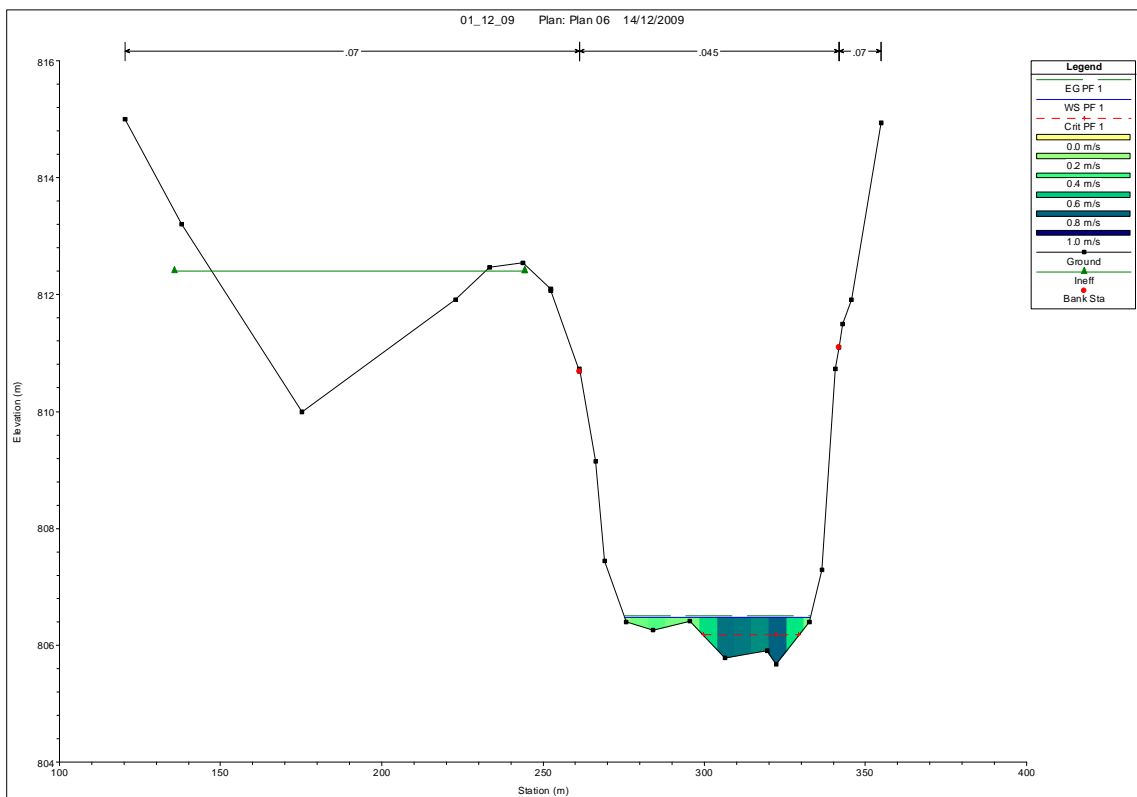
**Seção 27.5, Perfil 5.**



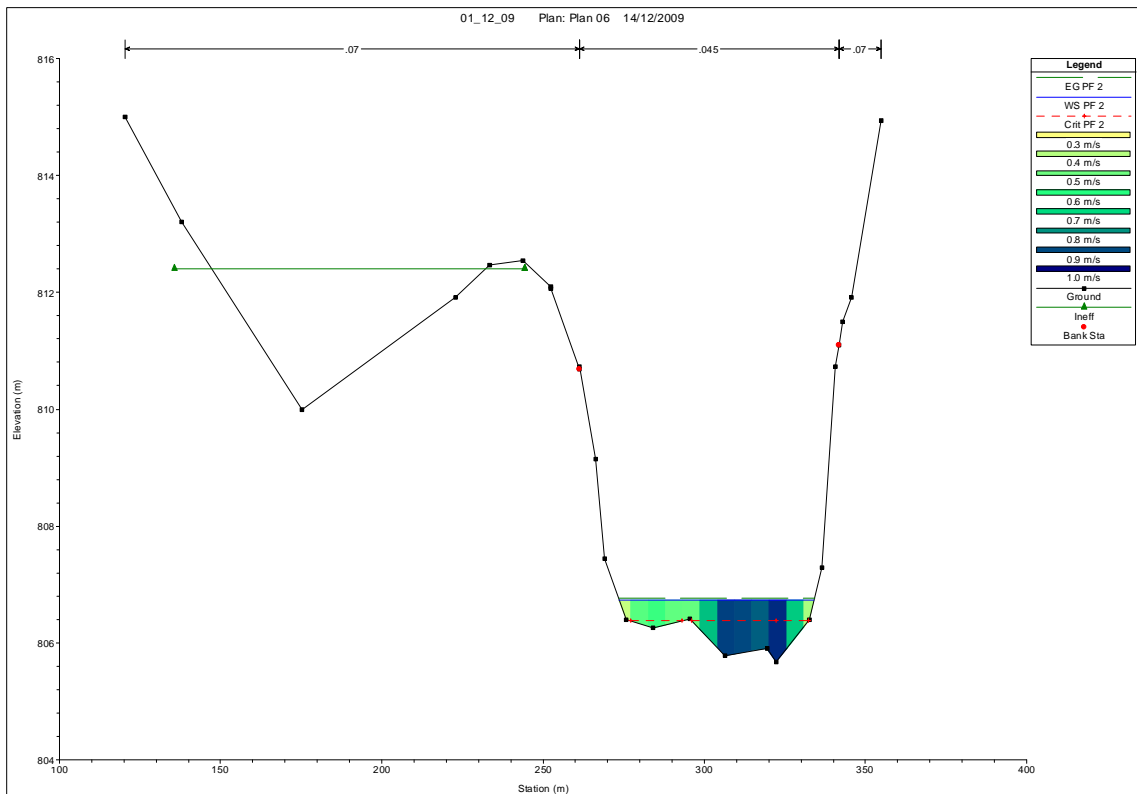
**Seção 27.5, Perfil 6.**



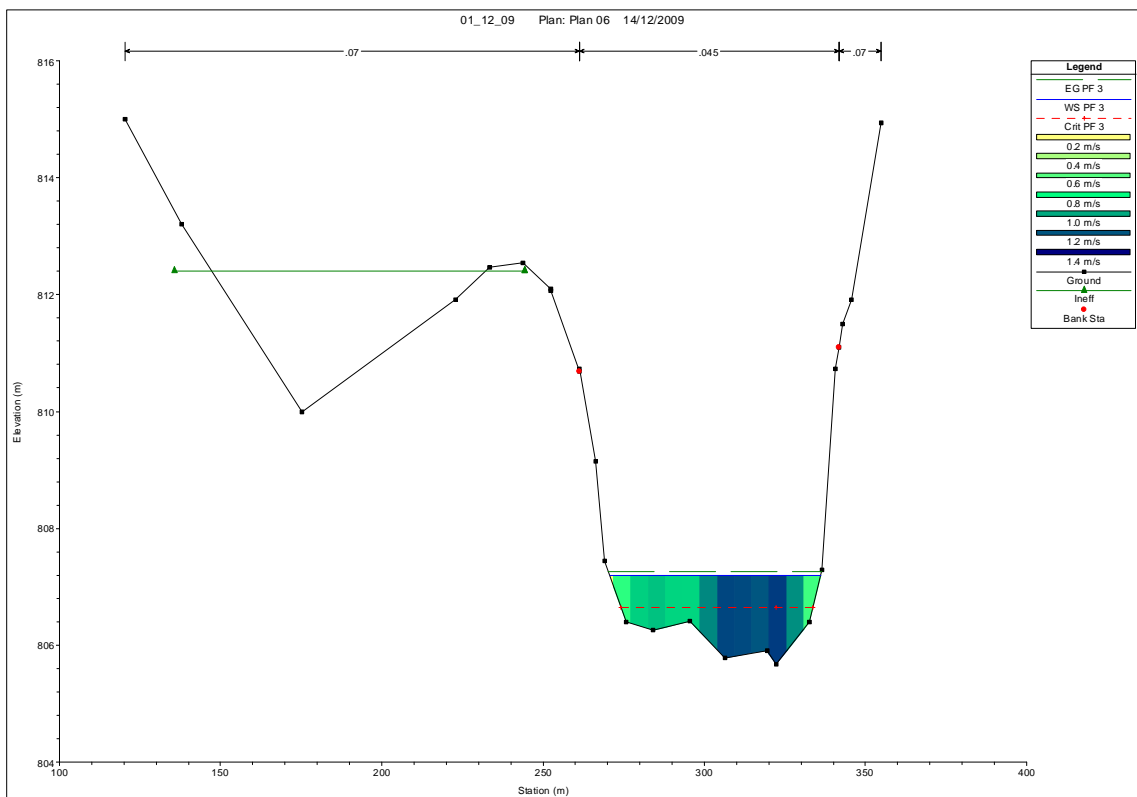
**Seção 27.5, Perfil 7.**



**Seção 29.4, Perfil 1.**

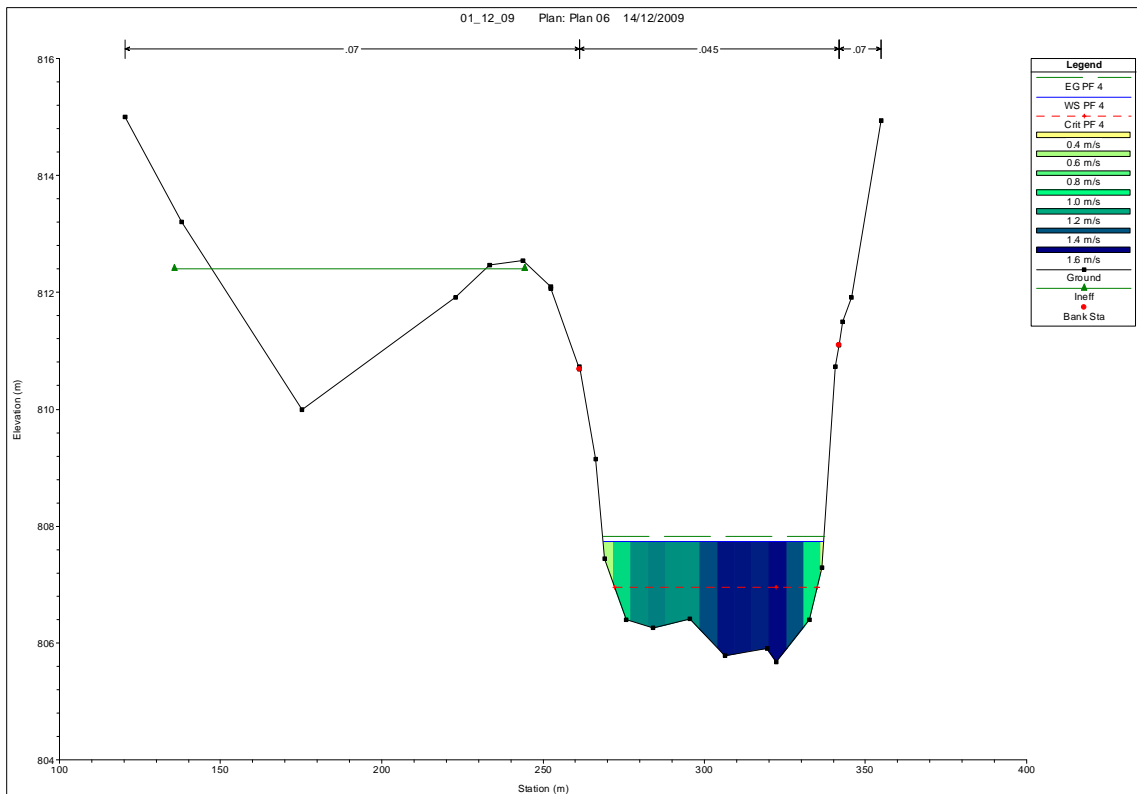


**Seção 29.4, Perfil 2.**

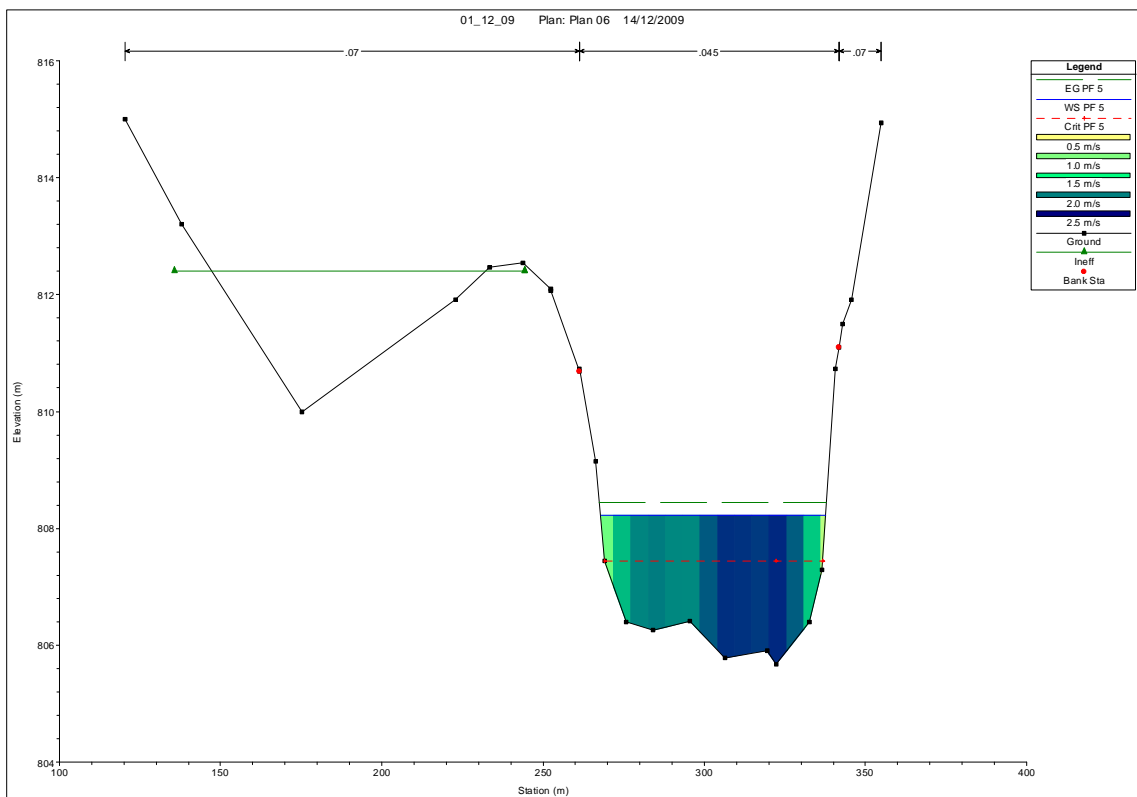


**Seção 29.4, Perfil 3.**

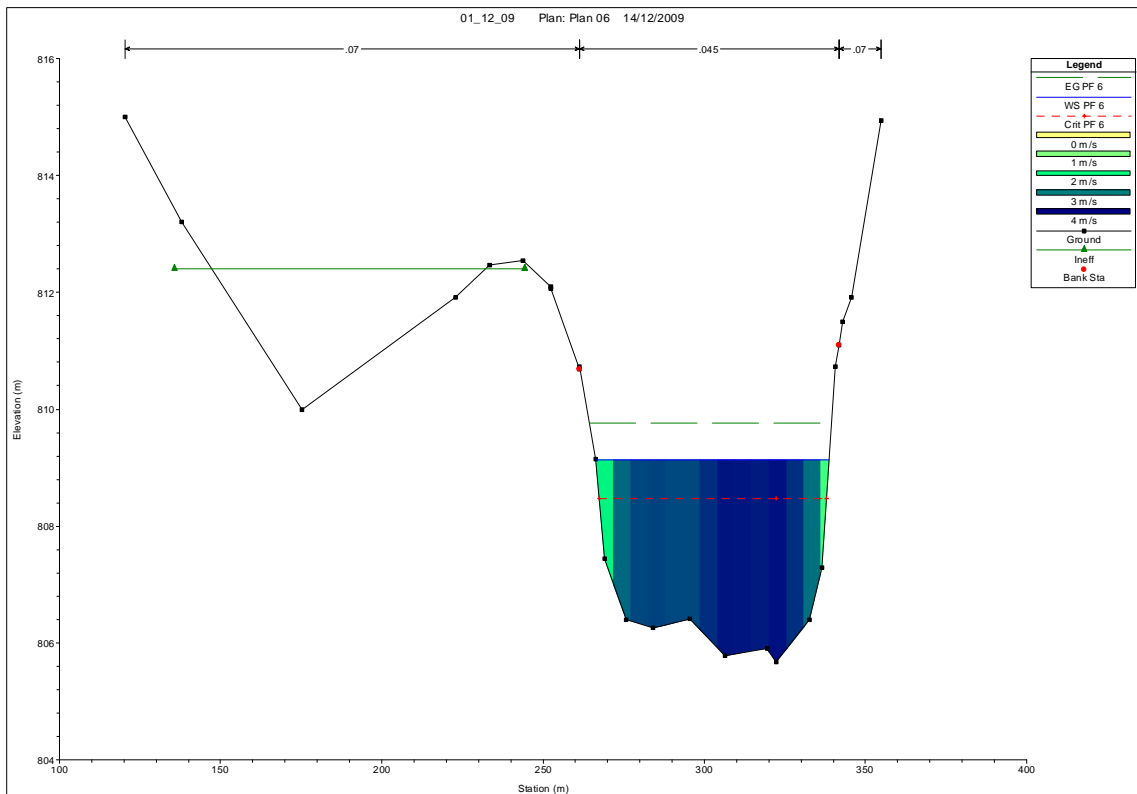




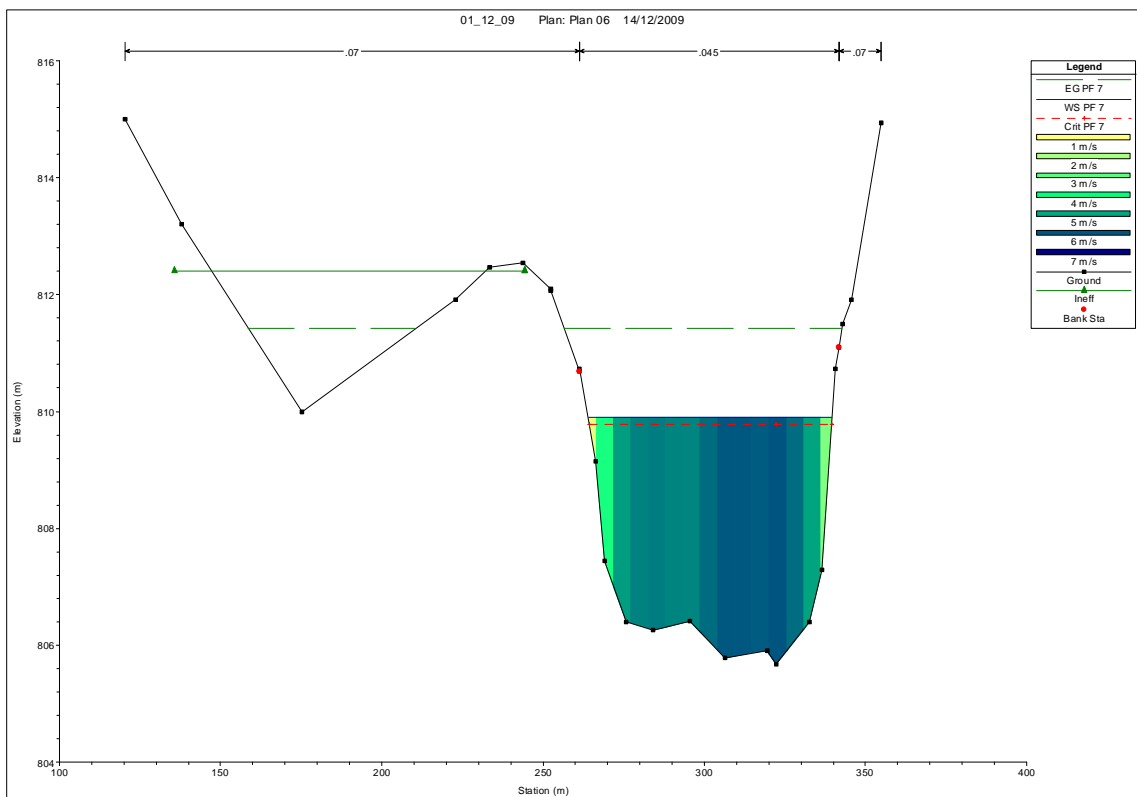
**Seção 29.4, Perfil 4.**



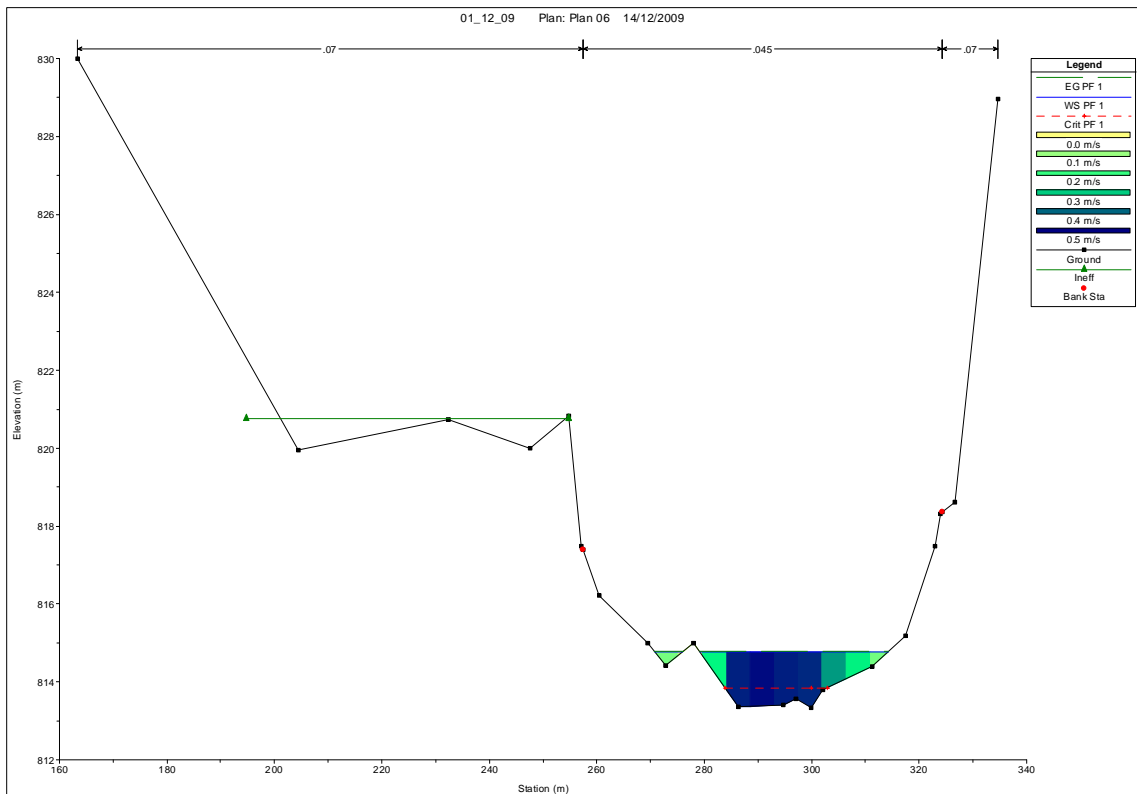
**Seção 29.4, Perfil 5.**



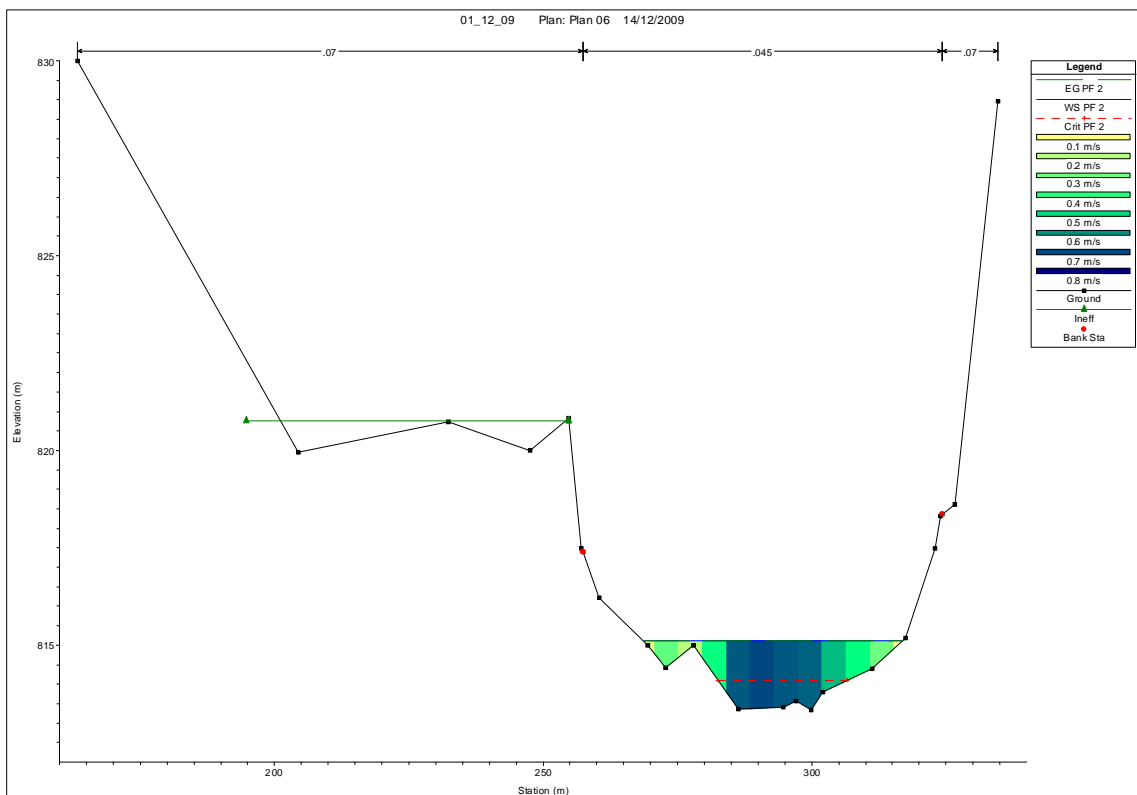
**Seção 29.4, Perfil 6.**



**Seção 29.4, Perfil 7.**

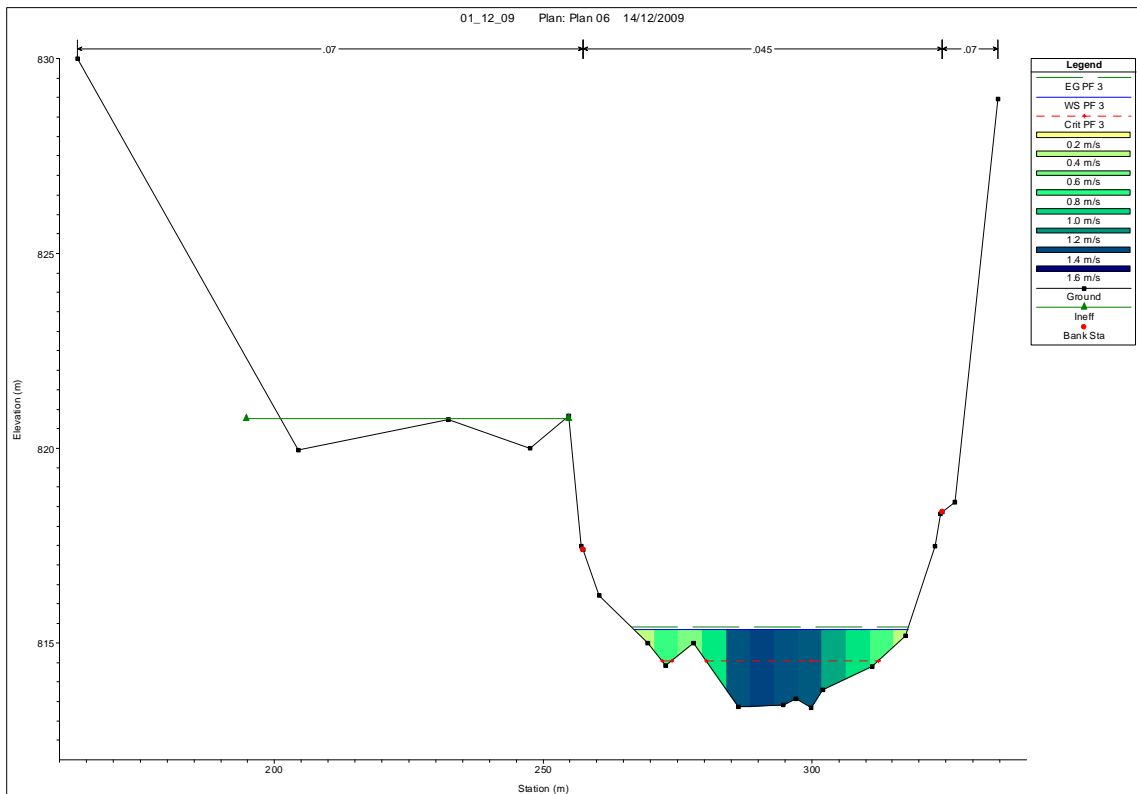


**Seção 32.1, Perfil 1.**

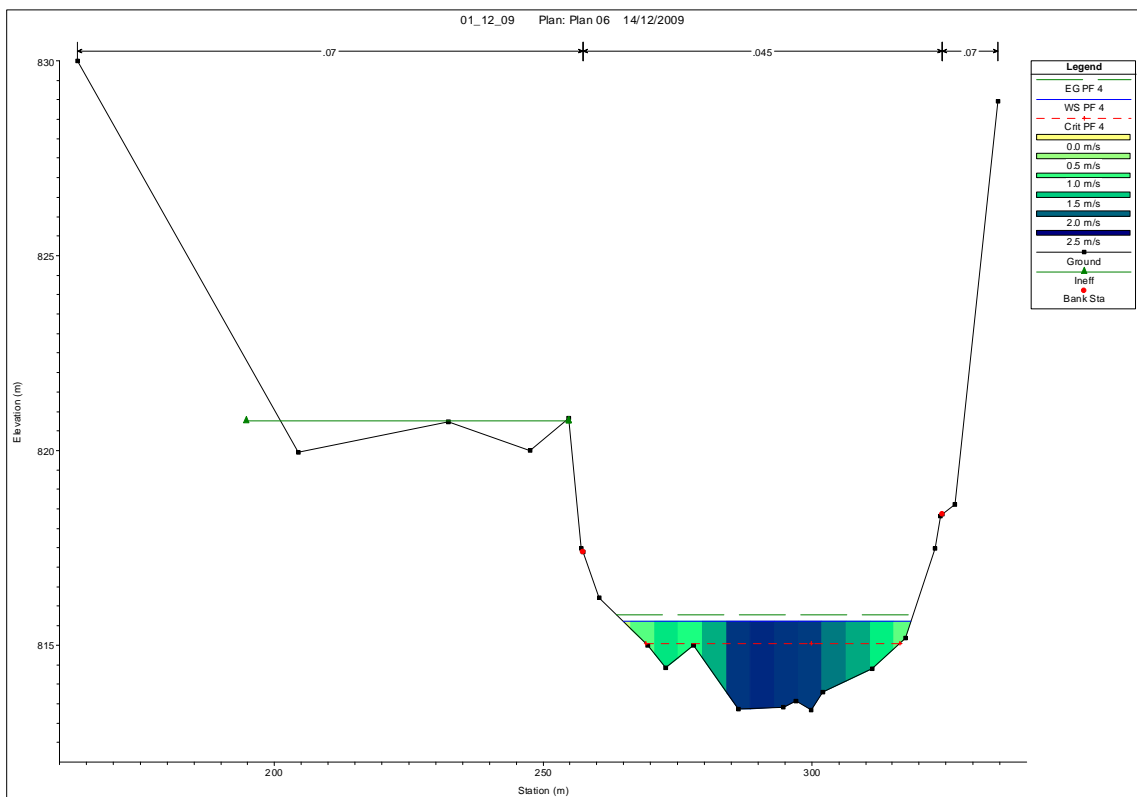


**Seção 32.1, Perfil 2.**

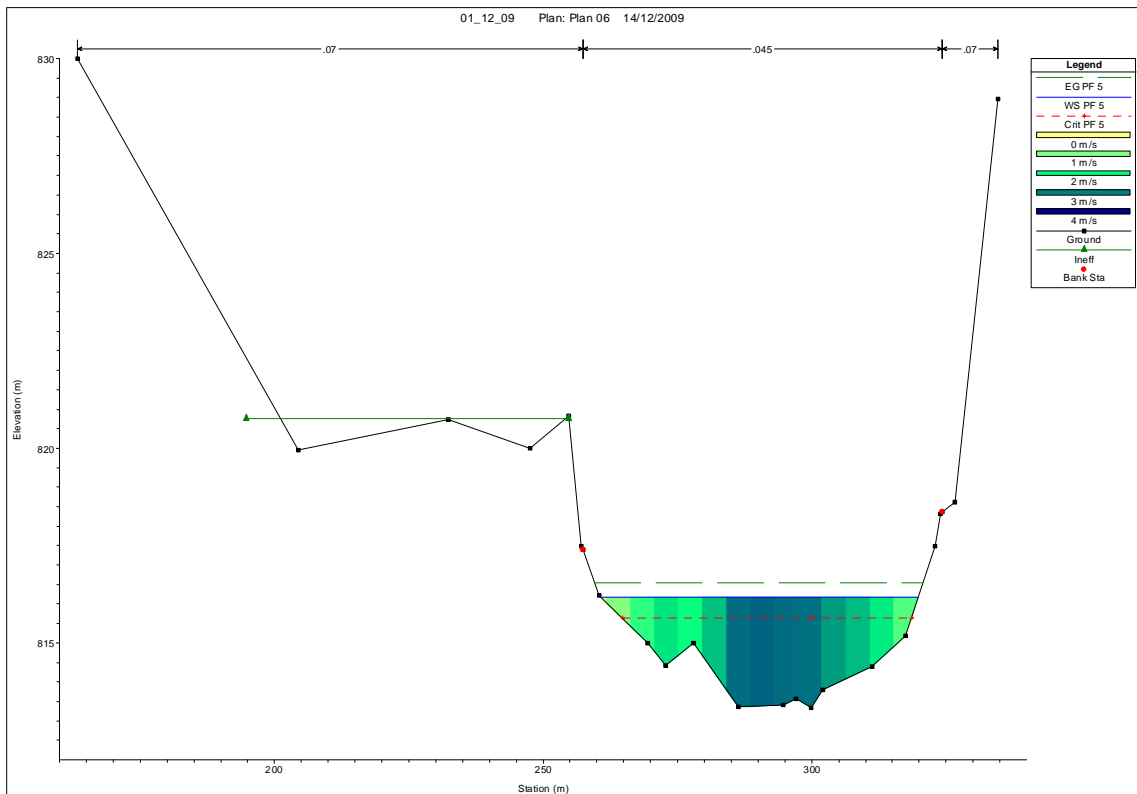




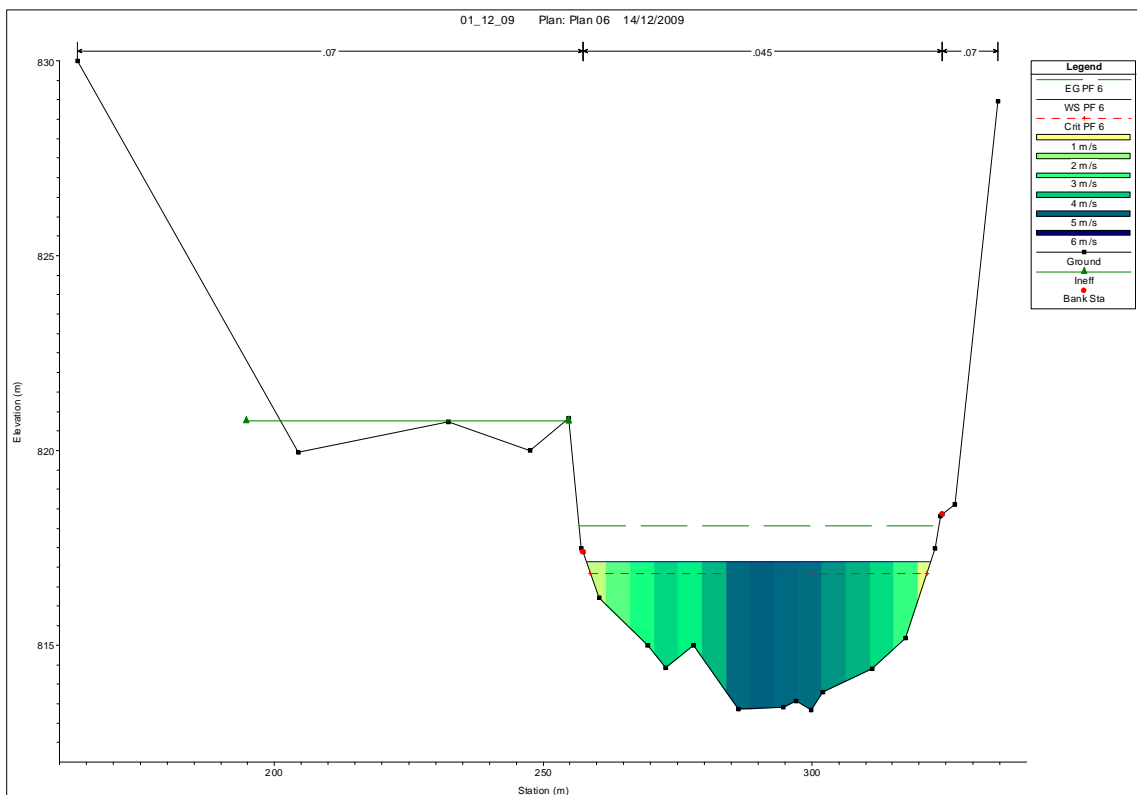
**Seção 32.1, Perfil 3.**



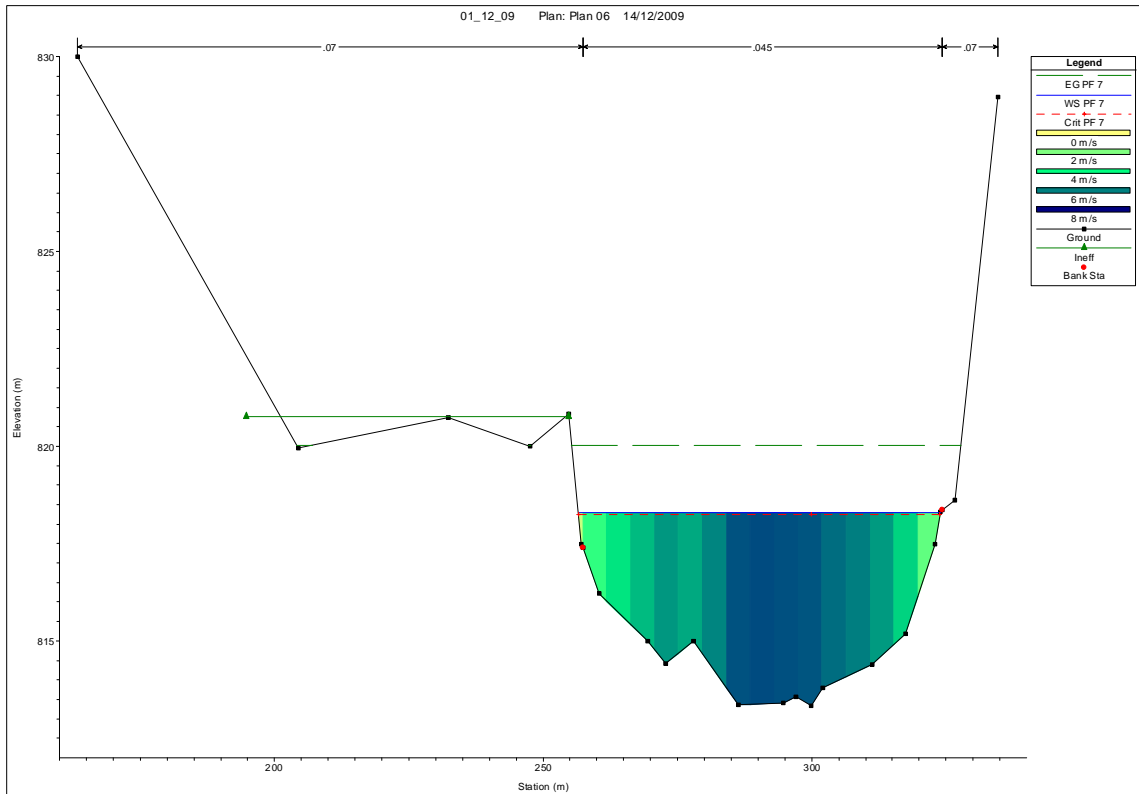
**Seção 32.1, Perfil 4.**



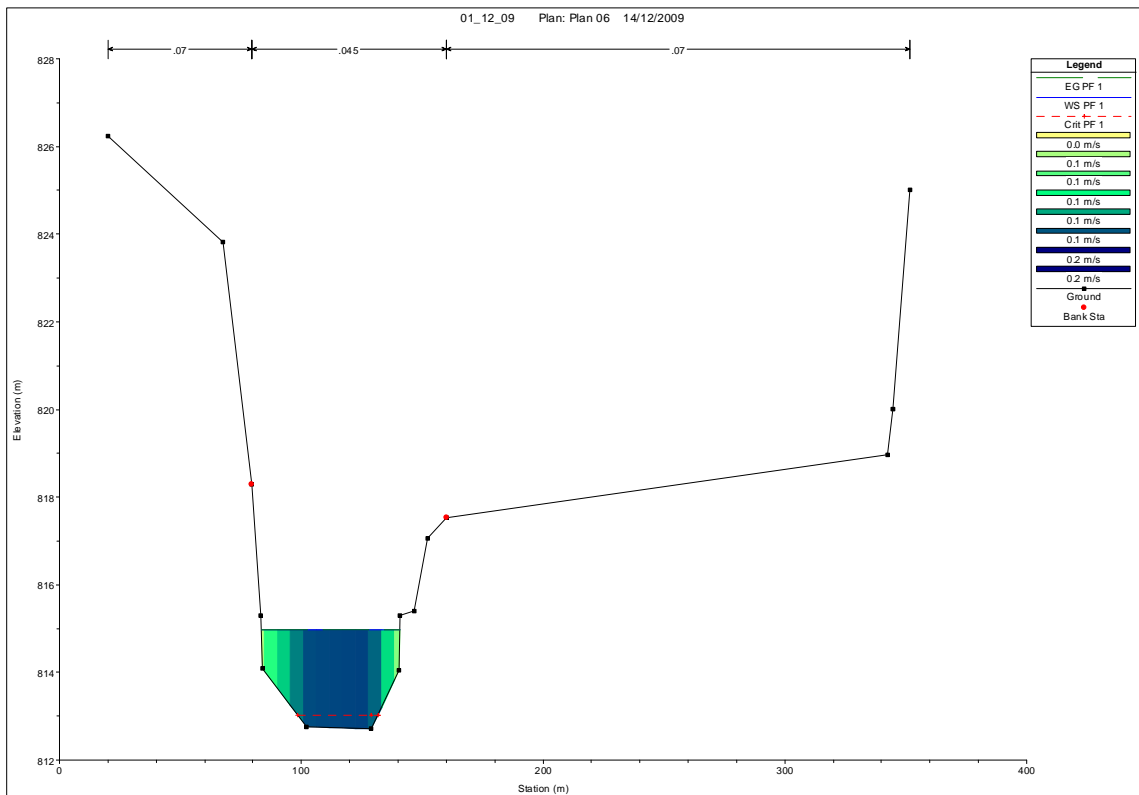
**Seção 32.1, Perfil 5.**



**Seção 32.1, Perfil 6.**

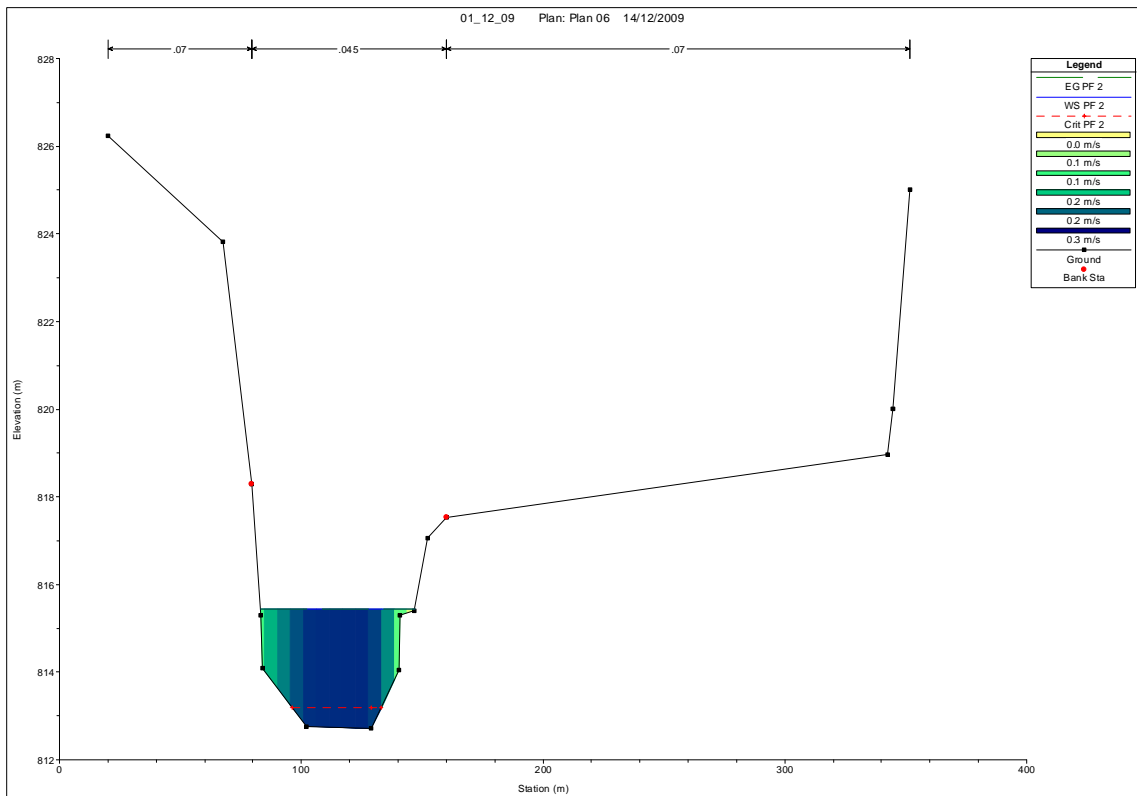


**Seção 32.1, Perfil 7.**

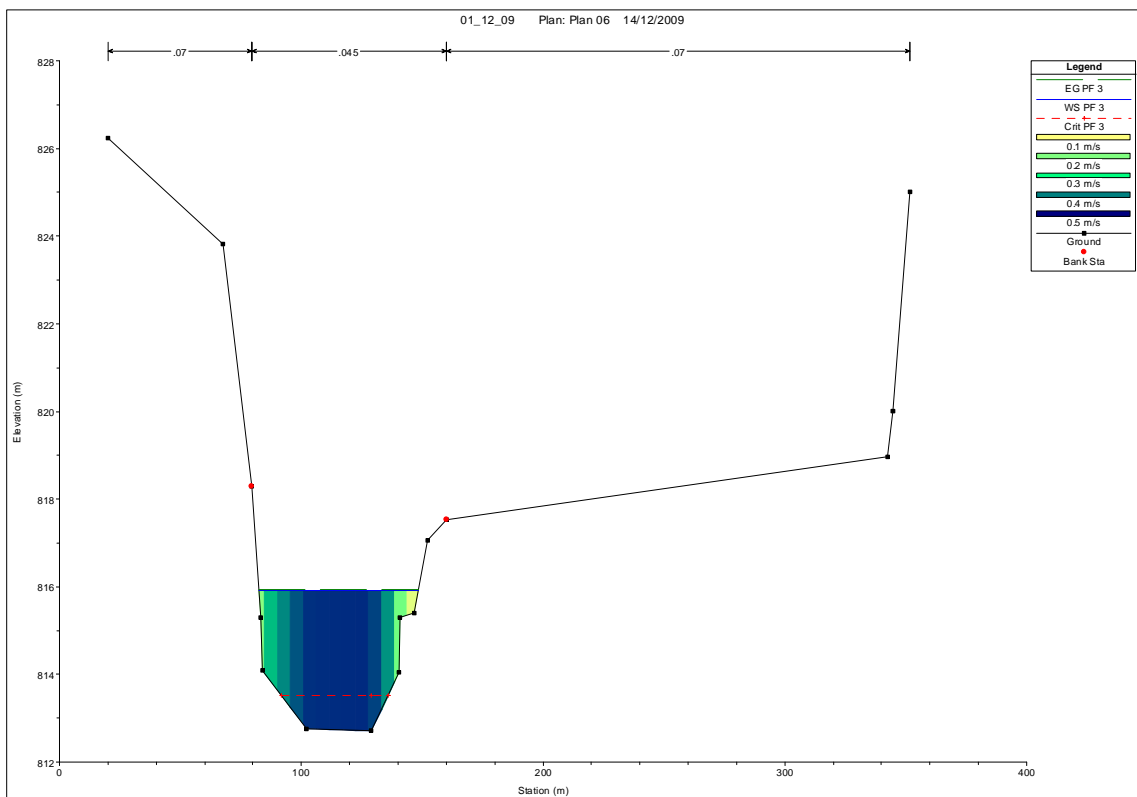


**Seção 33.4, Perfil 1.**

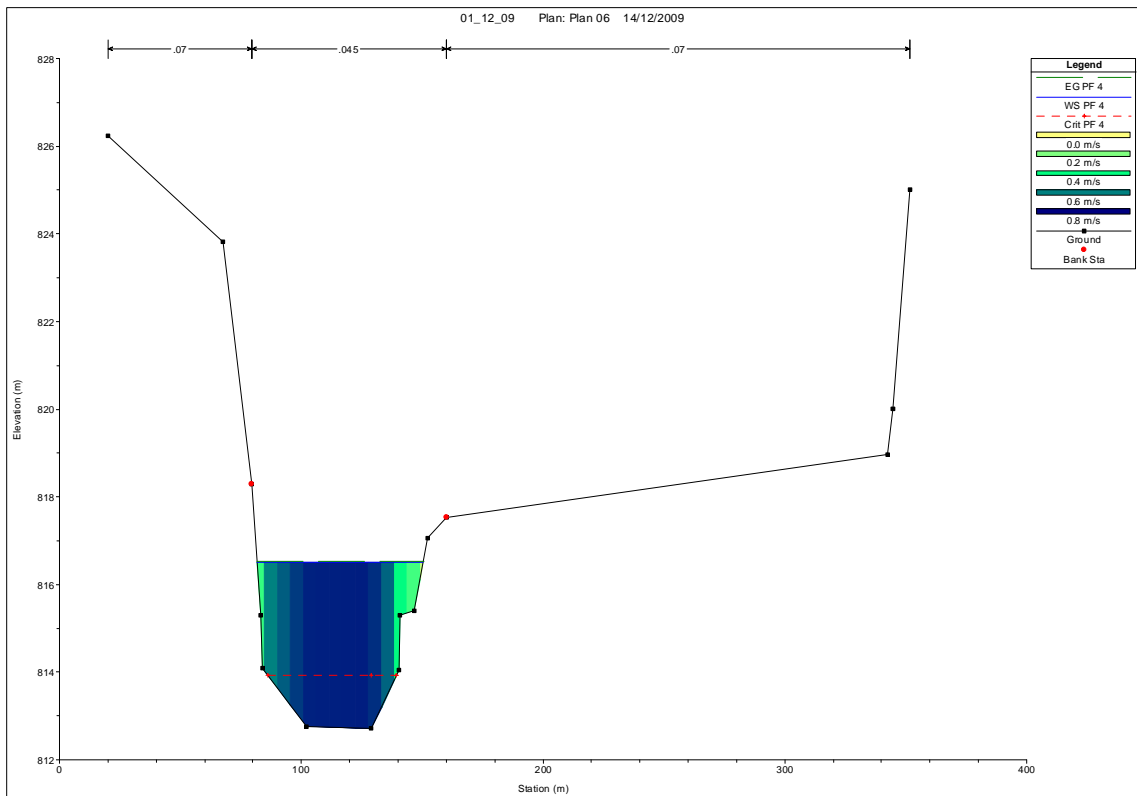




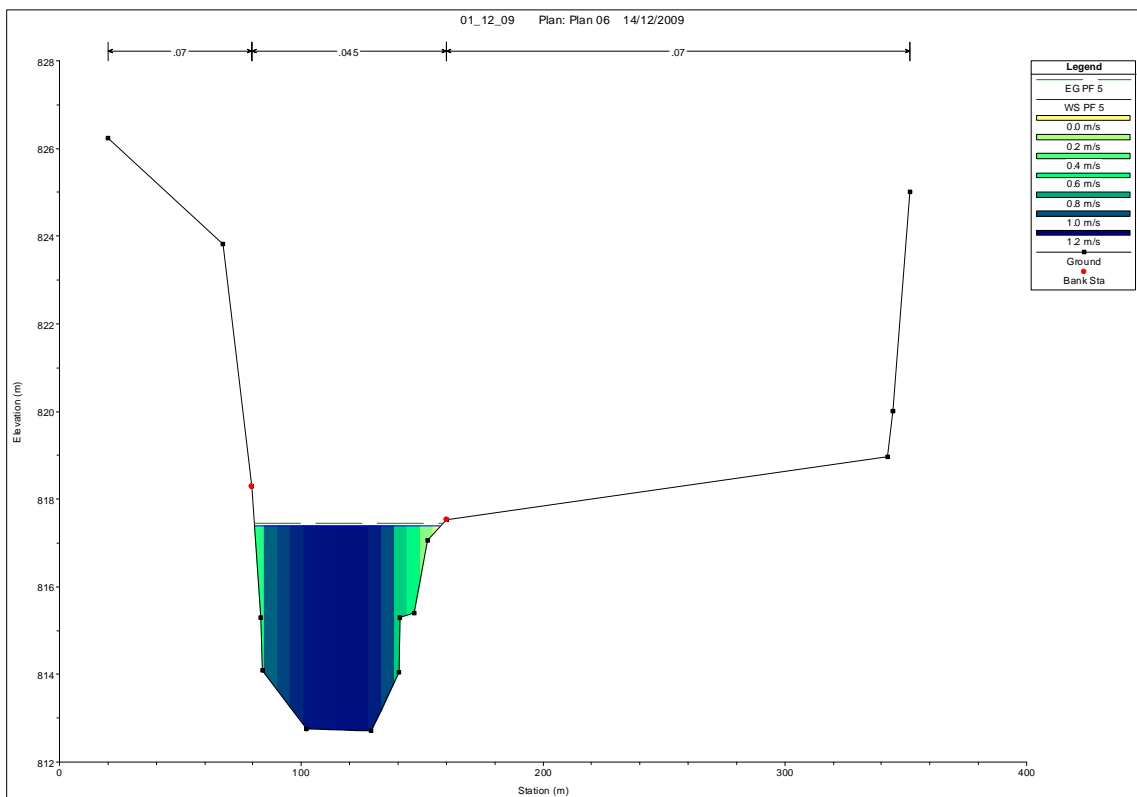
**Seção 33.4, Perfil 2.**



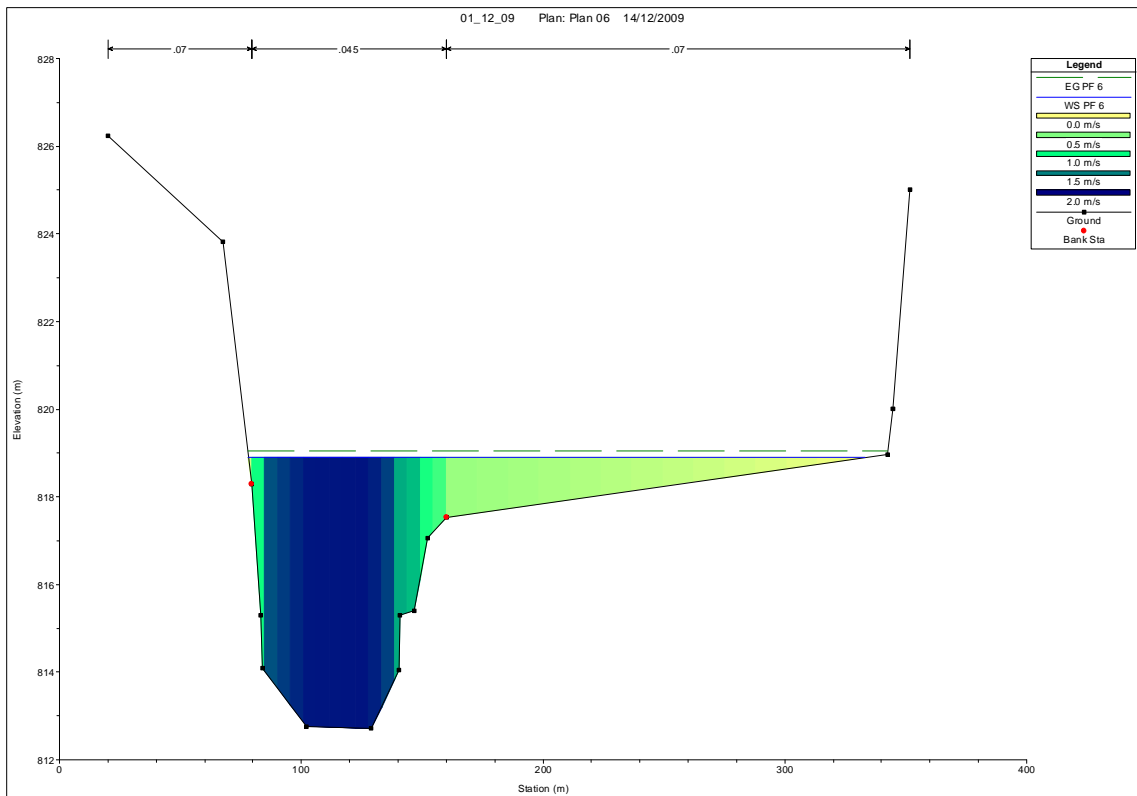
**Seção 33.4, Perfil 3.**



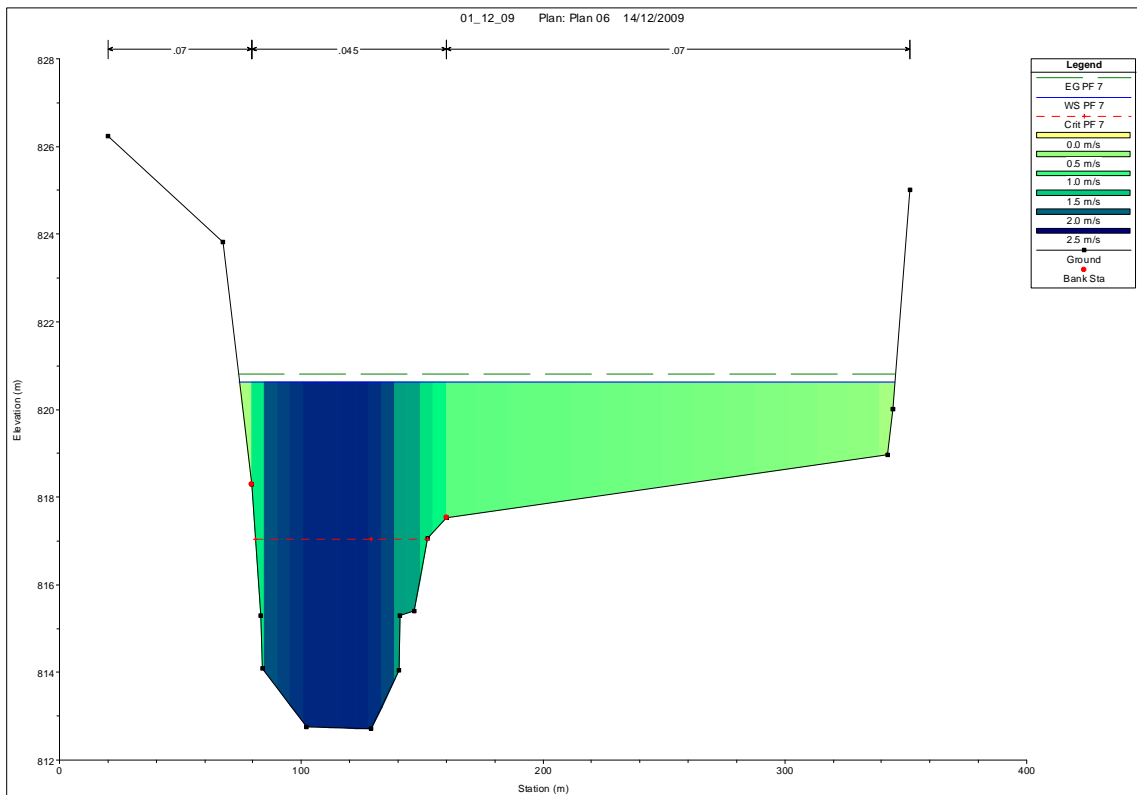
**Seção 33.4, Perfil 4.**



**Seção 33.4, Perfil 5.**

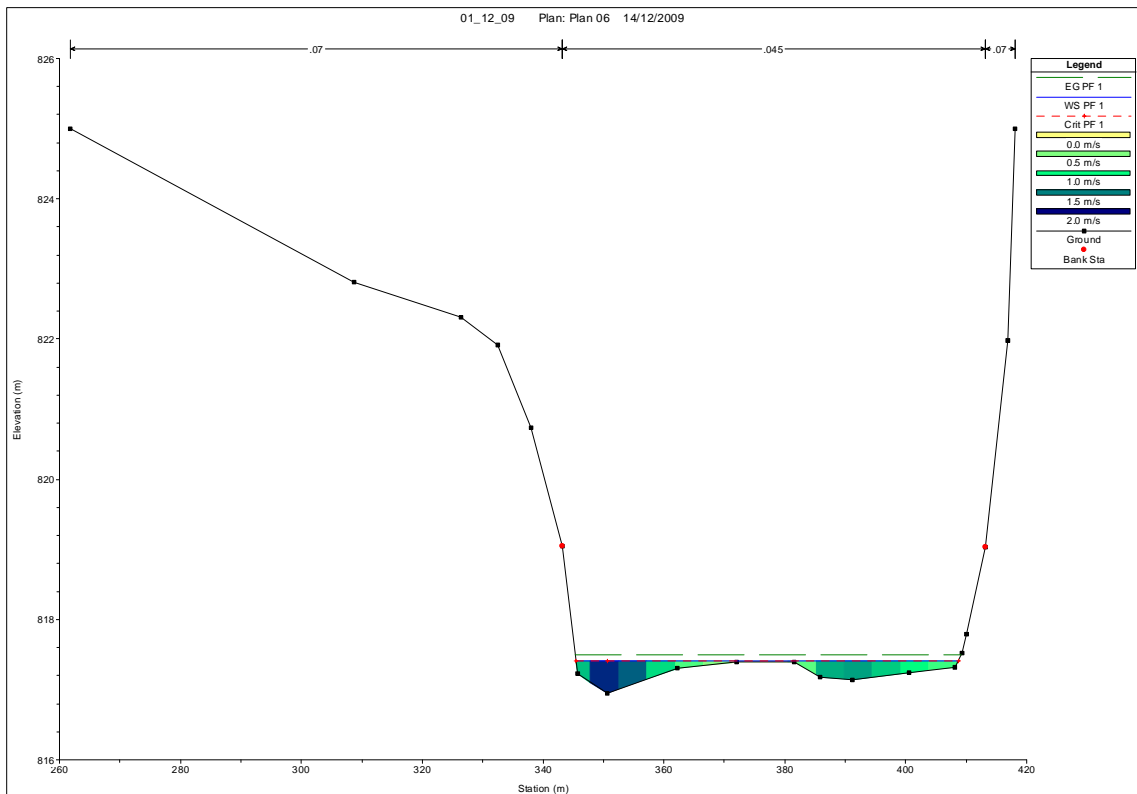


**Seção 33.4, Perfil 6.**

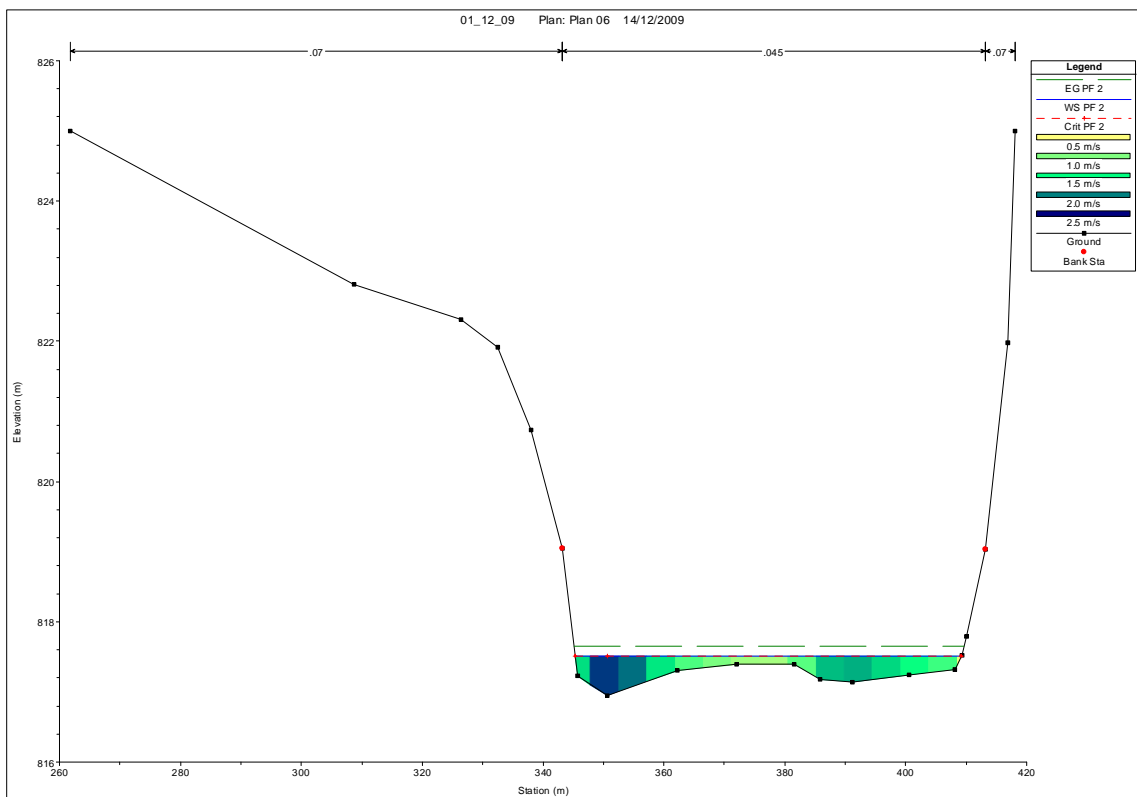


**Seção 33.4, Perfil 7.**

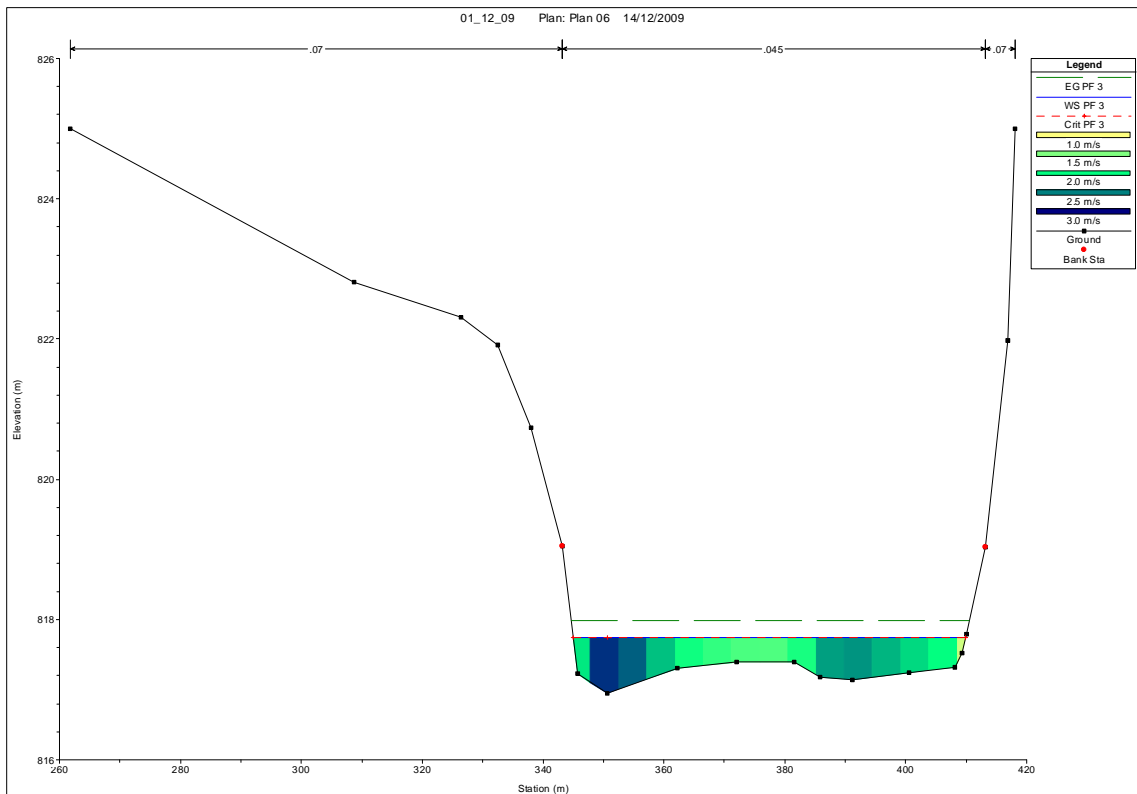




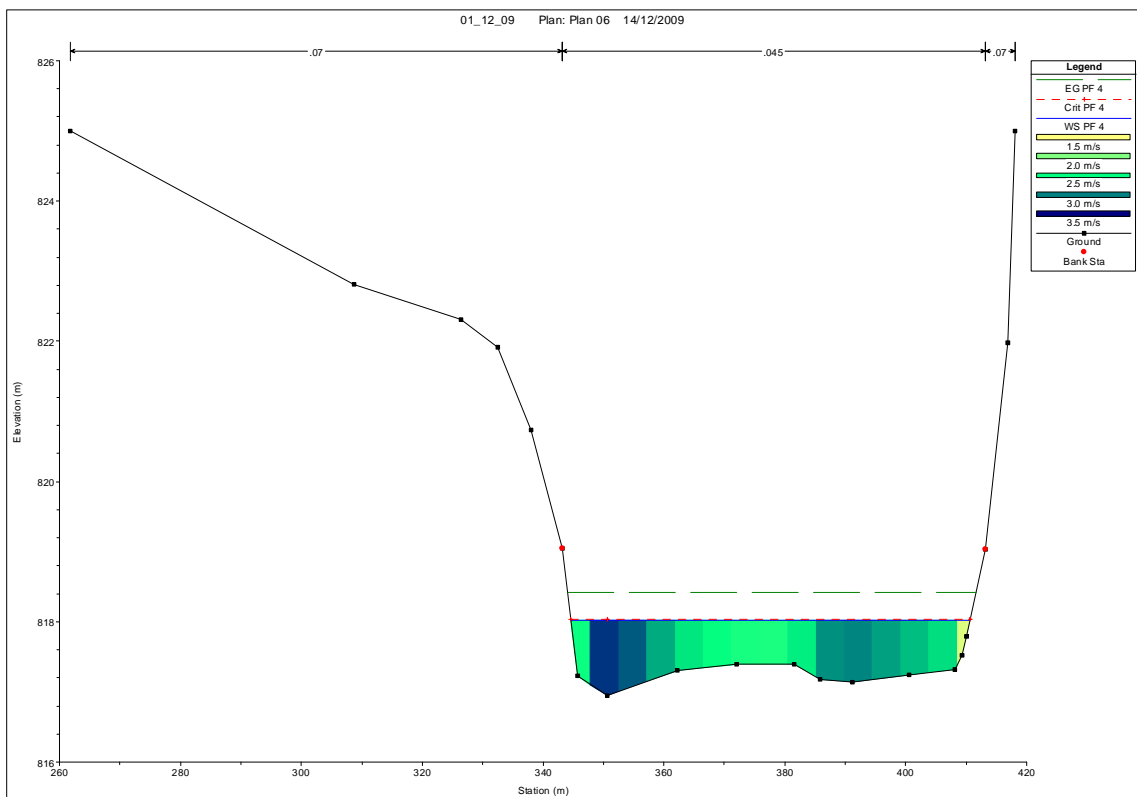
**Seção 35.3, Perfil 1.**



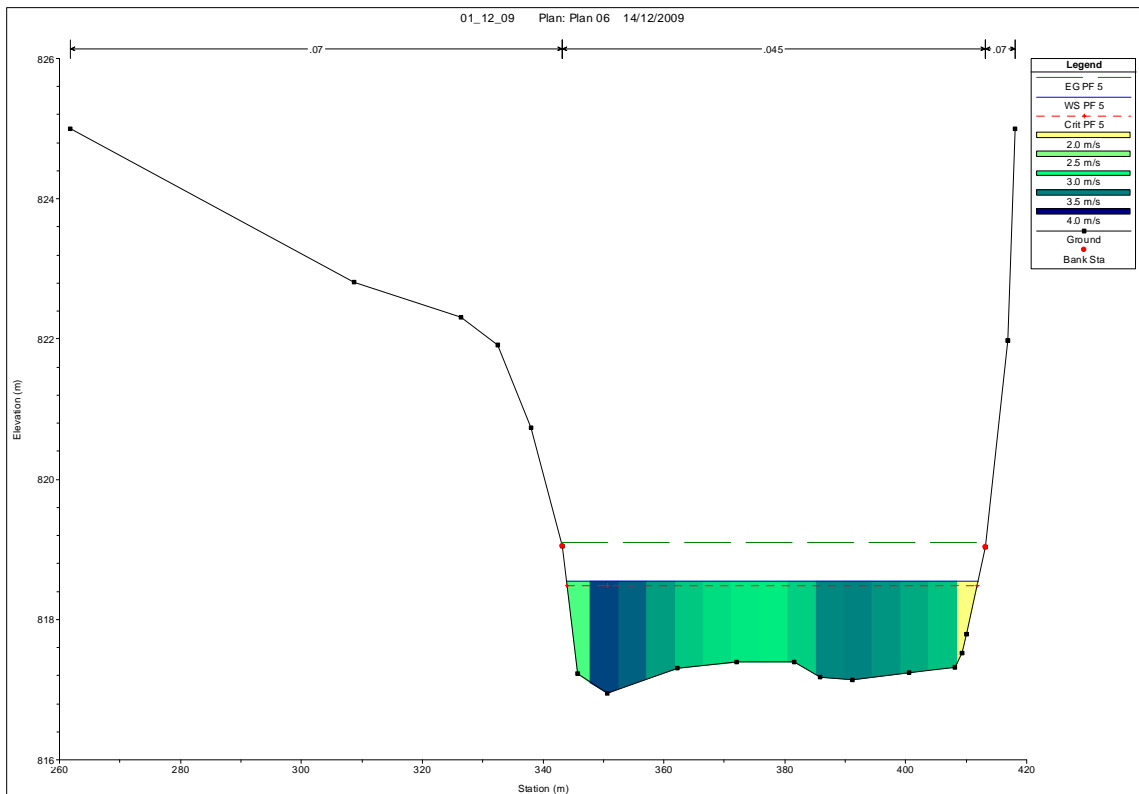
**Seção 35.3, Perfil 2.**



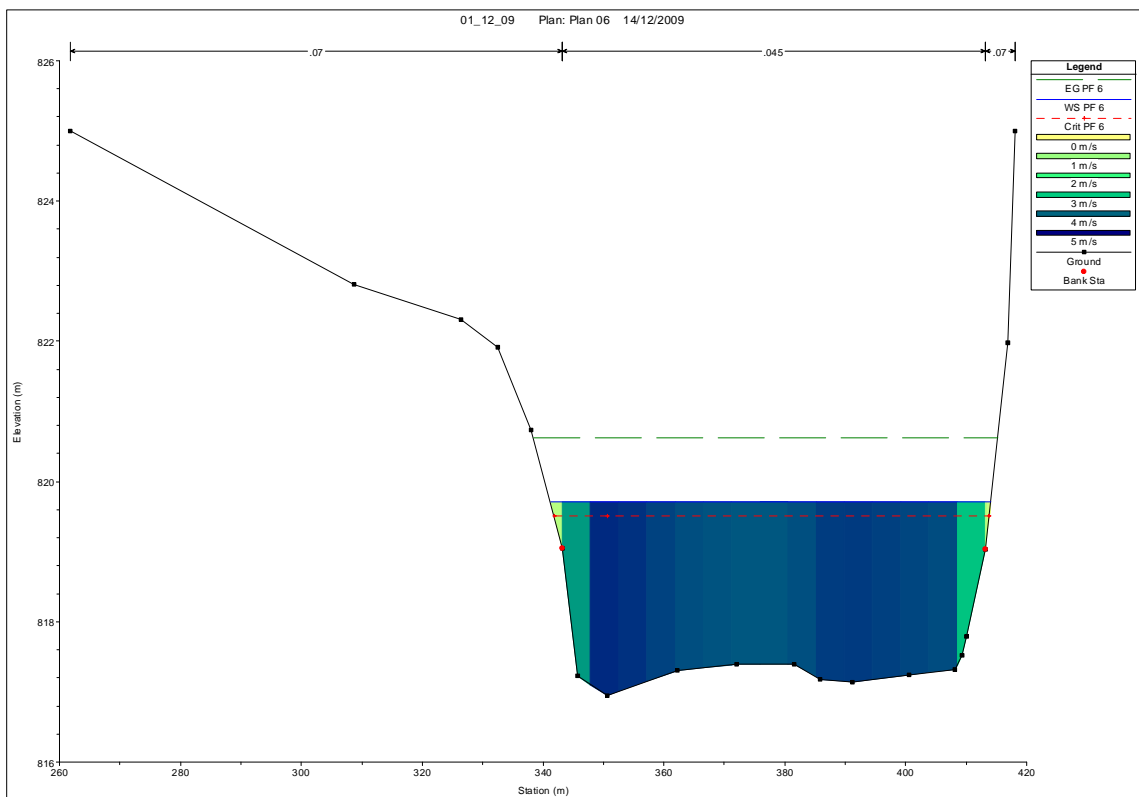
**Seção 35.3, Perfil 3.**



**Seção 35.3, Perfil 4.**

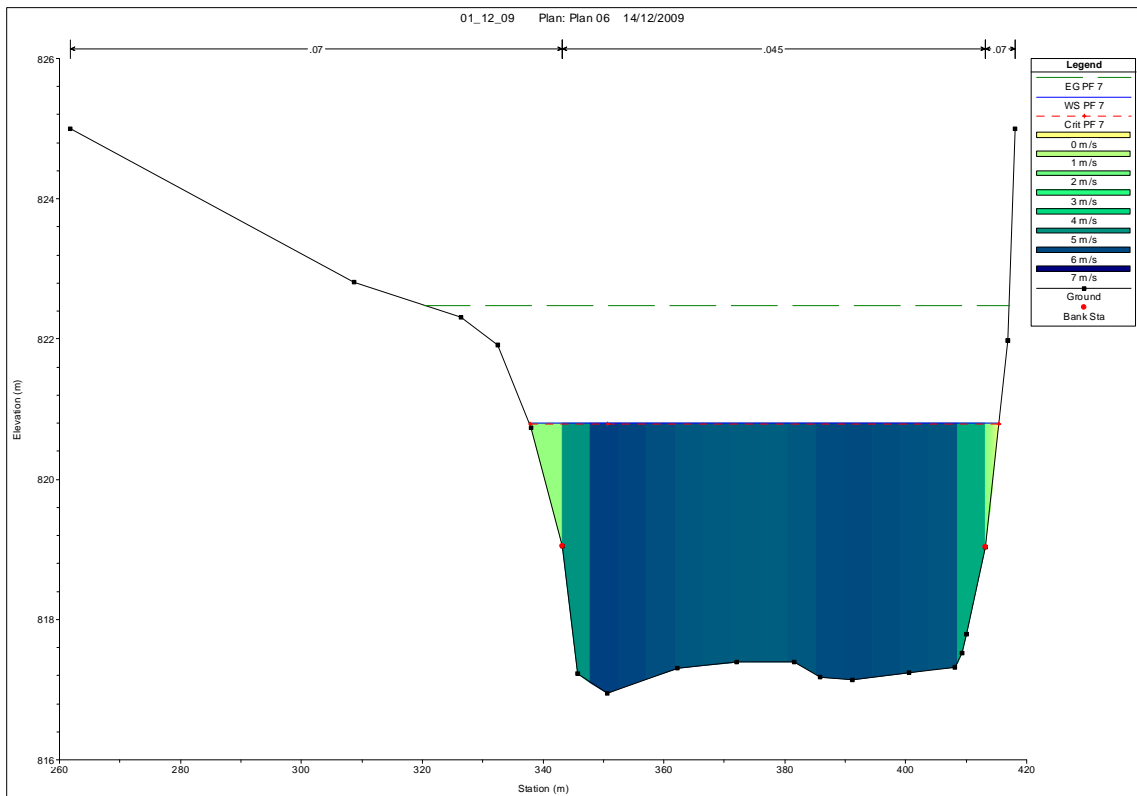


**Seção 35.3, Perfil 5.**



**Seção 35.3, Perfil 6.**





## APÊNDICE J – PLANILHA SÍNTESE DE RESULTADOS E LAUDOS DE QUALIDADE DA ÁGUA SUPERFICIAL

## 1ª CAMPANHA – 2009



## 2ª CAMPANHA – 2009

### 3ª CAMPANHA – 2011

## APÊNDICE K – RELATÓRIO FOTOGRÁFICO DAS COLETAS DE ÁGUAS SUPERFICIAIS





**Coleta superficial no ponto AA01**



**Aspecto visual no ponto AA01**



**Coleta superficial no ponto AA03**



**Análise de campo ponto AA07**



**Coleta superficial do ponto AA08**



**Coleta superficial do ponto AA09**



**Coleta superficial do ponto AA10**



**Coleta superficial no ponto AA11**



**Coleta superficial no ponto AA12**



**Análise de campo no ponto AA13**



**Coleta superficial no ponto AA14**



**Análise de campo no ponto AA15**





**Coleta superficial no ponto AA16**



**Coleta superficial no ponto AA17**



**Coleta superficial no ponto AA18**



**Coleta superficial no ponto AA19**



**Análise de campo no ponto AA21**



**Coleta superficial no ponto AA22**





**Coleta superficial no ponto AA23**



**Coleta superficial no ponto AA24**



**Coleta superficial no ponto AA25**



**Coleta superficial no ponto AA26**



**Coleta superficial no ponto AA27**



**Análise de campo no ponto AA28**





**Coleta superficial no ponto AA29**



**Coleta superficial no ponto AA30**



**Análise de campo no ponto AA31**



**Coleta de sedimento no ponto AA32**



**Coleta superficial no ponto AA33**



**Análise de campo no ponto AA34**





**Coleta superficial no ponto AA35**



**Coleta superficial no ponto AA36**



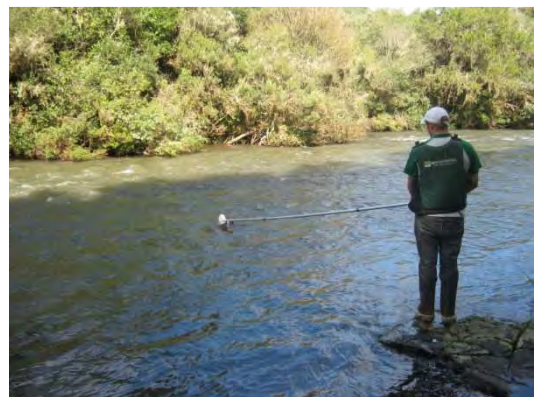
**Coleta superficial no ponto AA37**



**Análise de campo no ponto AA38**



**Coleta superficial no ponto AA39**



**Coleta superficial no ponto AA40**





**Coleta superficial no ponto AA41**



**Coleta superficial no ponto AA42**



**Coleta superficial no ponto AA43**



**Coleta superficial no ponto AA44**



**Coleta superficial no ponto AA45**



**Coleta superficial no ponto AA46**



Coleta superficial no ponto AA47



Coleta superficial no ponto AA48



Coleta superficial no ponto AA49



Coleta superficial no ponto AA50



Monitoramento da variação diária (Nictimeral)  
ponto AA03



Armazenamento e acondicionamento das amostras



## APÊNDICE L – LAUDOS DE QUALIDADE DA ÁGUA SUBTERRÂNEA



