FERROVIA: TRANORDESTINA

TRECHO: PARNAMIRIM - ARARIPINA (PE)

LOTE: 3

PLANILHA DE VOLUMES (BRÜCKNER)

TRIÂNGULO DE REVERSÃO - RAMO A (est. -25+13,13 à 47+00)

Estaca	Área de Corte Geométrico Parcial (m²)				Volume de Corte Geométrico Parcial (m³)				Área de Aterro Geométrico Parcial (m²)	Volume de Aterro Geométrico Parcial (m³)	Volume de Corte Geométrico Acumulado (m³)				Volume de Corte Equivalente Acumulado (m³)				Volume de Aterro Geométrico Acumulado (m³)	Volume de Compensação Lateral Geométrico Parcial (m³)				Ordenada Bruckner
	1ª Cat.	2ª Cat.	3ª Cat.	Total	1ª Cat.	2ª Cat.	3ª Cat.	Total			1ª Cat.	2ª Cat.	3ª Cat.	Total	1ª Cat.	2ª Cat.	3ª Cat.	Total		1ª Cat.	2ª Cat.	3ª Cat.	Total	
-24	2,564			2,564					5,981															
-23	9,412			9,412	119,76			119,76		59,81	119,76			119,76	95,81			95,81	59,81	59,81			59,81	36,00
-22	23,713			23,713	331,25			331,25			451,01			451,01	360,81			360,81						301,00
-21	30,869			30,869	545,82			545,82			996,83			996,83	797,46			797,46						737,66
-20	17,359			17,359	482,28			482,28			1.479,11			1.479,11	1.183,29			1.183,29						1.123,48
-19	16,414			16,414	337,73			337,73			1.816,84			1.816,84	1.453,47			1.453,47						1.393,66
-18	4,008			4,008	204,22			204,22	0,929	9,29	2.021,06			2.021,06	1.616,85			1.616,85	9,29	9,29			9,29	1.547,75
-17	0,468			0,468	44,76			44,76	15,445	163,74	2.065,82			2.065,82	1.652,66			1.652,66	173,03	35,81			35,81	1.419,82
-16					4,68			4,68	34,274	497,19	2.070,50			2.070,50	1.656,40			1.656,40	670,22	3,74			3,74	926,37
-15									62,813	970,87									1.641,09					-44,50
-14									79,928	1.427,41									3.068,50					-1.471,91
-13									82,013	1.619,41									4.687,91					-3.091,32
-12									93,076	1.750,89									6.438,80					-4.842,21
-11									89,922	1.829,98									8.268,78					-6.672,19
-10									97,377	1.872,99									10.141,77					-8.545,18
-9									108,282	2.056,59									12.198,36					-10.601,77
-8									133,407	2.416,89									14.615,25					-13.018,66
-7									150,410	2.838,17									17.453,42					-15.856,83
-6									169,724	3.201,34									20.654,76					-19.058,17
-5									170,851	3.405,75									24.060,51					-22.463,92
-4									179,248	3.500,99									27.561,50					-25.964,91
-3									158,911	3.381,59									30.943,09					-29.346,50
-2									171,592	3.305,03									34.248,12					-32.651,53
-1									197,071	3.686,63									37.934,75					-36.338,16
0									159,609	3.566,80									41.501,55					-39.904,96
1									102,001	2.616,10									44.117,65					-42.521,06
2									64,195	1.661,96									45.779,61					-44.183,02
3									35,229	994,24									46.773,85					-45.177,26
4									17,262	524,91									47.298,76					-45.702,17
5	2,717			2,717	27,17			27,17	4,086	213,48	27,17			27,17	21,74			21,74	47.512,24	21,74			21,74	-45.893,91
6	13,369	1,169	0,724	15,262	160,86	11,69	7,24	179,79		40,86	188,03	11,69	7,24	206,96	150,42	10,17	8,52	169,11	47.553,10	40,86			40,86	-45.787,40
7	26,319	2,421	2,446	31,186	396,88	35,90	31,70	464,48			584,91	47,59	38,94	671,44	467,93	41,38	45,81	555,12						-45.401,38
8	18,653	4,054	3,864	26,571	449,72	64,75	63,10	577,57			1.034,63	112,34	102,04	1.249,01	827,70	97,69	120,05	1.045,44						-44.911,06
9	21,332	4,738	11,772	37,842	399,85	87,92	156,36	644,13			1.434,48	200,26	258,40	1.893,14	1.147,58	174,14	304,00	1.625,72						-44.330,77
10	18,356	4,341	23,007	45,704	396,88	90,79	347,79	835,46			1.831,36	291,05	606,19	2.728,60	1.465,09	253,09	713,16	2.431,34						-43.525,15
11	20,377	4,811	27,034	52,222	387,33	91,52	500,41	979,26			2.218,69	382,57	1.106,60	3.707,86	1.774,95	332,67	1.301,88	3.409,50						-42.546,99
12	16,920	4,092	27,810	48,822	372,97	89,03	548,44	1.010,44			2.591,66	471,60	1.655,04	4.718,30	2.073,33	410,09	1.947,11	4.430,53						-41.525,97
13	14,523	3,408	18,393	36,324	314,43	75,00	462,03	851,46			2.906,09	546,60	2.117,07	5.569,76	2.324,87	475,30	2.490,67	5.290,84						-40.665,64
14	18,675	4,438	25,596	48,709	331,98	78,46	439,89	850,33			3.238,07	625,06	2.556,96	6.420,09	2.590,46	543,53	3.008,19	6.142,18						-39.814,31
15	14,878	3,595	22,001	40,474	335,53	80,33	475,97	891,83			3.573,60	705,39	3.032,93	7.311,92	2.858,88	613,38	3.568,15	7.040,41						-38.916,07
16	16,409	3,775	11,138	31,322	312,87	73,70	331,39	717,96			3.886,47	779,09	3.364,32	8.029,88	3.109,18	677,47	3.958,02	7.744,67						-38.211,82
17	4,320	1,154	1,381	6,855	207,29	49,29	125,19	381,77			4.093,76	828,38	3.489,51	8.411,65	3.275,01	720,33	4.105,31	8.100,65						-37.855,84
18	1,576	0,073		1,649	58,96	12,27	13,81	85,04			4.152,72	840,65	3.503,32	8.496,69	3.322,18	731,00	4.121,55	8.174,73						-37.781,76
19	0,026			0,026	16,02	0,73		16,75	7,028	70,28	4.168,74	841,38		5.010,12	3.334,99	731,63		4.066,62	70,28	12,82	0,63		13,45	-37.838,59
20					0,26			0,26	18,873	259,01	4.169,00			4.169,00	3.335,20			3.335,20	329,29	0,21			0,21	-38.097,39
21									46,833	657,06									986,35					-38.754,45

FERROVIA: TRANORDESTINA

TRECHO: PARNAMIRIM - ARARIPINA (PE)

LOTE: 3

PLANILHA DE VOLUMES (BRÜCKNER)

TRIÂNGULO DE REVERSÃO - RAMO A (est. -25+13,13 à 47+00)

Estaca	Área de Corte Geométrico Parcial (m²)				Volume de Corte Geométrico Parcial (m³)				Área de Aterro Geométrico Parcial (m²)	Volume de Aterro Geométrico Parcial (m³)	Volume de Corte Geométrico Acumulado (m³)				Volume de Corte Equivalente Acumulado (m³)				Volume de Aterro Geométrico Acumulado (m³)	Volume de Compensação Lateral Geométrico Parcial (m³)				Ordenada Bruckner
	1ª Cat.	2ª Cat.	3ª Cat.	Total	1ª Cat.	2ª Cat.	3ª Cat.	Total			1ª Cat.	2ª Cat.	3ª Cat.	Total	1ª Cat.	2ª Cat.	3ª Cat.	Total		1ª Cat.	2ª Cat.	3ª Cat.	Total	
22									54,179	1.010,12									1.996,47					-39.764,57
23									44,068	982,47									2.978,94					-40.747,04
24									32,204	762,72									3.741,66					-41.509,76
25	0,134			0,134	1,34			1,34	18,411	506,15	1,34			1,34	1,07			1,07	4.247,81	1,07			1,07	-42.014,84
26	2,190			2,190	23,24			23,24	5,364	237,75	24,58			24,58	19,66			19,66	4.485,56	18,59			18,59	-42.234,00
27	4,227	0,741	2,603	7,571	64,17	7,41	26,03	97,61		53,64	88,75	7,41	26,03	122,19	71,00	6,44	30,62	108,06	4.539,20	51,34	2,30		53,64	-42.199,24
28	8,394	1,995	0,314	10,703	126,21	27,36	29,17	182,74			214,96	34,77	55,20	304,93	171,97	30,23	64,94	267,14						-42.040,16
29	9,223	2,202	2,369	13,794	176,17	41,97	26,83	244,97			391,13	76,74	82,03	549,90	312,90	66,73	96,51	476,14						-41.831,16
30	9,476	2,327	10,847	22,650	186,99	45,29	132,16	364,44			578,12	122,03	214,19	914,34	462,50	106,11	251,99	820,60						-41.486,70
31	6,648	1,775	21,877	30,300	161,24	41,02	327,24	529,50			739,36	163,05	541,43	1.443,84	591,49	141,78	636,98	1.370,25						-40.937,05
32	14,452	3,532	24,138	42,122	211,00	53,07	460,15	724,22			950,36	216,12	1.001,58	2.168,06	760,29	187,93	1.178,33	2.126,55						-40.180,75
33	13,388	3,401	35,877	52,666	278,40	69,33	600,15	947,88			1.228,76	285,45	1.601,73	3.115,94	983,01	248,22	1.884,39	3.115,62						-39.191,68
34	29,254	6,867	43,598	79,719	426,42	102,68	794,75	1.323,85			1.655,18	388,13	2.396,48	4.439,79	1.324,14	337,50	2.819,39	4.481,03						-37.826,26
35	23,821	5,610	71,717	101,148	530,75	124,77	1.153,15	1.808,67			2.185,93	512,90	3.549,63	6.248,46	1.748,74	446,00	4.176,04	6.370,78						-35.936,52
36	27,174	6,656	87,797	121,627	509,95	122,66	1.595,14	2.227,75			2.695,88	635,56	5.144,77	8.476,21	2.156,70	552,66	6.052,67	8.762,03						-33.545,26
37	32,588	8,152	107,807	148,547	597,62	148,08	1.956,04	2.701,74			3.293,50	783,64	7.100,81	11.177,95	2.634,80	681,43	8.353,89	11.670,12						-30.637,18
38	34,789	8,591	109,096	152,476	673,77	167,43	2.169,03	3.010,23			3.967,27	951,07	9.269,84	14.188,18	3.173,82	827,02	10.905,69	14.906,53						-27.400,77
39	43,935	10,643	96,663	151,241	787,24	192,34	2.057,59	3.037,17			4.754,51	1.143,41	11.327,43	17.225,35	3.803,61	994,27	13.326,39	18.124,27						-24.183,03
40	18,670	4,790	70,920	94,380	626,05	154,33	1.675,83	2.456,21			5.380,56	1.297,74	13.003,26	19.681,56	4.304,45	1.128,47	15.297,95	20.730,87						-21.576,43
41	15,729	4,062	63,084	82,875	343,99	88,52	1.340,04	1.772,55			5.724,55	1.386,26	14.343,30	21.454,11	4.579,64	1.205,44	16.874,47	22.659,55						-19.647,75
42	12,674	3,338	58,481	74,493	284,03	74,00	1.215,65	1.573,68			6.008,58	1.460,26	15.558,95	23.027,79	4.806,86	1.269,79	18.304,65	24.381,30						-17.926,00
43	16,958	4,294	53,048	74,300	296,32	76,32	1.115,29	1.487,93			6.304,90	1.536,58	16.674,24	24.515,72	5.043,92	1.336,16	19.616,75	25.996,83						-16.310,47
44	15,421	3,887	48,936	68,244	323,79	81,81	1.019,84	1.425,44			6.628,69	1.618,39	17.694,08	25.941,16	5.302,95	1.407,30	20.816,56	27.526,81						-14.780,49
45	16,995	4,267	48,934	70,196	324,16	81,54	978,70	1.384,40			6.952,85	1.699,93	18.672,78	27.325,56	5.562,28	1.478,20	21.967,98	29.008,46						-13.298,85
46	15,320	3,693	21,865	40,878	323,15	79,60	707,99	1.110,74			7.276,00	1.779,53	19.380,77	28.436,30	5.820,80	1.547,42	22.800,91	30.169,13						-12.138,18
47	5,051	1,262	11,153	17,466	203,71	49,55	330,18	583,44			7.479,71	1.829,08	19.710,95	29.019,74	5.983,77	1.590,50	23.189,35	30.763,62						-11.543,68
TOTAL					13.719,21	2.670,46	23.214,27	39.603,94		52.152,11										255,28	2,93		258,21	