

Anexo A. Técnicas de exploración

Se describen a continuación las técnicas de exploración empleadas en los sondeos realizados por TGC Geotecnia en la colonia Lomas de San Lorenzo (TGC, 2007):

Sondeo de cono eléctrico. Consiste en hincar un cono a presión con una velocidad controlada, con la finalidad de determinar la variación de resistencia que opone el subsuelo a la penetración de punta, q_c , la interpretación de este parámetro permite definir con precisión cambios en las condiciones estratigráficas y estimar la cohesión y el módulo de deformación volumétrica del suelo, haciendo uso de correlaciones empíricas.

Sondeo de penetración estándar. Los tramos en los que el cono no entró se complementaron con la prueba de penetración estándar, que consiste en hincar un tubo partido de cm de longitud, penetrómetro, mediante los impactos de un martinete cuya masa es de 64 (kg) dejándola caer desde 75 (cm) de altura.

Se hacen cuatro avances de 15 (cm) para el hincado del penetrómetro, contando en cada uno el número de golpes necesarios; la resistencia a la penetración estándar se define como el número de golpes, N, necesarios para penetrar los 30 (cm) intermedios, de 15 a 45 (cm). Los golpes en el primer tramo se desprecian debido a la alteración inducida por la perforación, mientras que el último sirve para muestrear una longitud ligeramente mayor y para detallar la estratigrafía del sitio.

Muestreo con tubo TGC. Sirve para obtener los parámetros de resistencia y compresibilidad del suelo para lo que se necesitan extraer muestras inalteradas de buena calidad, haciendo uso de muestreadores tubulares de pared delgada hincados a presión y velocidad constante.

Muestreo con barril doble giratorio. Para el muestreo del basalto se utilizó el barril doble giratorio, provisto de una broca de diamante en su extremo inferior. El barril muestreador se hace girar mediante una máquina rotatoria, la cual transmite una fuerza de empuje y un movimiento rotatorio a través de una columna de barras de perforación huecas, por cuyo interior circula agua a presión que enfría la corona de corte y extrae el material cortado a la superficie de terreno. Al girar, la corona cortante labra una muestra que penetra en el tubo interior a medida que avanza el barril muestreador. Al extraer el muestreador después de haber perforado una longitud igual a la del barril interior, una trampa interna cónica sujeta a la columna de roca labrada para asegurar su extracción.

Longitud	Latitud	Frecuencia (1/s)	Periodo Dominante [1/Frecuencia] (s)	Punto
-99.0671944	19.3203056	0.38	2.65	A1
-99.0666111	19.3205833	0.51	1.95	A2
-99.0665556	19.3203889	0.64	1.57	A3
-99.0665556	19.3203056	0.53	1.89	A4
-99.0665556	19.3200833	0.59	1.70	A5
-99.0657222	19.3192778	1.71	0.58	A6
-99.0655833	19.3191667	1.30	0.77	A7
-99.0655833	19.3188611	1.95	0.51	A8
-99.0654444	19.3188333	1.95	0.51	A9
-99.0650833	19.3186944	2.12	0.47	A10
-99.0651111	19.3185	1.64	0.61	A11
-99.0655833	19.31775	4.57	0.22	B1
-99.0658889	19.3179167	4.74	0.21	B2
-99.0658889	19.3185278	3.32	0.30	B3
-99.0661111	19.3188056	2.25	0.44	B4
-99.0662889	19.3190444	2.78	0.36	B5
-99.0665667	19.319325	1.40	0.72	B6
-99.0668472	19.3195028	0.66	1.51	B7
-99.0673194	19.3195806	0.42	2.41	B8
-99.0671556	19.319675	0.50	2.00	B9
-99.0672222	19.3198611	0.61	1.64	B10
-99.0672778	19.3201944	0.49	2.05	B11
-99.0680861	19.3206389	0.61	1.64	B12
-99.0681111	19.3200278	0.64	1.57	C1
-99.0676667	19.3196944	0.64	1.57	C2
-99.0676944	19.3193333	1.05	0.95	C3

Valores y localización de los puntos analizados. Anexo B

-99.0675556	19.3190833	1.09	0.91	C4
-99.0669444	19.3186667	2.70	0.37	C5
-99.067	19.3185556	2.66	0.38	C6
-99.0680139	19.3177417	2.20	0.45	C7
-99.0679389	19.3162389	1.64	0.61	C8
-99.0679917	19.3153083	1.46	0.68	C9
-99.06785	19.3191361	0.49	2.05	G*2
-99.0687972	19.3196028	0.88	1.14	G*3
-99.0708722	19.3196389	0.64	1.57	E3
-99.0714333	19.3183194	0.71	1.41	E4
-99.0713889	19.3169306	0.59	1.71	E5
-99.0712	19.3157361	0.56	1.78	E6
-99.0684861	19.32075	0.59	1.71	D2
-99.0682972	19.3194583	0.71	1.41	D3
-99.0687167	19.3179167	3.05	0.33	D4
-99.0698389	19.3166167	0.51	1.95	D5
-99.0692889	19.3160111	0.59	1.71	D6
-99.0647722	19.3196361	2.39	0.42	F2
-99.0649944	19.3189944	1.39	0.72	F3
-99.0651139	19.3186222	1.20	0.83	F4
-99.0656306	19.3175667	1.44	0.69	F5
-99.0657889	19.3171667	1.05	0.95	F6
-99.066125	19.3164333	2.78	0.36	F7
-99.0648917	19.3203222	2.03	0.49	G1
-99.0651694	19.3196139	1.07	0.93	G2
-99.065375	19.3191944	2.69	0.37	G3
-99.0653972	19.3189639	1.86	0.54	G4

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-99.0654778	19.3187222	1.64	0.61	G5
-99.0655694	19.3185389	1.46	0.68	G6
-99.0659278	19.3177361	4.69	0.21	G7
-99.0662056	19.3170861	7.23	0.14	G8
-99.0667972	19.3157167	3.78	0.26	G9
-99.0656722	19.3191278	5.05	0.20	H2
-99.0656944	19.3189444	6.27	0.16	H3
-99.0657639	19.3187806	2.10	0.48	H4
-99.0661833	19.3178556	2.37	0.42	H5
-99.0664222	19.317375	5.18	0.19	H6
-99.0667944	19.3168417	8.33	0.12	H7
-99.0672611	19.3157667	3.00	0.33	H8
-99.0662333	19.3192556	1.95	0.51	I2
-99.0663167	19.3190972	2.64	0.38	I3
-99.0663611	19.3189972	2.08	0.48	I4
-99.0664083	19.3189028	2.39	0.42	I5
-99.0670139	19.3175611	6.74	0.15	I6
-99.0677778	19.3158139	1.98	0.51	I7
-99.0666111	19.3194861	0.67	1.50	J1
-99.0666806	19.3193417	2.03	0.49	J2
-99.06675	19.3191806	2.51	0.40	J3
-99.0668139	19.3190167	2.49	0.40	J4
-99.0670556	19.3188278	1.81	0.55	J5
-99.0673806	19.3176639	6.49	0.15	J6
-99.0678611	19.3167333	3.55	0.28	J7
-99.0682167	19.3158194	6.96	0.14	J8
-99.067925	19.3190917	1.42	0.70	L3

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-99.0682139	19.3187361	1.51	0.66	L4
-99.0685806	19.3182278	2.59	0.39	L5
-99.0693278	19.317225	0.95	1.05	L6
-99.0698417	19.3160778	0.39	2.56	L7
-99.0687778	19.3179889	2.56	0.39	L11
-99.0659722	19.3198944	0.83	1.21	K1
-99.0685056	19.3207	0.61	1.64	M1
-99.0686722	19.3202333	0.44	2.28	M2
-99.0689222	19.3197083	0.51	1.95	M3
-99.069	19.3195028	0.56	1.78	M4
-99.0692056	19.319025	1.00	1.00	M5
-99.0693222	19.3187306	1.61	0.62	M6
-99.0694111	19.3185	1.68	0.60	M7
-99.0699611	19.3174583	0.61	1.64	M8
-99.0704889	19.3162361	0.71	1.41	M9
-99.0699278	19.3187583	1.25	0.80	N1
-99.070375	19.3189639	1.05	0.95	N2
-99.0704222	19.3187833	0.91	1.10	N3
-99.0708111	19.3178861	0.56	1.78	N4
-99.0713778	19.3167806	0.56	1.78	N5
-99.0703306	19.3199611	0.55	1.82	O1
-99.0706389	19.3192528	0.61	1.64	O2
-99.0707528	19.3189639	1.03	0.97	O3
-99.07115	19.3180222	0.51	1.95	O4
-99.0717833	19.3169861	0.51	1.95	O5
-99.0706917	19.3201361	0.49	2.05	P1
-99.07105	19.31935	0.73	1.37	P2

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-99.0711139	19.3190944	0.46	2.16	P3
-99.0712444	19.3188222	1.00	1.00	P4
-99.0715444	19.3180278	0.56	1.78	P5
-99.07195	19.3171083	0.54	1.86	P6
-99.0718056	19.3206278	0.51	1.95	Q1
-99.0719583	19.3202806	0.46	2.16	Q2
-99.0721111	19.3198944	0.39	2.56	Q3
-99.0723639	19.319275	0.49	2.05	Q4
-99.0725472	19.3186333	0.32	3.15	Q5
-99.0727361	19.3181833	0.39	2.56	Q6
-99.0657278	19.3195389	1.04	0.96	Y2
-98.993144	19.361317	0.64	1.56	X1
-98.993555	19.363443	0.49	2.05	X2
-98.993223	19.364189	0.61	1.64	X3
-98.993204	19.364985	0.64	1.57	X4
-98.993027	19.366494	0.56	1.78	X5
-98.993027	19.367965	0.54	1.86	X6
-98.992314	19.367567	1.20	0.83	X7
-98.992311	19.366574	0.59	1.71	X8
-98.992537	19.365385	0.54	1.86	X9
-98.992526	19.364727	0.51	1.95	X10
-99.000646	19.364684	0.37	2.73	X36
-99.000678	19.364048	0.46	2.16	X37
-99.000702	19.363322	0.46	2.16	X38
-99.000754	19.362074	0.30	3.33	X39
-98.999161	19.361809	0.37	2.73	X40
-98.998991	19.362599	0.64	1.57	X41

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-98.998668	19.363258	0.59	1.71	X42
-98.998606	19.363782	0.54	1.86	X43
-98.999067	19.364373	0.51	1.95	X44
-98.999991	19.36381	0.44	2.28	X45
-99.000019	19.362906	0.42	2.41	X46
-99.000045	19.362547	0.51	1.95	X47
-98.996403	19.360698	0.78	1.28	X63
-98.996355	19.361592	0.57	1.77	X64
-98.99637	19.362537	0.51	1.95	X65
-98.996351	19.363794	0.42	2.41	X66
-98.998203	19.363819	0.64	1.56	X67
-98.998345	19.362741	0.42	2.41	X68
-98.998371	19.361769	0.61	1.64	X69
-98.998452	19.360759	1.41	0.71	X70
-99.025462	19.369251	0.56	1.78	X11
-99.025597	19.369349	0.61	1.64	X12
-99.025721	19.369467	0.46	2.16	X13
-99.025794	19.369529	0.56	1.78	X14
-99.025906	19.369621	0.59	1.71	X15
-99.026042	19.369723	0.44	2.28	X16
-99.025384	19.369138	0.61	1.64	X48
-99.025131	19.368947	0.56	1.78	X49
-99.024321	19.36841	0.51	1.95	X50
-99.023964	19.368147	0.61	1.64	X51
-99.023409	19.367551	0.59	1.71	X52
-99.032497	19.355221	0.49	2.06	W1
-99.032503	19.355174	0.51	1.95	W2

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-99.032504	19.355088	0.56	1.78	W3
-99.032537	19.355012	0.61	1.64	W4
-99.032579	19.354764	0.56	1.78	W5
-99.032636	19.354528	0.56	1.78	W6
-99.032702	19.354169	0.56	1.78	W7
-99.032496	19.355258	0.54	1.86	W16
-99.032492	19.355299	0.46	2.16	W17
-99.032483	19.35535	0.49	2.05	W18
-99.03247	19.35544	0.61	1.64	W19
-99.032459	19.355526	0.56	1.78	W20
-99.03243	19.355611	0.49	2.05	W21
-99.032237	19.355734	0.54	1.86	W22
-99.033515	19.349428	1.03	0.97	X30
-99.033484	19.34965	1.12	0.89	X31
-99.033445	19.349898	0.93	1.08	X32
-99.033404	19.350096	0.83	1.20	X33
-99.033383	19.350258	0.61	1.64	X34
-99.033332	19.350511	0.56	1.78	X35
-99.03376	19.348317	1.12	0.89	X76
-99.033713	19.3486	1.07	0.93	X77
-99.033637	19.348929	1.37	0.73	X78
-99.033611	19.349057	1.44	0.69	X79
-99.033587	19.349161	1.32	0.76	X80
-99.03355	19.349284	1.39	0.72	X81
-99.054543	19.345592	0.46	2.16	X59
-99.054272	19.345539	0.39	2.56	X60
-99.054131	19.345502	0.42	2.41	X61

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-99.053853	19.345454	0.42	2.41	X62
-99.052554	19.345392	0.46	2.16	X25
-99.052232	19.345395	0.61	1.63	X26
-99.052067	19.345356	0.44	2.28	X27
-99.051916	19.34535	0.61	1.64	X28
-99.051454	19.345299	0.51	1.95	X29
-99.106967	19.371854	0.44	2.28	W9
-99.106967	19.372152	0.54	1.86	W10
-99.106962	19.372433	0.44	2.28	W11
-99.106984	19.372645	0.54	1.86	W12
-99.106988	19.372843	0.49	2.05	W13
-99.106969	19.373023	0.54	1.86	W14
-99.106943	19.373253	0.49	2.05	W15
-99.106726	19.374969	0.44	2.28	W23
-99.106777	19.374752	0.44	2.28	W24
-99.106818	19.374564	0.49	2.05	W25
-99.106872	19.374362	0.49	2.05	W26
-99.106919	19.374123	0.46	2.16	W27
-99.106957	19.373955	0.51	1.95	W28
-99.10703	19.373649	0.42	2.41	W29
-99.067303	19.30112	1.46	0.68	X17
-99.067513	19.301131	1.03	0.97	X18
-99.06774	19.301138	0.81	1.24	X19
-99.067999	19.301144	0.59	1.71	X20
-99.068142	19.301152	0.51	1.95	X21
-99.06842	19.301173	0.59	1.71	X22
-99.068679	19.30117	0.59	1.71	X23

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-99.068851	19.301185	0.46	2.16	X24
-99.067128	19.300998	0.51	1.95	X71
-99.066985	19.300971	2.93	0.34	X72
-99.066887	19.300956	2.37	0.42	X73
-99.066698	19.30092	2.64	0.38	X74
-99.066519	19.300869	2.56	0.39	X75
-99.065952	19.300796	3.22	0.31	X53
-99.065781	19.300785	2.22	0.45	X54
-99.06561	19.30077	3.05	0.33	X55
-99.065478	19.300751	2.73	0.37	X56
-99.065262	19.300724	2.69	0.37	X57
-99.064507	19.300613	2.71	0.37	X58
-99.0302	19.3502	1.00	1.00	T1
-99.0323	19.3505	1.00	1.00	T2
-99.0344	19.3508	1.00	1.00	T3
-99.0367	19.3512	0.59	1.70	T4
-99.0389	19.3517	0.67	1.50	T5
-99.0294	19.3535	0.56	1.80	T6
-99.0317	19.3539	0.56	1.80	T7
-99.0339	19.3544	0.40	2.50	T8
-99.0361	19.3547	0.56	1.80	T9
-99.0382	19.3551	0.59	1.70	T10
-99.0276	19.3570	0.91	1.10	T11
-99.0308	19.3575	0.50	2.00	T12
-99.0317	19.3575	0.53	1.90	T13
-99.0319	19.3576	0.53	1.90	T14
-99.0342	19.3583	0.59	1.70	T15

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-99.0366	19.3582	0.59	1.70	T16
-99.0308	19.3521	0.59	1.70	T17
-99.0317	19.3522	1.25	0.80	T18
-99.0330	19.3524	0.77	1.30	T19
-99.0352	19.3528	0.77	1.30	T20
-99.0374	19.3531	0.59	1.70	T21
-99.0396	19.3535	0.63	1.60	T22
-99.0280	19.3552	0.77	1.30	T23
-99.0302	19.3556	0.71	1.40	T24
-99.0323	19.3561	0.50	2.00	T25
-99.0347	19.3563	0.63	1.60	T26
-99.0368	19.3567	0.67	1.50	T27
-99.0389	19.3570	0.59	1.70	T28
-99.0275	19.3587	0.67	1.50	T29
-99.0295	19.3591	0.91	1.10	T30
-99.0317	19.3594	0.50	2.00	T31
-99.0339	19.3598	0.59	1.70	T32
-99.0383	19.3605	0.50	2.00	T33
-99.0663	19.3839	0.38	2.60	T65
-99.0608	19.3844	0.45	2.20	T69
-99.0731	19.3840	0.42	2.40	T73
-99.0714	19.3841	0.50	2.00	T74
-99.0697	19.3838	0.29	3.40	T75
-99.0754	19.3818	0.34	2.90	T76
-99.0735	19.3815	0.50	2.00	T77
-99.0701	19.3809	0.59	1.70	T78
-99.0759	19.3788	0.34	2.90	T79

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-99.0707	19.3779	0.26	3.80	T80
-99.0725	19.3829	0.40	2.50	V1
-99.0708	19.3825	0.32	3.10	V2
-99.0690	19.3823	0.42	2.40	V3
-99.0747	19.3802	0.26	3.80	V4
-99.0730	19.3799	0.27	3.70	V5
-99.0713	19.3795	0.38	2.60	V6
-99.0697	19.3792	0.27	3.70	V7
-99.1075	19.3811	0.71	1.40	V21
-99.1064	19.3810	0.50	2.00	V22
-99.1054	19.3808	0.50	2.00	V23
-99.1042	19.3806	0.48	2.10	V24
-99.069	19.38	0.24	4.10	L1
-99.082	19.387	0.28	3.60	L4
-99.049	19.355	0.25	4.00	L8
-99.038	19.346	0.71	1.40	L9
-99.024	19.348	2.00	0.50	L10
-99.027	19.339	3.33	0.30	L11
-99.056	19.332	0.83	1.20	L12
-99.056	19.367	0.25	4.00	L13
-99.096	19.316	0.77	1.30	L14
-99.095	19.323	1.11	0.90	L15
-99.11	19.339	1.00	1.00	L16
-99.11	19.347	1.43	0.70	L17
-99.111	19.353	0.53	1.90	L18
-99.111	19.363	0.53	1.90	L19
-99.11	19.371	0.38	2.60	L20

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-99.103	19.361	0.63	1.60	L21
-99.091	19.362	2.00	0.50	L22
-99.094	19.364	0.50	2.00	L23
-99.105	19.365	0.43	2.30	L24
-99.101	19.368	0.40	2.50	L25
-99.097	19.374	0.30	3.30	L26
-99.067	19.288	0.29	3.50	L27
-99.073	19.292	0.29	3.50	L28
-99.082	19.299	0.27	3.70	L29
-99.068	19.3	0.38	2.60	L30
-99.07	19.302	0.45	2.20	L31
-99.086	19.304	0.50	2.00	L32
-99.068	19.305	0.40	2.50	L33
-99.077	19.306	0.45	2.20	L34
-99.084	19.31	0.42	2.40	L35
-99.073	19.311	0.40	2.50	L36
-99.089	19.314	0.45	2.20	L37
-99.093	19.314	0.48	2.10	L38
-99.076	19.315	0.56	1.80	L39
-99.095	19.318	0.59	1.70	L40
-99.1	19.321	0.71	1.40	L41
-99.1	19.324	1.11	0.90	L42
-99.117	19.358	0.56	1.80	L44
-99.133	19.359	0.77	1.30	L45
-99.119	19.363	0.53	1.90	L46
-99.121	19.373	0.59	1.70	L47
-99.111	19.353	0.53	1.90	L48

Valores y localización de los puntos analizados. Anexo B

-99.111	19.347	1.43	0.70	L49
-99.111	19.339	1.00	1.00	L50
-99.134	19.374	0.63	1.60	L51
-99.122	19.381	0.37	2.70	L52
-99.1153	19.3797	0.37	2.70	L53
-99.1194	19.3511	0.59	1.70	L54
-99.1264	19.3672	0.53	1.90	L55
-99.0594	19.3558	0.56	1.80	L56
-99.0378	19.3903	0.21	4.70	L57
-99.0586	19.3992	0.29	3.50	L58
-99.1116	19.335	0.91	1.10	L59
-99.0783	19.3163	0.45	2.20	L60
-99.0611	19.3302	0.45	2.20	L61
-99.0691	19.3491	1.67	0.60	L62
-99.0725	19.3375	2.00	0.50	L63
-99.0494	19.3605	0.28	3.60	L64
-99.0358	19.3638	0.30	3.30	L65
-99.0288	19.375	3.33	0.30	L66
-99.0845	19.3639	0.56	1.80	L67
-99.0777	19.3555	1.25	0.80	L68
-99.073	19.3611	0.42	2.40	L69
-99.0644	19.3805	0.28	3.60	L70
-99.105	19.3583	0.63	1.60	L71
-99.0733	19.3044	0.42	2.40	L72
-99.005	19.3611	0.56	1.80	L73
-99.0725	19.3266	0.71	1.40	L74
-99.13499	19.36889	0.61	1.65	Z1

Valores y localización de los puntos analizados. Anexo B

-99.13725	19.36889	0.63	1.60	Z2
-99.13556	19.36116	0.67	1.50	Z3
-99.13967	19.35721	0.63	1.60	Z4
-99.13483	19.35721	0.67	1.50	Z5
-99.0498	19.32	1.43	0.70	Z6
-99.0433	19.3231	1.43	0.70	Z7
-99.081	19.3482	1.84	0.54	Z8
-99.0755	19.3469	1.89	0.53	Z9
-99.0485	19.3356	1.85	0.54	Z10
-99.0501	19.3398	1.67	0.60	Z11
-99.0411	19.3286	2.00	0.50	Z12
-99.0317	19.326	1.72	0.58	Z13
-99.0134	19.3315	2.00	0.50	Z14
-99.0034	19.3418	1.72	0.58	Z15
-99.0002	19.3472	1.67	0.60	Z16
-98.9966	19.3563	1.11	0.90	Z18
-98.9953	19.3521	1.43	0.70	Z19
-98.9824	19.3447	1.33	0.75	Z20
-98.9753	19.3373	1.45	0.69	Z21
-98.9631	19.3269	1.05	0.95	Z22
-98.9985	19.3286	1.96	0.51	Z23
-99.0047	19.3273	2.13	0.47	Z24
-99.0159	19.324	1.92	0.52	Z25
-99.0395	19.3221	1.67	0.60	Z26
-99.06899	19.28515	0.33	3.00	Z27
-99.0252296	19.3800161	0.659	1.52	U54
-99.0253716	19.3797822	1.27	0.79	U53

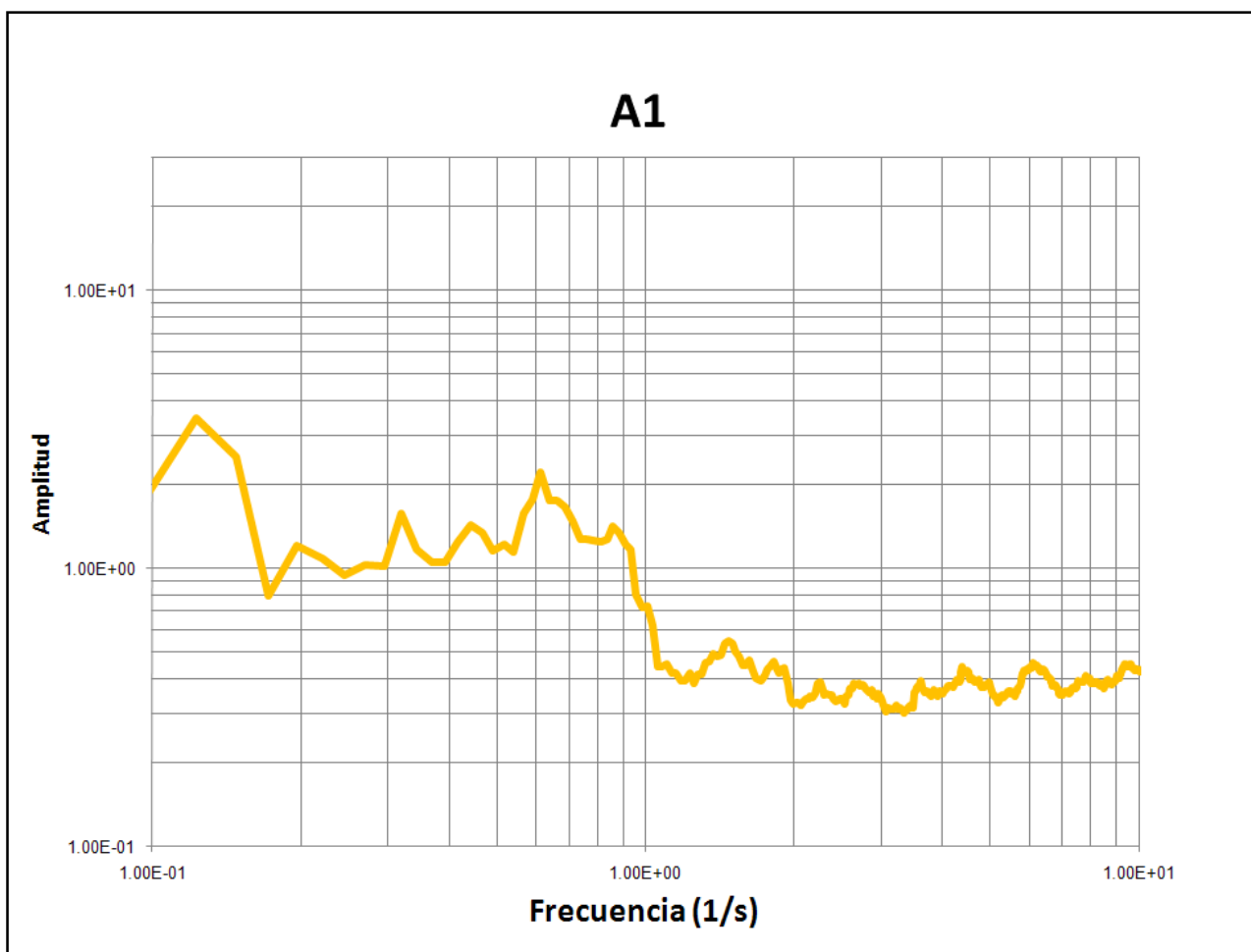
Valores y localización de los puntos analizados. Anexo B

-99.0252126	19.3796567	1.29	0.78	U52
-99.0247666	19.3797073	0.854	1.17	U51
-99.0244793	19.3797478	0.635	1.57	U50
-99.0205783	19.3779327	0.562	1.78	U49
-99.0172095	19.3759737	0.21	4.76	U48
-99.0151658	19.3752642	0.415	2.41	U47
-99.0143491	19.3749847	0.244	4.10	U46
-99.012869	19.3744587	0.269	3.72	U45
-99.0178851	19.3699228	0.537	1.86	U43
-99.0193049	19.3685978	0.415	2.41	U42
-99.022814	19.3646576	0.415	2.41	U41
-99.0236786	19.3599245	0.83	1.20	U40
-99.022937	19.3568521	0.708	1.41	U39
-99.0114095	19.3631687	1	1.00	U37
-99.020657	19.3593188	0.879	1.14	U36
-99.0517363	19.3937436	0.293	3.41	U35
-99.053745	19.3887973	0.366	2.73	U34
-99.0540695	19.3862958	0.415	2.41	U33
-99.0553927	19.3816155	0.342	2.92	U32
-99.051378	19.380573	0.391	2.56	U31
-99.0501943	19.3826888	0.34	2.94	U30
-99.0472636	19.3874488	0.342	2.92	U29
-99.0375795	19.3797149	0.391	2.56	U25
-99.0388117	19.375591	0.488	2.05	U24
-99.0403699	19.3726794	0.562	1.78	U23
-99.0403958	19.3669485	0.488	2.05	U22
-99.0116741	19.3626712	1.2	0.83	U21

Valores y localización de los puntos analizados. Anexo B

-99.0110314	19.3655523	1.39	0.72	U20
-99.0075703	19.3621016	0.83	1.20	U19
-99.0066563	19.360708	0.708	1.41	U18
-99.0067289	19.3588182	0.537	1.86	U17
-99.005478	19.3560959	0.854	1.17	U16
-99.003868	19.3543571	0.537	1.86	U15
-99.0041486	19.3530292	0.732	1.37	U14
-99.0041354	19.3510841	2.51	0.40	U13
-99.0036145	19.3492704	2.37	0.42	U12
-99.0054186	19.3495737	3.13	0.32	U11
-99.0117698	19.350834	6.18	0.16	U10
-99.0073784	19.3409813	3.37	0.30	U9
-99.0080323	19.342481	3.71	0.27	U8
-99.0101166	19.3452251	5.76	0.17	U7
-99.0116116	19.3455986	4.91	0.20	U6
-99.0125222	19.34448	2.05	0.49	U5
-99.0147998	19.345249	3.98	0.25	U4
-99.016241	19.3472638	3.03	0.33	U3
-99.0175182	19.3498888	1.15	0.87	U2
-99.0205482	19.3442623	0.903	1.11	U1

Anexo C. Gráficas de los cocientes espectrales



*Todas las gráficas siguientes tienen la misma escala gráfica logarítmica, como se muestra en la parte superior de esta página. Valores representativos del eje de las abscisas: (0.1, 1.0, 10.0). Valores representativos del eje de las ordenadas: (0.1, 1.0, 10.0, 20, 30).

