



ESTACA	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
COTA DO TERRENO NATURAL(m)	496.69	494.94	494.20	495.73	496.81	497.46	498.17	498.84	499.27	499.37	499.90	500.96	501.92	502.27	502.86	503.13	503.60	503.96	504.16	504.59	504.96	505.20	505.76	506.00	506.26	506.04	506.52	507.31	508.11	508.60	509.03	509.14	509.28	509.39	510.04	510.38	510.63	510.89	511.28	511.69	512.31	513.07	513.65	513.94	513.97	512.79	511.91	511.04	511.12	510.77	510.33	509.84	509.36	508.82	508.10	507.59	507.08	506.58	505.99	505.38	504.93	504.43	503.56	502.74	501.95	501.25	500.25	499.89	499.11	500.05	500.45	500.54	500.87	501.17	501.40	501.51	501.64																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
COTA DA GERATRIZ INFERIOR DO TUBO(m)	496.79	494.02	493.26	494.88	495.93	496.61	497.29	497.96	498.29	498.46	498.76	499.92	501.05	501.41	501.78	502.25	502.72	503.06	503.36	503.67	503.99	504.31	504.67	505.05	505.16	505.26	505.64	506.44	507.23	507.75	508.14	508.23	508.32	508.51	509.16	509.46	509.72	510.02	510.40	510.82	511.43	512.12	512.79	513.07	513.94	512.49	511.91	511.04	510.23	509.79	509.34	508.90	508.46	507.95	507.23	506.63	505.99	505.55	505.01	504.47	503.99	503.51	502.87	502.16	501.46	500.76	500.05	499.39	498.67	497.95	497.23	496.51	495.79	495.07	494.35	493.63	492.91	492.19	491.47	490.75	490.03	489.31	488.59	487.87	487.15	486.43	485.71	484.99	484.27	483.55	482.83	482.11	481.39	480.67	479.95	479.23	478.51	477.79	477.07	476.35	475.63	474.91	474.19	473.47	472.75	472.03	471.31	470.59	469.87	469.15	468.43	467.71	466.99	466.27	465.55	464.83	464.11	463.39	462.67	461.95	461.23	460.51	459.79	459.07	458.35	457.63	456.91	456.19	455.47	454.75	454.03	453.31	452.59	451.87	451.15	450.43	449.71	448.99	448.27	447.55	446.83	446.11	445.39	444.67	443.95	443.23	442.51	441.79	441.07	440.35	439.63	438.91	438.19	437.47	436.75	436.03	435.31	434.59	433.87	433.15	432.43	431.71	430.99	430.27	429.55	428.83	428.11	427.39	426.67	425.95	425.23	424.51	423.79	423.07	422.35	421.63	420.91	420.19	419.47	418.75	418.03	417.31	416.59	415.87	415.15	414.43	413.71	412.99	412.27	411.55	410.83	410.11	409.39	408.67	407.95	407.23	406.51	405.79	405.07	404.35	403.63	402.91	402.19	401.47	400.75	400.03	399.31	398.59	397.87	397.15	396.43	395.71	394.99	394.27	393.55	392.83	392.11	391.39	390.67	389.95	389.23	388.51	387.79	387.07	386.35	385.63	384.91	384.19	383.47	382.75	382.03	381.31	380.59	379.87	379.15	378.43	377.71	376.99	376.27	375.55	374.83	374.11	373.39	372.67	371.95	371.23	370.51	369.79	369.07	368.35	367.63	366.91	366.19	365.47	364.75	364.03	363.31	362.59	361.87	361.15	360.43	359.71	358.99	358.27	357.55	356.83	356.11	355.39	354.67	353.95	353.23	352.51	351.79	351.07	350.35	349.63	348.91	348.19	347.47	346.75	346.03	345.31	344.59	343.87	343.15	342.43	341.71	340.99	340.27	339.55	338.83	338.11	337.39	336.67	335.95	335.23	334.51	333.79	333.07	332.35	331.63	330.91	330.19	329.47	328.75	328.03	327.31	326.59	325.87	325.15	324.43	323.71	322.99	322.27	321.55	320.83	320.11	319.39	318.67	317.95	317.23	316.51	315.79	315.07	314.35	313.63	312.91	312.19	311.47	310.75	310.03	309.31	308.59	307.87	307.15	306.43	305.71	304.99	304.27	303.55	302.83	302.11	301.39	300.67	299.95	299.23	298.51	297.79	297.07	296.35	295.63	294.91	294.19	293.47	292.75	292.03	291.31	290.59	289.87	289.15	288.43	287.71	286.99	286.27	285.55	284.83	284.11	283.39	282.67	281.95	281.23	280.51	279.79	279.07	278.35	277.63	276.91	276.19	275.47	274.75	274.03	273.31	272.59	271.87	271.15	270.43	269.71	268.99	268.27	267.55	266.83	266.11	265.39	264.67	263.95	263.23	262.51	261.79	261.07	260.35	259.63	258.91	258.19	257.47	256.75	256.03	255.31	254.59	253.87	253.15	252.43	251.71	250.99	250.27	249.55	248.83	248.11	247.39	246.67	245.95	245.23	244.51	243.79	243.07	242.35	241.63	240.91	240.19	239.47	238.75	238.03	237.31	236.59	235.87	235.15	234.43	233.71	232.99	232.27	231.55	230.83	230.11	229.39	228.67	227.95	227.23	226.51	225.79	225.07	224.35	223.63	222.91	222.19	221.47	220.75	220.03	219.31	218.59	217.87	217.15	216.43	215.71	214.99	214.27	213.55	212.83	212.11	211.39	210.67	209.95	209.23	208.51	207.79	207.07	206.35	205.63	204.91	204.19	203.47	202.75	202.03	201.31	200.59	199.87	199.15	198.43	197.71	196.99	196.27	195.55	194.83	194.11	193.39	192.67	191.95	191.23	190.51	189.79	189.07	188.35	187.63	186.91	186.19	185.47	184.75	184.03	183.31	182.59	181.87	181.15	180.43	179.71	178.99	178.27	177.55	176.83	176.11	175.39	174.67	173.95	173.23	172.51	171.79	171.07	170.35	169.63	168.91	168.19	167.47	166.75	166.03	165.31	164.59	163.87	163.15	162.43	161.71	160.99	160.27	159.55	158.83	158.11	157.39	156.67	155.95	155.23	154.51	153.79	153.07	152.35	151.63	150.91	150.19	149.47	148.75	148.03	147.31	146.59	145.87	145.15	144.43	143.71	142.99	142.27	141.55	140.83	140.11	139.39	138.67	137.95	137.23	136.51	135.79	135.07	134.35	133.63	132.91	132.19	131.47	130.75	130.03	129.31	128.59	127.87	127.15	126.43	125.71	124.99	124.27	123.55	122.83	122.11	121.39	120.67	119.95	119.23	118.51	117.79	117.07	116.35	115.63	114.91	114.19	113.47	112.75	112.03	111.31	110.59	109.87	109.15	108.43	107.71	106.99	106.27	105.55	104.83	104.11	103.39	102.67	101.95	101.23	100.51	99.79	99.07	98.35	97.63	96.91	96.19	95.47	94.75	94.03	93.31	92.59	91.87	91.15	90.43	89.71	88.99	88.27	87.55	86.83	86.11	85.39	84.67	83.95	83.23	82.51	81.79	81.07	80.35	79.63	78.91	78.19	77.47	76.75	76.03	75.31	74.59	73.87	73.15	72.43	71.71	70.99	70.27	69.55	68.83	68.11	67.39	66.67	65.95	65.23	64.51	63.79	63.07	62.35	61.63	60.91	60.19	59.47	58.75	58.03	57.31	56.59	55.87	55.15	54.43	53.71	52.99	52.27	51.55	50.83	50.11	49.39	48.67	47.95	47.23	46.51	45.79	45.07	44.35	43.63	42.91	42.19	41.47	40.75	40.03	39.31	38.59	37.87	37.15	36.43	35.71	34.99	34.27	33.55	32.83	32.11	31.39	30.67	29.95	29.23	28.51	27.79	27.07	26.35	25.63	24.91	24.19	23.47	22.75	22.03	21.31	20.59	19.87	19.15	18.43	17.71	16.99	16.27	15.55	14.83	14.11	13.39	12.67	11.95	11.23	10.51	9.79	9.07	8.35	7.63	6.91	6.19	5.47	4.75	4.03	3.31	2.59	1.87	1.15	0.43	-0.29	-0.99	-1.69	-2.39	-3.09	-3.79	-4.49	-5.19	-5.89	-6.59	-7.29	-7.99	-8.69	-9.39	-10.09	-10.79	-11.49	-12.19	-12.89	-13.59	-14.29	-14.99	-15.69	-16.39	-17.09	-17.79	-18.49	-19.19	-19.89	-20.59	-21.29	-21.99	-22.69	-23.39	-24.09	-24.79	-25.49	-26.19	-26.89	-27.59	-28.29	-28.99	-29.69	-30.39	-31.09	-31.79	-32.49	-33.19	-33.89	-34.59	-35.29	-35.99	-36.69	-37.39	-38.09	-38.79	-39.49	-40.19	-40.89	-41.59	-42.29	-42.99	-43.69	-44.39	-45.09	-45.79	-46.49	-47.19	-47.89	-48.59	-49.29	-49.99	-50.69	-51.39	-52.09	-52.79	-53.49	-54.19	-54.89	-55.59	-56.29	-56.99	-57.69	-58.39	-59.09	-59.79	-60.49	-61.19	-61.89	-62.59	-63.29	-63.99	-64.69	-65.39	-66.09	-66.79	-67.49	-68.19	-68.89	-69.59	-70.29	-70.99	-71.69	-72.39	-73.09	-73.79	-74.49	-75.19	-75.89	-76.59	-77.29	-77.99	-78.69	-79.39	-80.09	-80.79	-81.49	-82.19	-82.89	-83.59	-84.29	-84.99	-85.69	-86.39	-87.09	-87.79	-88.49	-89.19	-89.89	-90.59	-91.29	-91.99	-92.69	-93.39	-94.09	-94.79	-95.49	-96.19	-96.89	-97.59	-98.29	-98.99	-99.69	-100.39	-101.09	-101.79	-102.49	-103.19	-103.89	-104.59	-105.29	-105.99	-106.69	-107.39	-108.09	-108.79	-109.49	-110.19	-110.89	-111.59	-112.29	-112.99	-113.69	-114.39	-115.09	-115.79	-116.49	-117.19	-117.89	-118.59	-119.29	-119.99	-120.69	-121.39	-122.09	-122.79	-123.49	-124.19	-124.89	-125.59	-126.29	-126.99	-127.69	-128.39	-129.09	-129.79	-130.49	-131.19	-131.89	-132.59	-133.29	-133.99	-134.69	-135.39	-136.09	-136.79	-137.49	-138.19	-138.89	-139.59	-140.29	-140.99	-141.69	-142.39	-143.09	-143.79	-144.49	-145.19	-145.89	-146.59	-147.29	-147.99	-148.69	-149.39	-150.09	-150.79	-151.49	-152.19	-152.89	-153.59	-154.29	-154.99	-155.69	-156.39	-157.09	-157.79	-158.49	-159.19	-159.89	-160.59	-161.29	-161.99	-162.69	-163.39	-164.09	-164.79	-165.49	-166.19