

ANEJO N°4
CARTOGRAFÍA, TOPOGRAFÍA Y REPLANTEO

ÍNDICE

1	INTRODUCCIÓN.....	1
2	SISTEMA DE COORDENADAS	1
3	CARTOGRAFÍA Y TOPOGRAFÍA GENERAL.....	1
4	LEVANTAMIENTOS TOPOGRÁFICOS DE DETALLE	2
5	PROCEDIMIENTO DE TOMA DE DATOS.....	3
6	TRABAJO DE GABINETE.....	3
7	PUNTOS DE APOYO O BASES DE REPLANTEO	5
	APÉNDICE 1: CD CON TRABAJOS DE GEODISA.....	6
	APÉNDICE 2: PUNTOS LEVANTAMIENTO AGRUPACIONES.....	7
	APÉNDICE 3: PUNTOS TRAZADO TUBERÍAS PRIMARIAS	13
	APÉNDICE 4: VÉRTICE GEODÉSICO	55
	APÉNDICE 5: RESEÑAS BASES DE REPLANTEO	58
	APÉNDICE 6: LEVANTAMIENTO PARCELA PLANTA FOTOVOLTAICA.....	62
	APÉNDICE 7: REPLANTEO CIMENTACIÓN PLANTA FOTOVOLTAICA.....	69
	APÉNDICE 8: PLANOS.....	76

ÍNDICE DE TABLAS

Tabla 1. Trabajos topográficos de detalle.....	2
Tabla 2. Puntos de apoyo	5

1 INTRODUCCIÓN

En el presente anexo se describen los trabajos de Topografía realizados para la elaboración y desarrollo del **PROYECTO DE MODERNIZACIÓN DE REGADÍO EN LA COLECTIVIDAD DE CUEVAS DEL CAMPO (GRANADA). FASE II. (C.R. POZO ALCÓN, HINOJARES Y CUEVAS DEL CAMPO)**, así como la cartografía usada para su redacción y los listados de los elementos lineales que integran este proyecto.

Según el Real Decreto 1071/2007, de 27 de julio, por el que se regula el sistema geodésico de referencia oficial en España, se adopta el sistema ETRS89 (European Terrestrial Reference System 1989) como sistema geodésico para la referenciación geográfica y cartográfica del proyecto.

Se han ejecutado todas las observaciones conducentes a obtener una red de bases de replanteo para la realización de todos los trabajos posteriores del proyecto.

2 SISTEMA DE COORDENADAS

Se ha utilizado como Sistema de referencia geodésica el Sistema ETRS89 referido al elipsoide GRS80 y está materializado por el marco que define la Red Geodésica Nacional por Técnicas Espaciales, REGENTE, y sus densificaciones.

Se tomará como referencia de altitudes los registros del nivel medio del mar en Alicante y como proyección la Proyección Universal Transversa de Mercator (U.T.M.), utilizada en la confección de la cartografía oficial del Estado según Decreto 2303/1970 de 16 de julio.

El sistema de coordenadas utilizado, U.T.M. ETRS89 H30N, cuya transformación desde el elipsoide GRS80 (Geodesic Reference System) se ha realizado en base a la transformación de 7 parámetros.

3 CARTOGRAFÍA Y TOPOGRAFÍA GENERAL

La cartografía base utilizada ha sido la siguiente:

- Mapa Topográfico Nacional 1:50.000 (MTN50). Hojas 949 y 971
- Mapa Topográfico Nacional 1:25.000 (MTN25).
- Mapa Topográfico Ráster de Andalucía a escala 1:10.000
- Ortofotos en formato digital del vuelo PNOA de 2019.
- Modelo Digital del Terreno, del IGN en formatos ASCII y DXF.

- La Comunidad de Regantes ha facilitado un modelo digital del terreno (MDT) con curvas de nivel cada 2 m de los términos municipales de Pozo Alcón y Cuevas del Campo.

Los trabajos cartográficos proporcionados por la Comunidad de Regantes fueron realizados por una empresa de gran experiencia en este tipo de trabajos que es GEODISA. Los trabajos encargados y realizados por GEODISA (se adjuntan en CD en apéndice 1 «CD con trabajos de GEODISA») han sido los siguientes:

1. Vuelo fotogramétrico a escala 1:8.000 en color (gráfico de vuelo, contactos con apoyos fotogramétricos, etc.), realizado sobre alrededor de 8.800 hectáreas que ocupan la superficie completa de los términos municipales de Pozo Alcón Hinojares y Cuevas del Campo. Ortofotomap a escala 1:2.000.
2. Modelo Digital del Terreno (determinando precisión altimétrica-mínimo 0,5 m-). Escala 1:2.000. Curvas de nivel cada 2 m del perímetro de la zona regable realizadas en Acad2000 y entregadas en formato digital.

Con esta cartografía se redactaron y ejecutaron sin dificultad los proyectos de las fases 1 y 2 de modernización de regadíos de la Colectividad de Pozo Alcón e Hinojares, lo que demuestra su fiabilidad y precisión. Por tanto, se convierte en una herramienta cartográfica de partida muy importante.

4 LEVANTAMIENTOS TOPOGRÁFICOS DE DETALLE

Se han llevado a cabo los siguientes levantamientos topográficos en diferentes zonas donde se requiere mayor precisión de las que puede aportar el Modelo Digital del Terreno. Así, se han realizado levantamientos topográficos de los terrenos donde se ubicará la estación de bombeo y filtrado y campo fotovoltaico.

Tabla 1. Trabajos topográficos de detalle

EMPRESA	FECHA	TOMA DE DATOS	ELEMENTO
SUEZ	8, 9 y 10 marzo 2016	GPS Leica Viva NetRover Estación total Laica TS06	Estación de bombeo y filtrado
AGRIMENSUR	7 junio 2020	GPS TOPCON HIPER VR	Estación de bombeo y filtrado
AGRIMENSUR	Mayo 2022	GPS TOPCON HIPER VR	Fase II (agrupaciones)

Por parte de la empresa SUEZ se realizó un levantamiento topográfico de la zona los días 8, 9 y 10 de marzo de 2016.

Posteriormente, en junio de 2020, AGRIMENSUR realizó el levantamiento topográfico de detalle de la zona de la estación de bombeo y filtrado (junto al campo fotovoltaico) para comprobar la validez de los trabajos topográficos de SUEZ, dado que las instalaciones se ubican exactamente en las mismas parcelas en ambos proyectos. Por último, AGRIMENSUR ha realizado una comprobación topográfica de las zonas de actuación en mayo de 2022 (ubicación agrupaciones). Todos estos trabajos están hechos mediante GPS marca TOPCON provisto de:

- GPS TOPCON HIPER VR, N/S: 147210127
- GPS TOPCON HIPER VR, N/S: 147210117
- CONTROLADORA TOPCON FC5000, N/S:
- SOFTWARE MAGNET FIELD, N/S: 2211590163

5 PROCEDIMIENTO DE TOMA DE DATOS

El procedimiento empleado para los levantamientos topográficos ha sido:

- Estudio previo de la zona a levantar.
- Obtención de coordenadas de bases de referencia.
- Toma de datos de campo.

El primer paso ha consistido en el estudio de la zona de trabajo mediante ortofotografía digital, poniendo de manifiesto los límites hasta los que llegar con la toma de datos en campo, y conocimiento a priori de la orografía del terreno.

El segundo paso ha sido la obtención de coordenadas de bases de referencia.

En tercer lugar, AGRIMENSUR hizo el levantamiento de las zonas donde se implantarán el campo fotovoltaico, junto a la estación de bombeo y filtrado, comprobándose la validez de los levantamientos realizados por SUEZ críticos (apéndice 6 «Levantamiento parcela planta fotovoltaica»). Además, se han tomado con GPS las ubicaciones de las nuevas agrupaciones de hidrantes, como posibles puntos críticos (apéndice 2 «Puntos levantamiento agrupaciones»).

6 TRABAJO DE GABINETE

Se procedió a procesar toda la información disponible operando de la siguiente manera en cada caso:

1. Planta fotovoltaica. - Se decidió tomar los levantamientos realizados por SUEZ, una vez comprobada su fiabilidad, junto con los realizados por Agrimensur.

2. Tuberías primarias y secundarias: Con la topografía de detalle realizada en todas las ubicaciones indicadas, se ha comprobado la validez de los distintos MDT's disponibles (el proporcionado por la Comunidad del vuelo realizado, así como la información pública del IGN), que son de máxima precisión, por lo que se tomarán estos para el diseño de dichas redes. Se recogen los puntos de la red primaria en el apéndice 3 «Puntos trazado tuberías primarias». Las cotas necesarias para el diseño de la red secundaria se han tomado también del MDT. Para calcular el movimiento de tierras de las tuberías secundarias se ha cubicado en base a las zanjas tipo y a su longitud (medida sobre cartografía disponible), ya que dentro de cada agrupación la escasa diferencia de cotas, las cortas longitudes y las pequeñas zanjas no hacen necesaria la realización de perfiles.

Los planos de curvas de nivel y las trazas de las tuberías primarias se encuentran en los planos nº 6 «Redes primarias ramal G1», 7 «Redes primarias ramal G2» y 8 «Redes primarias ramal bombeo bajo» respectivamente.

7 PUNTOS DE APOYO O BASES DE REPLANTEO

Se ha tomado como vértice geodésico de referencia el número 97199 (ver apéndice 4 «Vértice geodésico»). Las bases se han materializado en campo mediante estacas o clavos de acero tipo GEOPUNT. Las reseñas de los puntos de apoyo quedan reflejadas en la siguiente tabla (ver apéndice 5 «Reseñas base de replanteo»):

Tabla 2. Puntos de apoyo

Nº BASE	X (m)	Y (m)	ELEVACIÓN (m)	Descripción
BR1	506828,634	4173449,061	937,757	Puente sobre canal
BR2	507080,497	4173062,210	928,190	Plataforma hormigón
BR3	506576,699	4171879,477	904,777	Estaca
BR4	507647,790	4168229.739	887,057	Sifón

APÉNDICE 1: CD CON TRABAJOS DE GEODISA

APÉNDICE 2: PUNTOS LEVANTAMIENTO AGRUPACIONES

PUNTOS DE LEVANTAMIENTO AGRUPACIONES BB

NÚMERO	X	Y	ELEVACIÓN
2	508204,435	4168295,168	899
3	508443,392	4168371,804	903
4	508671,847	4168176,857	904
5	509004,949	4168704,735	908
6	508940,456	4169039,2	907
7	509092,49	4169158,191	906
9	508411,416	4167928,285	900
10	509175,137	4168489,438	908
12	509388,346	4169356,029	906
14	508513,886	4167676,59	901
15	509147,171	4167870,843	909
20	508619,341	4167438,156	902
21	508817,214	4167378,54	907
22	509009,865	4167726,284	907
28	508708,097	4167094,052	908
36	508599,864	4166706,535	906
37	508818,725	4166500,208	906
38	508900,183	4166359,158	904
41	509079,368	4165846,381	898
50	508407,652	4166528,178	901
52	508256,678	4166074,715	895
53	508646,999	4165995,86	899
56	508566,381	4165731,267	899
58	508447,654	4165509,256	897
60	508665,458	4165595,548	892
61	509006,651	4165907,696	898
64	509266,212	4165613,119	907
316	508496,418	4167806,016	901

PUNTOS DE LEVANTAMIENTO AGRUPACIONES G1

NÚMERO	X	Y	ELEVACIÓN
80	507391,465	4163343,976	858
92	507600,82	4164168,032	869
93	507269,582	4164035,222	849
94	507481,266	4163923,864	873
95	507189,962	4163402,389	851
96	507018,4	4163360,385	852
97	507044,673	4163103,097	851
100	506794,88	4163139,573	859
102	506942,549	4162838,022	881
103	506553,196	4162852,043	860
105	506018,905	4162998,278	822
106	506158,564	4162944,828	828
107	506334,361	4162622,684	828
108	506894,201	4162678,469	881
109	506534,948	4162553,371	838
110	506537,996	4163103,59	835
112	506826,797	4162459,337	859
168	506619,159	4164154,394	849
169	506403,536	4163500,022	830
170	506583,553	4163599,142	850
171	506515,516	4163631,842	837
172	507029,927	4163732,415	858
173	506910,831	4164118,485	858
174	507068,234	4164022,176	859
203	507172,88	4163760,457	845
229	505563,436	4162162,318	825
230	505681,965	4162019,564	833
239	505071,073	4160463,242	776
240	505297,084	4160542,771	782
252	505727,414	4160126,126	799
254	505757,458	4160462,738	799
255	505947,49	4160543,968	807
256	506405,605	4160287,784	827
257	506844,559	4160488,126	853
258	505758,97	4160681,031	805
259	505728,42	4161020,673	801
260	505411,484	4161236,901	791
262	505593,122	4161458,14	814
263	505701,747	4161300,031	807
265	505933,27	4161712,593	823
267	506011,697	4161334,831	821
268	506081,083	4161042,728	834

NÚMERO	X	Y	ELEVACIÓN
269	505987,28	4160676,813	830
270	506778,856	4160602,987	857
271	506549,864	4160547,92	846
272	506697,468	4160880,012	844
273	506712,885	4161254,842	852
274	506480,69	4160982,791	852
276	506610,068	4161177,318	849
277	506170,439	4161432,486	840
278	506130,185	4161758,595	834
280	506444,285	4161592,17	844
282	506379,926	4161883,819	843
283	506684,666	4161708,443	841
284	506530,496	4161546,642	847
286	506806,39	4161310,43	857
288	506952,544	4161611,549	856
289	506621,178	4161908,79	855
291	506879,68	4161840,672	864
293	506982,818	4161347,671	868
294	507833,604	4161290,59	846
296	508208,762	4161206,236	849
297	508028,807	4161250,45	850
298	507571,51	4161466,816	855
299	507151,445	4161530,683	868
317	507442,413	4161552,907	862
318	506461,35	4161431,858	848
320	507037,641	4162905,381	864
322	506351,14	4162925,365	846
323	505990,551	4161737,052	827
324	505599,459	4161422,156	813
325	506770,387	4162382,04	853
328	505181,195	4160506,151	780

PUNTOS DE LEVANTAMIENTO AGRUPACIONES G2

NÚMERO	X	Y	ELEVACIÓN
115	506965,541	4167785,534	858
116	506429,391	4167495,69	859
118	505893,207	4167205,856	848
123	506284,089	4167048,907	838
124	505787,057	4166605,546	828
129	506415,787	4166565,431	850
130	505905,467	4166696,048	829
131	505897,283	4166463,766	843
132	505933,618	4166165,835	845
135	506775,195	4166216,311	859
136	506407,089	4166561,048	851
137	506271,117	4166114,954	830
138	505997,97	4166176,969	846
142	506795,273	4165897,639	859
143	506615,672	4165693,062	850
144	506475,63	4165381,173	848
145	505985,096	4165830,352	830
146	506100,208	4165213,285	840
147	506271,743	4165200,614	844
151	506845,643	4165264,427	858
152	506754,066	4164800,675	856
155	506022,733	4165217,187	839
156	506087,697	4164667,487	839
157	506503,491	4164558,807	850
158	506345,557	4164566,242	846
160	506188,366	4164137,712	842
161	506240,903	4163843,181	841
164	506061,105	4163634,094	834
182	504035,073	4165920,95	837
183	503699,262	4165852,813	836
184	503813,439	4165676,164	836
186	504224,302	4165609,608	839
187	504027,97	4165343,323	836
188	504069,267	4165221,013	836
190	504204,817	4164972,538	833
191	504389,238	4164756,601	832
192	504585,761	4164521,316	832
195	503146,505	4165627,016	837
198	503255,559	4165425,464	835
199	503294,08	4165370,602	835
200	503445,485	4165115,126	833

NÚMERO	X	Y	ELEVACIÓN
201	503536,188	4164944,916	831
206	503842,311	4164640,151	828
207	503622,578	4164722,525	829
208	504116,078	4164448,934	828
209	503677,864	4164551,143	822
210	503395,142	4163749,82	811
211	503306,322	4163701,238	806
212	504635,621	4164126,046	826
213	503243,213	4163397,543	799
214	503357,045	4163739,609	808
215	503624,278	4163053,614	808
217	503680,319	4163155,495	806
218	503852,663	4163251,984	809
219	504110,77	4162905,969	801
220	504143,472	4162606,572	806
221	504058,539	4162685,644	806
224	503787,602	4162451,125	815
225	504075,473	4162371,929	808
227	504546,782	4161859,014	786
232	505089,564	4161606,176	786
233	505207,046	4161235,429	784
234	504903,986	4161647,716	785
235	504141,245	4161698,393	816
236	504322,822	4161429,823	823
237	504642,89	4161308,332	785
238	504485,597	4160852,668	788
242	504971,303	4160948,511	778
303	503704,956	4163757,33	814
304	504173,954	4164276,613	828
305	504335,565	4163659,062	816
307	504186,383	4163523,231	814
308	504435,296	4163354,789	803
309	504488,657	4163613,667	814
310	504801,704	4163875,341	827
311	505103,412	4163706,41	826
312	505113,347	4162889,343	795
313	505129,423	4163500,143	817
314	505142,022	4162402,357	805
319	505395,168	4166600,276	824
326	505762,36	4165666,946	823
327	506040,594	4165221,713	839
329	505185,136	4161270,681	783
330	504495,035	4164645,113	832

APÉNDICE 3: PUNTOS TRAZADO TUBERÍAS PRIMARIAS

PUNTOS REPLANTEO TUBERÍA BB

PUNTO	X	Y
1	507702,001	4168169,510
2	507714,774	4168172,382
3	507703,367	4168219,158
4	507748,349	4168243,774
5	507755,877	4168248,241
6	507797,582	4168274,984
7	507818,027	4168285,594
8	507849,065	4168298,249
9	507862,600	4168302,672
10	507916,315	4168316,081
11	507916,315	4168316,081
12	507974,433	4168313,989
13	508019,699	4168349,114
14	508154,537	4168405,559
15	508164,277	4168377,617
16	508170,931	4168362,616
17	508193,424	4168321,413
18	508204,435	4168295,168
19	508248,555	4168206,639
20	508365,117	4167994,405
21	508388,697	4167962,194
22	508388,697	4167962,194
23	508418,221	4167926,190
24	508485,200	4167823,255
25	508499,921	4167785,749
26	508505,979	4167754,973
27	508507,845	4167737,430
28	508508,415	4167705,247
29	508522,478	4167657,626
30	508565,654	4167585,277
31	508574,609	4167565,779
32	508591,776	4167514,503
33	508596,779	4167502,299
34	508622,744	4167449,235
35	508630,506	4167436,040
36	508679,120	4167366,231
37	508760,134	4167263,688
38	508728,429	4167174,554
39	508708,097	4167094,052
40	508678,782	4166992,808
41	508602,523	4166759,471
42	508630,255	4166654,461
43	508711,090	4166580,866

44	508724,298	4166570,718
45	508815,995	4166511,711
46	508827,971	4166502,665
47	508920,055	4166421,573
48	508900,184	4166359,158
49	508888,603	4166324,499
50	508841,204	4166268,163
51	508737,929	4166212,499
52	508829,771	4166103,293
53	508911,430	4166014,964
54	508926,329	4165993,966
55	508944,076	4165970,021
56	509006,651	4165907,696
57	509052,657	4165866,202
58	509061,661	4165858,979
59	509079,368	4165846,382
60	509086,905	4165831,407
61	509102,659	4165808,635
62	509129,603	4165779,369
63	509137,629	4165771,576
64	509154,338	4165757,075
65	509166,345	4165744,685
66	509184,729	4165722,104
67	509194,255	4165711,939
68	509210,433	4165696,926
69	509222,675	4165683,271
70	509235,673	4165665,778
71	509243,883	4165652,741
72	509258,175	4165632,288
73	509270,936	4165618,129
74	509270,936	4165618,129
75	508154,537	4168405,559
76	508151,116	4168413,208
77	508181,903	4168423,353
78	508226,473	4168445,822
79	508254,175	4168454,632
80	508266,215	4168460,322
81	508320,283	4168495,363
82	508349,284	4168508,170
83	508371,315	4168516,850
84	508394,606	4168529,394
85	508410,930	4168534,905
86	508420,858	4168539,522
87	508451,834	4168558,304
88	508491,820	4168586,315

89	508520,275	4168611,829
90	508547,265	4168629,128
91	508568,232	4168641,437
92	508590,137	4168658,184
93	508652,549	4168717,413
94	508690,364	4168748,406
95	508772,533	4168824,702
96	508799,193	4168857,620
97	508822,548	4168896,662
98	508834,324	4168909,937
99	508855,317	4168946,452
100	508894,468	4168988,736
101	508934,639	4169033,761
102	509045,447	4169123,134
103	509079,940	4169149,481
104	509092,491	4169157,260
105	509114,696	4169174,712
106	509159,675	4169204,011
107	509183,906	4169221,149
108	509203,582	4169236,240
109	509224,249	4169248,961
110	509267,234	4169272,381
111	509320,514	4169311,118
112	509386,021	4169355,451
113	508834,324	4168909,937
114	508887,137	4168843,740
115	509004,952	4168702,890
116	509003,555	4168696,027
117	509024,761	4168677,468
118	509045,541	4168653,547
119	509054,465	4168645,691
120	509129,240	4168557,364
121	509166,077	4168513,588
122	509173,355	4168496,876
123	509174,292	4168489,224
124	508248,555	4168206,639
125	508252,397	4168207,109
126	508268,766	4168214,097
127	508285,790	4168229,551
128	508349,195	4168306,136
129	508383,496	4168338,778
130	508419,850	4168365,956
131	508439,622	4168372,321
132	508443,975	4168372,238
133	508456,545	4168361,728

134	508502,159	4168332,587
135	508503,067	4168315,037
136	508532,342	4168291,754
137	508560,934	4168275,939
138	508578,077	4168264,465
139	508607,716	4168228,048
140	508613,391	4168214,057
141	508624,660	4168195,089
142	508664,080	4168175,838
143	508671,790	4168176,816
144	508415,554	4167930,020
145	508411,651	4167926,895
146	508627,125	4167441,230
147	508620,475	4167437,486
148	509009,865	4167726,284
149	509005,529	4167726,720
150	508879,898	4167532,140
151	508817,214	4167378,540
152	508768,610	4167262,281
153	508760,134	4167263,688
154	508824,053	4166505,942
155	508818,838	4166499,875
156	508256,678	4166074,715
157	508580,948	4166359,598
158	508609,795	4166335,477
159	508708,855	4166231,594
160	508715,274	4166226,405
161	508737,929	4166212,499
162	508407,652	4166528,178
163	508415,551	4166528,442
164	508486,457	4166463,623
165	508510,430	4166439,145
166	508528,585	4166417,955
167	508545,382	4166402,176
168	508580,948	4166359,598
169	508737,929	4166212,499
170	508726,479	4166207,582
171	508679,011	4166180,954
172	508676,064	4166169,831
173	508646,506	4165995,860
174	508612,245	4165801,769
175	508608,186	4165789,971
176	508574,871	4165727,197
177	508550,978	4165682,544
178	508546,688	4165683,044

179	508461,595	4165523,947
180	508456,438	4165517,305
181	508447,654	4165509,257
182	508574,871	4165727,197
183	508566,453	4165731,380
184	508551,946	4165682,735
185	508580,844	4165659,830
186	508603,196	4165643,029
187	508637,108	4165616,553
188	508655,027	4165601,505
189	508665,279	4165594,567
190	509270,936	4165618,129
191	509265,901	4165613,266

PUNTOS REPLANTEO TUBERÍA G-1

PUNTO	X	Y
1	507.459,729	4.164.346,133
2	507.471,733	4.164.335,223
3	507.423,023	4.164.268,564
4	507.380,414	4.164.207,005
5	507.377,265	4.164.203,595
6	507.366,015	4.164.189,515
7	507.327,496	4.164.133,517
8	507.318,664	4.164.131,192
9	507.304,346	4.164.107,094
10	507.267,821	4.164.036,803
11	507.224,113	4.163.951,723
12	507.214,786	4.163.932,057
13	507.207,500	4.163.907,938
14	507.183,504	4.163.806,707
15	507.176,748	4.163.785,417
16	507.167,366	4.163.762,049
17	507.144,174	4.163.699,906
18	507.126,180	4.163.669,522
19	507.114,748	4.163.656,281
20	507.135,708	4.163.630,197
21	507.137,564	4.163.591,316
22	507.132,623	4.163.558,214
23	507.108,341	4.163.506,408
24	507.085,686	4.163.481,012
25	507.089,129	4.163.469,886
26	507.074,644	4.163.456,869
27	507.059,232	4.163.440,284
28	507.029,479	4.163.401,853
29	507.022,959	4.163.392,345
30	507.022,658	4.163.368,601
31	507.018,504	4.163.360,667
32	507.020,731	4.163.321,197
33	507.020,765	4.163.307,636
34	507.018,830	4.163.269,980
35	507.023,906	4.163.227,549
36	507.029,296	4.163.209,454
37	507.034,333	4.163.180,680
38	507.035,853	4.163.154,086
39	507.036,970	4.163.143,075
40	507.043,018	4.163.101,650
41	507.049,489	4.163.056,390
42	507.049,312	4.163.019,526

43	507.036,573	4.162.936,144
44	507.036,788	4.162.904,589
45	507.016,552	4.162.845,456
46	507.001,132	4.162.816,775
47	506.991,517	4.162.804,304
48	506.975,802	4.162.774,745
49	506.963,696	4.162.738,270
50	506.959,025	4.162.726,678
51	506.951,206	4.162.710,305
52	506.945,445	4.162.695,212
53	506.932,081	4.162.649,394
54	506.926,450	4.162.621,214
55	506.911,799	4.162.572,676
56	506.908,326	4.162.556,349
57	506.907,467	4.162.549,572
58	506.901,437	4.162.540,738
59	506.884,610	4.162.521,785
60	506.881,028	4.162.518,657
61	506.869,185	4.162.473,913
62	506.852,583	4.162.442,958
63	506.853,706	4.162.418,857
64	506.851,435	4.162.388,382
65	506.844,048	4.162.326,462
66	506.853,883	4.162.287,052
67	506.842,783	4.162.268,119
68	506.832,769	4.162.244,559
69	506.827,960	4.162.227,419
70	506.825,364	4.162.215,341
71	506.823,877	4.162.205,503
72	506.800,766	4.161.928,066
73	506.799,671	4.161.910,597
74	506.826,960	4.161.899,340
75	506.855,284	4.161.878,382
76	506.861,793	4.161.863,598
77	506.880,165	4.161.841,916
78	506.905,829	4.161.829,588
79	506.918,582	4.161.815,366
80	506.934,874	4.161.769,157
81	506.939,409	4.161.740,904
82	506.938,406	4.161.692,308
83	506.965,980	4.161.666,926
84	506.981,733	4.161.668,560
85	506.984,905	4.161.649,748
86	506.977,654	4.161.635,059
87	506.968,326	4.161.619,559

88	506.960,523	4.161.611,267
89	506.952,027	4.161.609,585
90	506.931,469	4.161.575,687
91	506.923,752	4.161.565,046
92	506.895,294	4.161.530,764
93	506.875,805	4.161.513,815
94	506.857,164	4.161.502,291
95	506.836,039	4.161.483,305
96	506.828,337	4.161.465,909
97	506.826,468	4.161.459,814
98	506.823,261	4.161.417,687
99	506.823,103	4.161.408,200
100	506.823,667	4.161.394,992
101	506.823,393	4.161.384,132
102	506.820,952	4.161.358,017
103	506.815,617	4.161.354,682
104	506.784,867	4.161.319,209
105	506.772,406	4.161.298,781
106	506.797,868	4.161.274,848
107	506.788,063	4.161.254,670
108	506.765,429	4.161.253,877
109	506.752,246	4.161.255,293
110	506.742,426	4.161.255,741
111	506.712,018	4.161.255,256
112	506.639,018	4.161.190,381
113	506.623,432	4.161.170,665
114	506.636,542	4.161.153,931
115	506.648,446	4.161.132,754
116	506.658,994	4.161.104,706
117	506.663,083	4.161.063,743
118	506.659,575	4.161.042,110
119	506.665,371	4.161.037,314
120	506.670,715	4.161.032,168
121	506.675,532	4.161.003,563
122	506.676,119	4.160.987,085
123	506.676,708	4.160.970,595
124	506.678,166	4.160.961,948
125	506.683,065	4.160.943,665
126	506.686,536	4.160.929,534
127	506.688,636	4.160.912,835
128	506.685,037	4.160.882,640
129	506.698,749	4.160.878,777
130	506.690,419	4.160.843,574
131	506.690,001	4.160.816,455
132	506.693,279	4.160.800,411

133	506.681,242	4.160.729,259
134	506.656,917	4.160.715,083
135	506.645,572	4.160.704,450
136	506.636,893	4.160.694,398
137	506.627,865	4.160.681,386
138	506.620,282	4.160.666,625
139	506.613,131	4.160.646,562
140	506.610,867	4.160.634,809
141	506.602,566	4.160.613,556
142	506.578,568	4.160.574,804
143	506.568,710	4.160.562,596
144	506.555,760	4.160.550,123
145	506.542,687	4.160.540,447
146	506.530,554	4.160.531,658
147	506.524,916	4.160.521,372
148	506.518,350	4.160.506,187
149	506.514,383	4.160.498,502
150	506.507,647	4.160.488,109
151	506.492,465	4.160.469,084
152	506.478,891	4.160.434,578
153	506.477,549	4.160.416,969
154	506.493,975	4.160.400,499
155	506.493,903	4.160.383,987
156	506.483,601	4.160.377,868
157	506.471,000	4.160.371,925
158	506.456,015	4.160.363,497
159	506.432,684	4.160.340,677
160	506.414,937	4.160.310,696
161	506.404,191	4.160.288,384
162	506.376,290	4.160.300,971
163	506.282,970	4.160.332,225
164	506.223,537	4.160.356,111
165	506.163,728	4.160.383,420
166	506.168,125	4.160.391,701
167	506.173,069	4.160.405,734
168	506.161,026	4.160.413,203
169	506.147,524	4.160.419,119
170	506.137,075	4.160.425,307
171	506.091,781	4.160.460,204
172	506.084,314	4.160.464,966
173	506.048,148	4.160.483,753
174	506.006,137	4.160.510,283
175	505.997,879	4.160.509,824
176	505.948,805	4.160.544,538
177	505.926,575	4.160.550,134

178	505.904,070	4.160.550,478
179	505.886,225	4.160.547,477
180	505.854,356	4.160.535,895
181	505.831,545	4.160.533,217
182	505.808,447	4.160.535,883
183	505.789,472	4.160.536,975
184	505.728,517	4.160.547,465
185	505.716,321	4.160.550,708
186	505.673,185	4.160.572,188
187	505.634,781	4.160.602,251
188	505.606,186	4.160.622,694
189	505.599,768	4.160.626,435
190	505.589,487	4.160.631,208
191	505.583,765	4.160.629,671
192	505.576,588	4.160.626,983
193	505.562,855	4.160.620,275
194	505.538,984	4.160.612,154
195	505.525,761	4.160.609,453
196	505.519,300	4.160.612,036
197	505.486,098	4.160.604,748
198	505.439,177	4.160.586,264
199	505.427,647	4.160.584,037
200	505.418,073	4.160.582,509
201	505.335,846	4.160.556,135
202	505.297,020	4.160.542,628
203	505.295,876	4.160.540,772
204	505.282,477	4.160.530,971
205	505.226,273	4.160.516,938
206	505.190,677	4.160.508,713
207	505.161,592	4.160.500,006
208	505.127,299	4.160.487,318
209	505.100,037	4.160.474,731
210	505.071,255	4.160.463,363
211	507.380,414	4.164.207,005
212	507.396,138	4.164.196,385
213	507.402,408	4.164.193,462
214	507.424,451	4.164.187,164
215	507.413,826	4.164.149,262
216	507.397,928	4.164.104,290
217	507.396,806	4.164.094,513
218	507.397,570	4.164.087,678
219	507.403,965	4.164.074,480
220	507.414,605	4.164.063,958
221	507.431,869	4.164.053,514
222	507.441,808	4.164.040,093

223	507.444,822	4.164.028,195
224	507.444,966	4.164.010,924
225	507.454,015	4.163.993,323
226	507.462,471	4.163.987,165
227	507.455,565	4.163.971,934
228	507.447,862	4.163.941,999
229	507.481,620	4.163.924,564
230	507.424,796	4.164.187,164
231	507.461,429	4.164.179,304
232	507.493,447	4.164.177,690
233	507.513,801	4.164.179,950
234	507.544,547	4.164.178,600
235	507.565,960	4.164.174,296
236	507.586,757	4.164.172,340
237	507.596,468	4.164.170,198
238	507.600,695	4.164.168,182
239	507.214,786	4.163.932,057
240	507.179,695	4.163.954,525
241	507.140,850	4.163.974,402
242	507.117,433	4.163.992,584
243	507.095,119	4.164.005,756
244	507.073,981	4.164.015,078
245	507.065,962	4.164.020,153
246	507.065,086	4.164.020,910
247	507.055,784	4.164.037,479
248	507.047,889	4.164.084,775
249	507.046,202	4.164.090,729
250	507.036,828	4.164.097,908
251	507.024,800	4.164.103,587
252	507.005,684	4.164.107,365
253	506.998,449	4.164.107,937
254	506.945,660	4.164.119,133
255	506.935,918	4.164.113,980
256	506.910,832	4.164.118,485
257	506.907,175	4.164.131,291
258	506.906,375	4.164.138,734
259	506.907,227	4.164.152,060
260	506.894,573	4.164.166,176
261	506.875,274	4.164.197,870
262	506.849,897	4.164.188,815
263	506.829,435	4.164.183,804
264	506.804,407	4.164.177,007
265	506.777,347	4.164.171,104
266	506.770,149	4.164.168,122
267	506.756,689	4.164.159,479

268	506.704,418	4.164.170,561
269	506.696,714	4.164.182,263
270	506.680,427	4.164.180,847
271	506.667,112	4.164.174,126
272	506.644,953	4.164.161,267
273	506.634,506	4.164.155,616
274	506.620,321	4.164.153,282
275	507.103,702	4.163.661,657
276	507.073,249	4.163.678,374
277	507.062,808	4.163.691,189
278	507.057,608	4.163.708,089
279	507.051,418	4.163.717,862
280	507.041,449	4.163.726,968
281	507.031,123	4.163.732,257
282	507.114,748	4.163.656,281
283	507.103,702	4.163.661,657
284	507.078,744	4.163.648,195
285	506.990,520	4.163.606,692
286	506.877,352	4.163.555,513
287	506.820,528	4.163.528,269
288	506.759,479	4.163.501,453
289	506.750,598	4.163.498,508
290	506.722,657	4.163.492,070
291	506.714,532	4.163.488,987
292	506.665,143	4.163.462,079
293	506.519,282	4.163.367,434
294	506.497,337	4.163.357,516
295	506.469,624	4.163.349,745
296	506.440,427	4.163.374,019
297	506.434,158	4.163.381,414
298	506.419,130	4.163.407,110
299	506.415,388	4.163.415,029
300	506.388,882	4.163.486,798
301	506.402,037	4.163.500,545
302	506.403,177	4.163.509,409
303	506.416,602	4.163.550,435
304	506.431,817	4.163.569,090
305	506.440,759	4.163.588,228
306	506.449,417	4.163.598,364
307	506.474,832	4.163.615,528
308	506.483,969	4.163.619,335
309	506.501,358	4.163.622,777
310	506.517,629	4.163.630,599
311	506.523,541	4.163.629,636
312	506.538,371	4.163.620,030

313	506.543,657	4.163.612,011
314	506.565,986	4.163.602,479
315	506.578,731	4.163.601,008
316	506.583,489	4.163.598,936
317	506.583,489	4.163.598,936
318	506.469,624	4.163.349,745
319	506.374,880	4.163.326,458
320	506.379,671	4.163.307,824
321	506.383,884	4.163.299,455
322	506.442,137	4.163.227,547
323	506.471,697	4.163.189,010
324	506.495,294	4.163.160,715
325	506.518,857	4.163.127,568
326	506.536,446	4.163.106,019
327	507.089,129	4.163.469,886
328	507.122,216	4.163.435,855
329	507.136,920	4.163.425,401
330	507.178,434	4.163.406,027
331	507.208,389	4.163.397,408
332	507.265,481	4.163.390,311
333	507.301,338	4.163.383,539
334	507.381,840	4.163.351,933
335	507.392,415	4.163.343,181
336	507.043,018	4.163.101,650
337	507.041,545	4.163.101,520
338	507.003,290	4.163.113,690
339	506.982,637	4.163.131,239
340	506.951,993	4.163.146,881
341	506.921,757	4.163.158,435
342	506.917,737	4.163.159,548
343	506.880,484	4.163.166,140
344	506.859,605	4.163.166,826
345	506.841,264	4.163.158,013
346	506.839,608	4.163.155,799
347	506.817,744	4.163.147,388
348	506.799,975	4.163.143,153
349	506.795,322	4.163.139,527
350	506.795,322	4.163.139,527
351	506.932,081	4.162.649,394
352	506.925,709	4.162.653,042
353	506.911,573	4.162.666,699
354	506.901,440	4.162.683,064
355	506.897,738	4.162.692,061
356	506.888,433	4.162.703,964
357	506.863,338	4.162.722,420

358	506.858,690	4.162.718,129
359	506.849,393	4.162.725,876
360	506.829,609	4.162.737,675
361	506.789,389	4.162.750,697
362	506.781,580	4.162.753,979
363	506.723,554	4.162.784,391
364	506.714,632	4.162.790,369
365	506.703,075	4.162.798,493
366	506.689,275	4.162.803,493
367	506.673,732	4.162.795,545
368	506.647,531	4.162.795,920
369	506.627,189	4.162.807,065
370	506.616,744	4.162.811,660
371	506.601,791	4.162.827,484
372	506.580,863	4.162.845,172
373	506.557,632	4.162.849,649
374	506.551,974	4.162.851,832
375	506.523,497	4.162.851,647
376	506.482,193	4.162.863,101
377	506.459,461	4.162.876,681
378	506.443,540	4.162.883,456
379	506.426,662	4.162.891,298
380	506.421,375	4.162.897,586
381	506.405,799	4.162.905,392
382	506.388,670	4.162.911,030
383	506.376,491	4.162.918,984
384	506.358,129	4.162.924,672
385	506.344,954	4.162.924,964
386	506.332,374	4.162.927,604
387	506.322,380	4.162.930,091
388	506.265,881	4.162.935,546
389	506.250,444	4.162.933,559
390	506.226,852	4.162.933,361
391	506.198,463	4.162.943,255
392	506.160,955	4.162.950,847
393	506.126,890	4.162.961,369
394	506.094,286	4.162.976,416
395	506.060,380	4.162.989,853
396	506.051,761	4.162.992,053
397	506.026,307	4.162.995,187
398	506.019,543	4.162.996,903
399	506.901,440	4.162.683,064
400	506.894,454	4.162.678,716
401	506.897,738	4.162.692,061
402	506.899,878	4.162.709,758

403	506.904,218	4.162.726,947
404	506.915,130	4.162.754,729
405	506.925,590	4.162.777,334
406	506.937,927	4.162.801,478
407	506.945,051	4.162.816,605
408	506.947,346	4.162.823,977
409	506.948,869	4.162.833,213
410	506.942,887	4.162.837,368
411	506.160,955	4.162.950,847
412	506.158,626	4.162.944,776
413	506.852,583	4.162.442,958
414	506.825,794	4.162.459,082
415	506.825,794	4.162.459,082
416	506.851,435	4.162.388,382
417	506.775,382	4.162.381,134
418	506.746,945	4.162.386,879
419	506.729,853	4.162.396,076
420	506.660,882	4.162.420,810
421	506.645,419	4.162.423,110
422	506.628,806	4.162.429,505
423	506.605,671	4.162.438,198
424	506.563,183	4.162.449,220
425	506.547,499	4.162.459,333
426	506.526,330	4.162.488,296
427	506.518,495	4.162.517,259
428	506.523,115	4.162.537,424
429	506.536,805	4.162.553,199
430	506.523,274	4.162.558,433
431	506.510,382	4.162.568,563
432	506.498,582	4.162.573,191
433	506.490,295	4.162.575,562
434	506.473,057	4.162.584,446
435	506.446,595	4.162.595,073
436	506.427,576	4.162.608,571
437	506.393,992	4.162.619,786
438	506.375,382	4.162.615,858
439	506.335,102	4.162.615,646
440	506.334,208	4.162.622,698
441	506.799,671	4.161.910,597
442	506.786,781	4.161.906,373
443	506.770,930	4.161.898,663
444	506.763,948	4.161.884,243
445	506.759,909	4.161.870,713
446	506.749,809	4.161.845,238
447	506.745,492	4.161.836,793

448	506.737,496	4.161.824,247
449	506.728,211	4.161.804,052
450	506.757,679	4.161.783,273
451	506.750,591	4.161.771,544
452	506.746,353	4.161.762,656
453	506.731,437	4.161.741,307
454	506.705,192	4.161.719,312
455	506.694,669	4.161.712,537
456	506.684,804	4.161.707,814
457	506.675,589	4.161.716,635
458	506.648,091	4.161.730,011
459	506.634,997	4.161.731,882
460	506.609,772	4.161.743,212
461	506.574,641	4.161.772,943
462	506.565,292	4.161.779,197
463	506.545,990	4.161.789,170
464	506.527,257	4.161.797,512
465	506.509,043	4.161.801,790
466	506.486,537	4.161.809,910
467	506.471,791	4.161.821,119
468	506.464,489	4.161.825,732
469	506.452,425	4.161.834,463
470	506.448,230	4.161.838,580
471	506.441,085	4.161.844,402
472	506.409,307	4.161.865,742
473	506.396,718	4.161.871,840
474	506.382,420	4.161.879,137
475	506.366,379	4.161.853,415
476	506.344,846	4.161.815,458
477	506.327,676	4.161.795,327
478	506.303,812	4.161.776,246
479	506.287,966	4.161.767,721
480	506.270,648	4.161.762,123
481	506.246,736	4.161.757,782
482	506.238,089	4.161.755,394
483	506.225,163	4.161.750,539
484	506.200,474	4.161.744,735
485	506.184,962	4.161.743,575
486	506.170,446	4.161.744,760
487	506.149,056	4.161.751,562
488	506.138,765	4.161.756,172
489	506.129,089	4.161.759,253
490	506.115,105	4.161.764,218
491	506.109,233	4.161.765,812
492	506.099,199	4.161.762,294

493	506.087,812	4.161.756,503
494	506.068,262	4.161.752,183
495	506.037,549	4.161.753,272
496	506.019,619	4.161.749,730
497	505.971,100	4.161.727,740
498	505.936,997	4.161.721,879
499	505.930,815	4.161.712,323
500	505.931,477	4.161.703,863
501	505.926,145	4.161.685,124
502	505.919,700	4.161.676,331
503	505.915,435	4.161.667,729
504	505.908,217	4.161.643,360
505	505.904,241	4.161.635,159
506	505.885,809	4.161.609,061
507	505.869,608	4.161.575,698
508	505.852,305	4.161.547,958
509	505.839,239	4.161.516,909
510	505.835,619	4.161.510,690
511	505.821,794	4.161.492,730
512	505.786,405	4.161.437,353
513	505.747,535	4.161.375,618
514	505.743,282	4.161.358,994
515	505.744,556	4.161.338,108
516	505.722,229	4.161.332,321
517	505.702,631	4.161.313,886
518	505.698,264	4.161.300,473
519	505.689,281	4.161.298,291
520	505.667,781	4.161.303,049
521	505.654,585	4.161.313,587
522	505.635,565	4.161.324,401
523	505.628,278	4.161.316,134
524	505.622,963	4.161.298,767
525	505.626,652	4.161.270,217
526	505.494,831	4.161.258,597
527	505.473,848	4.161.259,209
528	505.465,158	4.161.257,693
529	505.411,928	4.161.236,768
530	506.737,496	4.161.824,247
531	506.731,824	4.161.825,483
532	506.717,533	4.161.823,779
533	506.686,447	4.161.838,815
534	506.682,025	4.161.858,789
535	506.673,245	4.161.871,997
536	506.652,467	4.161.886,688
537	506.644,859	4.161.890,126

538	506.620,785	4.161.895,855
539	506.621,042	4.161.907,914
540	506.382,420	4.161.879,137
541	506.378,430	4.161.884,029
542	505.936,997	4.161.721,879
543	505.918,067	4.161.723,591
544	505.873,351	4.161.711,882
545	505.852,546	4.161.714,556
546	505.840,610	4.161.721,261
547	505.828,731	4.161.724,788
548	505.791,875	4.161.727,205
549	505.804,002	4.161.766,449
550	505.805,249	4.161.775,005
551	505.805,117	4.161.787,795
552	505.791,928	4.161.811,269
553	505.779,109	4.161.830,487
554	505.776,823	4.161.844,384
555	505.752,678	4.161.846,062
556	505.718,794	4.161.869,958
557	505.705,402	4.161.900,626
558	505.696,491	4.161.940,964
559	505.693,417	4.161.950,355
560	505.686,359	4.161.966,358
561	505.682,726	4.161.978,690
562	505.680,267	4.161.994,175
563	505.680,427	4.162.010,814
564	505.681,979	4.162.019,500
565	505.678,632	4.162.026,379
566	505.621,514	4.162.026,627
567	505.571,025	4.162.023,161
568	505.562,278	4.162.149,075
569	505.563,487	4.162.162,015
570	505.635,565	4.161.324,401
571	505.638,065	4.161.336,104
572	505.636,550	4.161.349,863
573	505.617,325	4.161.391,825
574	505.611,896	4.161.399,891
575	505.604,859	4.161.407,367
576	505.596,758	4.161.429,729
577	505.597,425	4.161.440,812
578	505.592,985	4.161.458,406
579	506.981,733	4.161.668,560
580	506.999,959	4.161.671,275
581	507.028,559	4.161.662,647
582	507.058,095	4.161.636,006

583	507.072,018	4.161.614,756
584	507.081,706	4.161.585,830
585	507.091,512	4.161.568,757
586	507.120,325	4.161.536,621
587	507.129,194	4.161.511,003
588	507.128,828	4.161.505,333
589	507.141,281	4.161.495,476
590	507.134,804	4.161.485,177
591	507.142,597	4.161.477,739
592	507.199,446	4.161.432,100
593	507.226,956	4.161.389,192
594	507.261,626	4.161.347,344
595	507.300,977	4.161.336,775
596	507.450,000	4.161.323,056
597	507.502,177	4.161.316,702
598	507.551,316	4.161.313,880
599	507.667,982	4.161.318,359
600	507.699,584	4.161.322,116
601	507.723,882	4.161.321,285
602	507.781,554	4.161.310,388
603	507.826,435	4.161.310,343
604	507.843,639	4.161.308,653
605	507.866,398	4.161.303,692
606	508.003,570	4.161.256,497
607	508.024,244	4.161.250,929
608	508.038,015	4.161.244,715
609	508.067,093	4.161.234,969
610	508.105,047	4.161.227,863
611	508.116,082	4.161.227,347
612	508.154,734	4.161.220,006
613	508.195,218	4.161.206,199
614	508.208,669	4.161.205,957
615	507.141,281	4.161.495,476
616	507.163,927	4.161.524,411
617	507.172,522	4.161.531,045
618	507.442,321	4.161.552,183
619	507.483,676	4.161.522,032
620	507.515,724	4.161.491,627
621	507.526,694	4.161.476,340
622	507.535,641	4.161.456,991
623	507.536,970	4.161.446,391
624	507.551,777	4.161.413,863
625	507.588,878	4.161.372,370
626	507.613,904	4.161.353,569
627	507.671,240	4.161.326,055

628	507.667,982	4.161.318,359
629	507.535,641	4.161.456,991
630	507.553,551	4.161.465,247
631	507.559,818	4.161.467,354
632	507.570,991	4.161.468,103
633	507.826,435	4.161.310,343
634	507.825,253	4.161.295,189
635	506.826,468	4.161.459,814
636	506.816,886	4.161.462,810
637	506.789,551	4.161.477,703
638	506.771,595	4.161.492,664
639	506.762,538	4.161.506,690
640	506.742,560	4.161.505,732
641	506.720,455	4.161.496,042
642	506.705,593	4.161.493,921
643	506.698,312	4.161.498,270
644	506.676,167	4.161.516,566
645	506.662,367	4.161.522,687
646	506.598,872	4.161.531,930
647	506.527,158	4.161.545,979
648	506.452,607	4.161.559,683
649	506.451,453	4.161.543,247
650	506.449,015	4.161.534,619
651	506.446,540	4.161.523,602
652	506.447,410	4.161.501,051
653	506.431,322	4.161.502,888
654	506.406,215	4.161.497,823
655	506.386,992	4.161.484,759
656	506.365,787	4.161.452,120
657	506.359,907	4.161.437,105
658	506.334,068	4.161.416,369
659	506.287,456	4.161.418,611
660	506.261,326	4.161.416,484
661	506.232,904	4.161.420,014
662	506.224,741	4.161.422,229
663	506.210,110	4.161.428,527
664	506.189,197	4.161.431,460
665	506.181,686	4.161.430,494
666	506.169,690	4.161.432,327
667	506.131,542	4.161.403,728
668	506.122,814	4.161.387,951
669	506.098,312	4.161.357,430
670	506.090,960	4.161.355,148
671	506.080,841	4.161.354,455
672	506.038,201	4.161.348,061

673	506.011,604	4.161.334,820
674	506.452,607	4.161.559,683
675	506.444,265	4.161.591,910
676	506.447,410	4.161.501,051
677	506.450,166	4.161.452,639
678	506.454,216	4.161.441,119
679	506.460,418	4.161.432,419
680	506.460,418	4.161.432,419
681	506.784,867	4.161.319,209
682	506.795,039	4.161.313,802
683	506.804,655	4.161.310,747
684	506.827,993	4.161.316,886
685	506.832,152	4.161.308,887
686	506.875,887	4.161.311,116
687	506.913,668	4.161.327,079
688	506.920,315	4.161.333,253
689	506.956,720	4.161.347,947
690	506.982,931	4.161.348,436
691	506.665,371	4.161.037,314
692	506.654,543	4.161.030,345
693	506.608,821	4.161.012,649
694	506.584,393	4.161.013,197
695	506.560,903	4.161.014,092
696	506.537,774	4.161.005,961
697	506.522,029	4.160.993,919
698	506.520,862	4.160.992,224
699	506.504,091	4.160.984,981
700	506.492,948	4.160.984,954
701	506.478,102	4.160.984,033
702	506.442,193	4.160.973,070
703	506.412,275	4.160.978,029
704	506.400,923	4.160.975,437
705	506.391,645	4.160.989,927
706	506.390,313	4.160.995,934
707	506.388,052	4.161.002,120
708	506.382,020	4.161.013,637
709	506.375,836	4.161.030,788
710	506.333,059	4.161.047,445
711	506.317,081	4.161.049,326
712	506.300,505	4.161.052,839
713	506.260,073	4.161.077,884
714	506.246,755	4.161.081,631
715	506.227,281	4.161.081,512
716	506.217,992	4.161.079,661
717	506.216,729	4.161.079,146

718	506.214,211	4.161.072,496
719	506.204,037	4.161.060,120
720	506.187,632	4.161.049,913
721	506.177,980	4.161.038,810
722	506.171,274	4.161.029,853
723	506.133,745	4.161.035,121
724	506.097,745	4.161.040,933
725	506.080,878	4.161.041,886
726	506.039,965	4.161.030,123
727	505.999,707	4.161.019,616
728	505.990,348	4.161.015,860
729	505.981,592	4.161.010,984
730	505.964,201	4.161.009,247
731	505.938,144	4.161.017,562
732	505.921,862	4.161.026,698
733	505.899,904	4.161.026,451
734	505.892,757	4.161.023,397
735	505.851,916	4.161.011,920
736	505.781,314	4.161.007,372
737	505.767,859	4.161.009,341
738	505.757,885	4.161.013,478
739	505.728,334	4.161.021,025
740	506.613,131	4.160.646,562
741	506.641,746	4.160.631,888
742	506.651,488	4.160.628,734
743	506.686,729	4.160.616,248
744	506.705,885	4.160.612,024
745	506.717,209	4.160.613,097
746	506.732,535	4.160.612,182
747	506.781,162	4.160.601,625
748	506.784,337	4.160.580,105
749	506.786,903	4.160.572,573
750	506.809,225	4.160.532,682
751	506.841,307	4.160.497,125
752	506.846,330	4.160.487,738
753	505.986,761	4.160.676,188
754	505.982,993	4.160.666,960
755	505.981,614	4.160.658,361
756	505.996,601	4.160.622,365
757	505.991,558	4.160.603,454
758	505.986,957	4.160.557,644
759	505.990,464	4.160.543,360
760	506.001,558	4.160.526,484
761	506.004,888	4.160.517,940
762	506.006,137	4.160.510,283

763	505.728,517	4.160.547,465
764	505.739,127	4.160.509,324
765	505.757,604	4.160.459,916
766	505.769,966	4.160.418,828
767	505.777,216	4.160.385,649
768	505.787,477	4.160.358,047
769	505.785,784	4.160.339,169
770	505.782,879	4.160.325,253
771	505.785,999	4.160.300,061
772	505.780,021	4.160.252,378
773	505.775,510	4.160.241,022
774	505.773,963	4.160.232,335
775	505.774,501	4.160.211,346
776	505.770,954	4.160.198,792
777	505.743,178	4.160.156,060
778	505.727,615	4.160.126,327
779	505.758,967	4.160.681,082
780	505.723,119	4.160.698,429
781	505.705,542	4.160.704,984
782	505.679,868	4.160.697,037
783	505.676,759	4.160.692,623
784	505.658,261	4.160.683,296
785	505.606,207	4.160.684,503
786	505.590,575	4.160.678,488
787	505.587,795	4.160.666,708
788	505.589,457	4.160.631,310

PUNTOS REPLANTEO TUBERÍA G-2

PUNTO	X	Y
1	507.541,757	4.167.899,938
2	507.535,614	4.167.901,981
3	507.404,689	4.167.880,413
4	507.386,810	4.167.876,248
5	507.351,596	4.167.865,567
6	507.284,310	4.167.862,101
7	507.259,870	4.167.866,840
8	507.245,731	4.167.870,354
9	507.230,434	4.167.875,013
10	507.205,675	4.167.880,166
11	507.184,986	4.167.876,458
12	507.114,045	4.167.858,153
13	507.097,538	4.167.875,700
14	507.032,815	4.167.876,451

15	507.020,007	4.167.863,794
16	506.997,780	4.167.835,263
17	506.982,114	4.167.808,665
18	506.963,622	4.167.783,967
19	506.948,694	4.167.768,280
20	506.936,437	4.167.755,061
21	506.909,832	4.167.720,464
22	506.894,558	4.167.692,443
23	506.839,438	4.167.669,758
24	506.732,212	4.167.595,620
25	506.702,335	4.167.579,911
26	506.560,658	4.167.526,058
27	506.536,971	4.167.519,368
28	506.522,826	4.167.515,919
29	506.470,810	4.167.500,326
30	506.424,803	4.167.494,551
31	506.398,793	4.167.483,746
32	506.367,789	4.167.467,029
33	506.349,991	4.167.455,620
34	506.342,119	4.167.441,810
35	506.307,400	4.167.371,960
36	506.294,315	4.167.320,508
37	506.292,769	4.167.278,446
38	506.295,913	4.167.245,471
39	506.304,890	4.167.206,586
40	506.312,022	4.167.175,405
41	506.320,311	4.167.150,991
42	506.331,768	4.167.097,569
43	506.331,408	4.167.048,214
44	506.309,455	4.166.923,719
45	506.318,623	4.166.850,167
46	506.325,074	4.166.835,821
47	506.301,096	4.166.821,890
48	506.282,645	4.166.754,266
49	506.293,338	4.166.721,303
50	506.293,688	4.166.719,334
51	506.349,730	4.166.635,300
52	506.353,097	4.166.633,140
53	506.392,370	4.166.593,143
54	506.414,820	4.166.566,053
55	506.423,701	4.166.556,486
56	506.440,218	4.166.541,581
57	506.453,241	4.166.531,767
58	506.461,034	4.166.525,391
59	506.473,531	4.166.514,305

60	506.494,308	4.166.499,348
61	506.530,114	4.166.468,524
62	506.557,375	4.166.434,216
63	506.578,473	4.166.383,024
64	506.580,954	4.166.360,642
65	506.612,344	4.166.330,096
66	506.638,923	4.166.327,233
67	506.683,679	4.166.313,685
68	506.706,447	4.166.304,511
69	506.734,499	4.166.292,419
70	506.767,000	4.166.240,049
71	506.774,542	4.166.216,371
72	506.785,624	4.166.177,245
73	506.788,304	4.166.165,757
74	506.798,092	4.166.112,674
75	506.805,388	4.166.087,806
76	506.814,772	4.166.040,493
77	506.803,903	4.166.027,082
78	506.800,960	4.165.996,454
79	506.797,648	4.165.977,439
80	506.793,760	4.165.945,814
81	506.793,974	4.165.897,705
82	506.793,167	4.165.858,817
83	506.793,368	4.165.848,620
84	506.795,083	4.165.820,169
85	506.795,234	4.165.738,092
86	506.797,945	4.165.712,328
87	506.809,073	4.165.659,553
88	506.810,001	4.165.644,423
89	506.811,332	4.165.632,328
90	506.813,765	4.165.617,046
91	506.815,297	4.165.600,218
92	506.816,635	4.165.543,705
93	506.819,211	4.165.521,170
94	506.839,302	4.165.424,024
95	506.841,893	4.165.400,782
96	506.842,727	4.165.354,655
97	506.845,938	4.165.290,682
98	506.846,044	4.165.280,736
99	506.845,521	4.165.262,606
100	506.843,414	4.165.233,867
101	506.843,239	4.165.218,256
102	506.848,196	4.165.120,765
103	506.847,712	4.165.101,621
104	506.848,798	4.165.068,050

105	506.850,024	4.165.035,936
106	506.849,544	4.165.022,014
107	506.850,315	4.164.985,121
108	506.834,291	4.164.920,948
109	506.826,609	4.164.907,224
110	506.754,308	4.164.801,159
111	506.753,297	4.164.791,200
112	506.734,014	4.164.775,201
113	506.704,644	4.164.739,994
114	506.692,561	4.164.718,509
115	506.660,167	4.164.683,858
116	506.601,631	4.164.645,542
117	506.582,191	4.164.630,397
118	506.504,065	4.164.558,477
119	506.371,583	4.164.436,094
120	506.355,130	4.164.417,580
121	506.334,924	4.164.389,757
122	506.313,532	4.164.350,417
123	506.194,754	4.164.154,091
124	506.185,526	4.164.134,190
125	506.200,069	4.164.075,649
126	506.213,508	4.164.009,094
127	506.130,379	4.163.977,619
128	506.114,311	4.163.970,823
129	506.072,183	4.163.941,708
130	506.065,536	4.163.935,229
131	506.029,181	4.163.902,320
132	505.985,196	4.163.865,407
133	505.938,823	4.163.843,623
134	505.916,381	4.163.839,537
135	505.905,639	4.163.838,056
136	505.882,645	4.163.833,705
137	505.825,343	4.163.817,227
138	505.816,151	4.163.814,197
139	505.789,745	4.163.804,353
140	505.772,274	4.163.799,244
141	505.533,534	4.163.747,798
142	505.518,030	4.163.745,455
143	505.487,572	4.163.738,910
144	505.365,707	4.163.696,406
145	505.314,511	4.163.682,655
146	505.254,403	4.163.662,224
147	505.239,464	4.163.685,801
148	505.214,081	4.163.699,614
149	505.166,310	4.163.717,236

150	505.126,082	4.163.744,729
151	505.114,127	4.163.758,218
152	505.096,494	4.163.775,383
153	505.088,813	4.163.772,209
154	505.018,625	4.163.835,960
155	505.006,945	4.163.845,364
156	504.915,791	4.163.910,206
157	504.903,948	4.163.895,712
158	504.818,963	4.163.869,716
159	504.717,006	4.163.900,370
160	504.679,865	4.163.902,504
161	504.560,605	4.163.881,138
162	504.526,658	4.163.866,351
163	504.472,103	4.163.825,362
164	504.447,261	4.163.794,360
165	504.485,010	4.163.700,385
166	504.490,635	4.163.675,297
167	504.489,902	4.163.669,812
168	504.423,592	4.163.628,067
169	504.334,547	4.163.657,000
170	504.295,778	4.163.667,850
171	504.232,669	4.163.625,745
172	504.226,594	4.163.575,862
173	504.181,174	4.163.540,091
174	504.163,237	4.163.546,648
175	504.132,987	4.163.566,706
176	504.102,540	4.163.592,139
177	503.930,425	4.163.771,621
178	503.866,039	4.163.762,337
179	503.858,639	4.163.748,056
180	503.840,578	4.163.730,467
181	503.817,061	4.163.728,544
182	503.805,126	4.163.725,678
183	503.772,157	4.163.712,139
184	503.748,841	4.163.685,948
185	503.742,862	4.163.672,582
186	503.730,531	4.163.653,242
187	503.700,851	4.163.634,951
188	503.600,964	4.163.624,791
189	503.603,544	4.163.604,214
190	503.620,619	4.163.538,626
191	503.638,651	4.163.514,463
192	503.724,975	4.163.462,331
193	503.734,088	4.163.454,784
194	503.735,904	4.163.445,073

195	503.740,001	4.163.378,154
196	503.762,148	4.163.344,766
197	503.813,198	4.163.319,437
198	503.834,824	4.163.290,487
199	503.842,048	4.163.249,121
200	503.842,048	4.163.249,121
201	503.854,997	4.163.175,227
202	503.866,169	4.163.117,934
203	503.884,438	4.163.093,959
204	503.923,612	4.163.070,831
205	503.965,243	4.163.040,021
206	504.071,710	4.162.942,636
207	504.082,666	4.162.935,509
208	504.099,679	4.162.921,391
209	504.110,447	4.162.905,588
210	504.117,498	4.162.891,380
211	504.120,805	4.162.885,376
212	504.151,851	4.162.834,319
213	504.181,475	4.162.799,161
214	504.212,007	4.162.772,558
215	504.240,734	4.162.753,992
216	504.259,986	4.162.745,146
217	504.258,388	4.162.741,131
218	504.232,455	4.162.717,531
219	504.139,487	4.162.690,331
220	504.101,170	4.162.688,699
221	504.080,945	4.162.692,788
222	504.062,793	4.162.678,898
223	504.087,530	4.162.639,906
224	504.117,499	4.162.615,729
225	504.143,293	4.162.606,251
226	504.150,445	4.162.600,964
227	504.166,251	4.162.574,570
228	504.169,467	4.162.560,972
229	504.174,053	4.162.547,119
230	504.181,473	4.162.530,980
231	504.188,100	4.162.519,979
232	504.196,324	4.162.501,266
233	504.188,511	4.162.485,143
234	504.112,483	4.162.364,799
235	504.114,767	4.162.359,256
236	504.117,775	4.162.331,525
237	504.100,655	4.162.234,491
238	504.099,317	4.162.211,074
239	504.110,670	4.162.023,512

240	504.108,707	4.162.008,497
241	504.108,626	4.161.970,952
242	504.123,863	4.161.924,356
243	504.148,901	4.161.867,166
244	504.160,969	4.161.835,990
245	504.184,464	4.161.803,326
246	504.202,402	4.161.782,183
247	504.219,961	4.161.752,175
248	504.269,909	4.161.780,323
249	504.313,861	4.161.788,681
250	504.340,957	4.161.784,936
251	504.353,797	4.161.804,541
252	504.364,583	4.161.816,344
253	504.402,138	4.161.846,085
254	504.438,721	4.161.850,339
255	504.454,735	4.161.842,834
256	504.479,717	4.161.841,023
257	504.511,822	4.161.850,729
258	504.546,324	4.161.858,974
259	504.599,222	4.161.867,263
260	504.641,155	4.161.866,414
261	504.664,694	4.161.861,743
262	504.684,864	4.161.863,723
263	504.728,349	4.161.881,678
264	504.744,424	4.161.884,221
265	504.764,508	4.161.888,728
266	504.809,152	4.161.914,243
267	504.831,082	4.161.923,512
268	504.839,905	4.161.911,591
269	504.863,229	4.161.863,388
270	504.873,279	4.161.832,561
271	504.881,730	4.161.786,023
272	504.903,522	4.161.757,233
273	504.964,803	4.161.727,281
274	504.954,986	4.161.701,625
275	504.942,053	4.161.672,742
276	504.922,098	4.161.654,163
277	504.903,827	4.161.647,502
278	504.861,198	4.161.634,493
279	504.821,064	4.161.614,433
280	504.808,591	4.161.604,102
281	504.799,569	4.161.586,078
282	504.797,915	4.161.552,471
283	504.792,993	4.161.533,170
284	504.773,276	4.161.492,378

285	504.755,750	4.161.472,373
286	504.732,755	4.161.457,235
287	504.731,333	4.161.441,051
288	504.721,532	4.161.419,017
289	504.689,007	4.161.395,477
290	504.663,670	4.161.392,916
291	504.643,886	4.161.371,421
292	504.642,755	4.161.308,305
293	504.603,938	4.161.225,106
294	504.590,637	4.161.193,472
295	504.579,846	4.161.181,371
296	504.567,410	4.161.163,500
297	504.564,228	4.161.143,454
298	504.542,457	4.161.074,486
299	504.543,628	4.161.059,548
300	504.550,306	4.161.046,143
301	504.553,845	4.161.010,899
302	504.552,668	4.161.006,509
303	504.538,250	4.160.989,954
304	504.526,628	4.160.985,044
305	504.515,550	4.160.959,966
306	504.515,171	4.160.942,323
307	504.506,750	4.160.921,376
308	504.484,491	4.160.883,176
309	504.482,291	4.160.862,940
310	504.485,479	4.160.853,019
311	506.304,890	4.167.206,586
312	506.290,142	4.167.209,443
313	506.276,594	4.167.207,752
314	506.258,798	4.167.199,381
315	506.237,072	4.167.201,090
316	506.229,142	4.167.206,477
317	506.215,808	4.167.210,257
318	506.178,614	4.167.208,610
319	506.154,208	4.167.198,897
320	506.098,652	4.167.150,822
321	506.030,953	4.167.209,375
322	506.013,659	4.167.214,543
323	505.993,911	4.167.211,915
324	505.957,680	4.167.213,584
325	505.937,088	4.167.211,750
326	505.930,951	4.167.210,296
327	505.918,360	4.167.205,319
328	505.907,324	4.167.203,977
329	505.894,517	4.167.205,709

330	506.331,408	4.167.048,214
331	506.305,179	4.167.051,376
332	506.299,201	4.167.051,279
333	506.284,144	4.167.048,962
334	506.284,144	4.167.048,962
335	506.282,645	4.166.754,266
336	506.252,653	4.166.759,092
337	506.203,947	4.166.762,530
338	506.168,801	4.166.743,230
339	506.141,665	4.166.693,083
340	506.126,154	4.166.673,237
341	506.109,739	4.166.675,154
342	506.003,724	4.166.561,515
343	505.968,302	4.166.614,619
344	505.938,716	4.166.655,591
345	505.917,809	4.166.686,621
346	505.905,305	4.166.696,258
347	505.897,118	4.166.694,782
348	505.888,128	4.166.682,266
349	505.880,559	4.166.668,893
350	505.868,571	4.166.654,632
351	505.857,215	4.166.644,081
352	505.842,923	4.166.637,544
353	505.831,200	4.166.636,259
354	505.811,731	4.166.627,599
355	505.787,057	4.166.605,614
356	505.769,983	4.166.591,616
357	505.700,731	4.166.561,438
358	505.689,155	4.166.549,592
359	505.675,749	4.166.516,787
360	505.673,213	4.166.502,496
361	505.669,437	4.166.493,831
362	505.654,696	4.166.469,237
363	505.613,825	4.166.426,652
364	505.605,381	4.166.412,276
365	505.586,844	4.166.401,424
366	505.546,355	4.166.400,628
367	505.546,705	4.166.425,164
368	505.539,844	4.166.441,443
369	505.502,466	4.166.476,884
370	505.487,181	4.166.487,111
371	505.478,688	4.166.498,021
372	505.475,490	4.166.503,941
373	505.450,741	4.166.536,575
374	505.425,179	4.166.566,794

375	505.410,987	4.166.581,116
376	505.407,224	4.166.583,757
377	505.398,083	4.166.598,652
378	506.003,724	4.166.561,515
379	505.941,906	4.166.493,912
380	505.938,062	4.166.488,056
381	505.936,680	4.166.484,968
382	505.928,109	4.166.475,209
383	505.920,265	4.166.470,394
384	505.913,949	4.166.467,765
385	505.897,489	4.166.463,766
386	506.580,954	4.166.360,642
387	506.565,545	4.166.360,541
388	506.512,351	4.166.354,975
389	506.499,101	4.166.352,045
390	506.438,052	4.166.331,071
391	506.400,563	4.166.311,950
392	506.351,171	4.166.276,857
393	506.344,730	4.166.271,144
394	506.321,265	4.166.258,513
395	506.316,233	4.166.246,968
396	506.306,021	4.166.234,094
397	506.299,705	4.166.227,851
398	506.305,431	4.166.214,199
399	506.318,759	4.166.195,941
400	506.332,472	4.166.169,660
401	506.324,030	4.166.165,429
402	506.308,392	4.166.152,658
403	506.287,500	4.166.129,237
404	506.276,201	4.166.111,642
405	506.267,858	4.166.095,642
406	506.263,379	4.166.061,700
407	506.266,465	4.166.047,780
408	506.258,833	4.166.015,560
409	506.251,950	4.166.007,107
410	506.245,083	4.165.995,957
411	506.241,555	4.165.988,075
412	506.238,073	4.165.972,445
413	506.237,598	4.165.945,585
414	506.236,019	4.165.928,071
415	506.214,446	4.165.908,050
416	506.201,098	4.165.907,845
417	506.170,610	4.165.903,421
418	506.140,683	4.165.895,048
419	506.075,411	4.165.872,538

420	506.025,107	4.165.863,560
421	505.981,531	4.165.840,289
422	505.975,977	4.165.834,519
423	505.955,649	4.165.810,510
424	505.934,817	4.165.787,330
425	505.915,986	4.165.772,964
426	505.900,009	4.165.756,687
427	505.885,378	4.165.736,749
428	505.846,207	4.165.708,192
429	505.804,519	4.165.694,279
430	505.773,899	4.165.675,578
431	505.743,239	4.165.645,580
432	506.321,265	4.166.258,513
433	506.310,422	4.166.256,084
434	506.280,133	4.166.244,843
435	506.244,965	4.166.226,068
436	506.232,420	4.166.223,134
437	506.208,096	4.166.223,884
438	506.163,318	4.166.222,378
439	506.124,840	4.166.216,340
440	506.072,070	4.166.201,300
441	506.037,141	4.166.192,324
442	506.011,422	4.166.182,375
443	505.995,844	4.166.177,096
444	505.952,936	4.166.167,628
445	505.933,606	4.166.165,879
446	505.975,977	4.165.834,519
447	505.984,929	4.165.828,666
448	506.795,083	4.165.820,169
449	506.768,285	4.165.805,286
450	506.732,771	4.165.783,285
451	506.725,487	4.165.777,794
452	506.714,678	4.165.767,977
453	506.684,841	4.165.748,111
454	506.629,046	4.165.722,014
455	506.614,667	4.165.700,565
456	506.614,273	4.165.692,349
457	506.809,073	4.165.659,553
458	506.794,751	4.165.642,010
459	506.476,003	4.165.380,915
460	506.340,976	4.165.272,655
461	506.281,512	4.165.221,347
462	506.252,675	4.165.207,676
463	506.237,911	4.165.205,088
464	506.199,326	4.165.203,373

465	506.098,558	4.165.211,926
466	506.070,531	4.165.213,895
467	506.059,276	4.165.216,000
468	506.029,354	4.165.225,244
469	506.022,824	4.165.217,383
470	506.022,703	4.165.217,262
471	506.268,785	4.165.212,929
472	506.272,731	4.165.201,706
473	506.334,924	4.164.389,757
474	506.333,065	4.164.401,560
475	506.326,521	4.164.416,473
476	506.319,982	4.164.446,714
477	506.345,788	4.164.549,979
478	506.345,738	4.164.567,147
479	506.329,454	4.164.565,379
480	506.155,474	4.164.516,717
481	506.127,157	4.164.527,191
482	506.092,933	4.164.667,994
483	506.087,154	4.164.667,353
484	506.213,508	4.164.009,094
485	506.243,710	4.163.867,537
486	506.241,420	4.163.843,582
487	506.246,003	4.163.834,463
488	506.224,181	4.163.808,908
489	506.083,518	4.163.657,445
490	506.060,774	4.163.634,777
491	505.254,403	4.163.662,224
492	505.260,726	4.163.651,105
493	505.271,528	4.163.640,059
494	505.305,028	4.163.590,771
495	505.267,693	4.163.567,771
496	505.249,668	4.163.565,480
497	505.215,486	4.163.563,767
498	505.198,683	4.163.556,675
499	505.169,959	4.163.540,823
500	505.153,947	4.163.526,816
501	505.143,569	4.163.512,810
502	505.129,625	4.163.500,010
503	505.114,127	4.163.758,218
504	505.110,665	4.163.752,962
505	505.107,100	4.163.742,514
506	505.104,845	4.163.712,610
507	505.104,001	4.163.706,624
508	505.104,001	4.163.706,624
509	504.915,791	4.163.910,206

510	504.872,913	4.163.947,216
511	504.849,637	4.163.972,508
512	504.842,322	4.163.982,561
513	504.808,958	4.164.015,833
514	504.791,405	4.164.030,711
515	504.771,668	4.164.050,229
516	504.737,217	4.164.075,696
517	504.703,034	4.164.094,072
518	504.667,933	4.164.110,990
519	504.635,308	4.164.125,572
520	504.601,339	4.164.140,813
521	504.577,338	4.164.155,108
522	504.550,566	4.164.172,747
523	504.499,452	4.164.216,847
524	504.452,011	4.164.239,520
525	504.435,969	4.164.244,731
526	504.406,115	4.164.259,091
527	504.383,884	4.164.266,720
528	504.359,024	4.164.272,090
529	504.334,929	4.164.274,300
530	504.303,607	4.164.291,730
531	504.288,045	4.164.318,574
532	504.267,624	4.164.346,020
533	504.229,356	4.164.386,773
534	504.200,897	4.164.409,113
535	504.170,712	4.164.426,164
536	504.156,902	4.164.427,698
537	504.120,060	4.164.445,029
538	504.115,808	4.164.449,141
539	504.094,048	4.164.473,965
540	504.072,836	4.164.491,110
541	504.050,579	4.164.503,515
542	504.014,978	4.164.525,817
543	503.997,284	4.164.538,796
544	503.957,862	4.164.572,412
545	503.946,812	4.164.579,966
546	503.863,107	4.164.624,958
547	503.854,219	4.164.630,750
548	503.842,377	4.164.639,975
549	503.835,635	4.164.644,797
550	503.793,108	4.164.665,968
551	503.776,516	4.164.671,153
552	503.759,825	4.164.679,228
553	503.730,103	4.164.699,486
554	503.713,377	4.164.708,682

555	503.669,589	4.164.727,563
556	503.645,236	4.164.739,355
557	503.622,014	4.164.749,583
558	503.607,664	4.164.768,687
559	503.577,008	4.164.840,601
560	503.552,175	4.164.904,665
561	503.535,367	4.164.944,043
562	503.510,639	4.164.988,229
563	503.465,283	4.165.078,448
564	503.444,956	4.165.114,689
565	503.418,374	4.165.157,836
566	503.394,644	4.165.199,282
567	503.372,368	4.165.246,456
568	503.339,466	4.165.296,514
569	503.317,480	4.165.335,943
570	503.295,650	4.165.371,017
571	503.261,976	4.165.428,381
572	503.219,366	4.165.499,825
573	503.189,800	4.165.544,776
574	503.178,421	4.165.564,421
575	503.146,713	4.165.627,119
576	504.825,721	4.164.001,731
577	504.824,226	4.164.008,687
578	504.820,053	4.164.021,363
579	504.801,188	4.164.063,149
580	504.796,178	4.164.080,616
581	504.794,005	4.164.096,655
582	504.790,344	4.164.110,897
583	504.777,021	4.164.145,390
584	504.765,014	4.164.167,620
585	504.756,072	4.164.180,095
586	504.733,716	4.164.214,425
587	504.713,349	4.164.252,615
588	504.703,335	4.164.277,145
589	504.686,174	4.164.336,178
590	504.673,787	4.164.424,658
591	504.672,173	4.164.439,071
592	504.665,665	4.164.465,019
593	504.662,604	4.164.472,685
594	504.643,603	4.164.491,996
595	504.602,926	4.164.509,008
596	504.580,488	4.164.527,592
597	504.553,045	4.164.569,168
598	504.533,243	4.164.596,706
599	504.480,999	4.164.661,562

600	504.446,114	4.164.693,188
601	504.425,374	4.164.709,877
602	504.389,064	4.164.756,193
603	504.384,408	4.164.766,102
604	504.380,571	4.164.776,600
605	504.371,956	4.164.808,777
606	504.351,733	4.164.871,903
607	504.331,410	4.164.898,542
608	504.311,084	4.164.911,784
609	504.274,828	4.164.926,302
610	504.250,137	4.164.936,701
611	504.233,991	4.164.948,054
612	504.205,078	4.164.972,169
613	504.195,956	4.164.990,419
614	504.189,094	4.165.011,871
615	504.174,489	4.165.038,363
616	504.146,164	4.165.082,166
617	504.109,547	4.165.155,495
618	504.080,023	4.165.199,924
619	504.068,904	4.165.220,258
620	504.044,684	4.165.264,825
621	504.031,594	4.165.295,177
622	504.026,237	4.165.314,803
623	504.026,838	4.165.343,164
624	504.021,034	4.165.356,051
625	504.003,294	4.165.382,857
626	503.946,248	4.165.444,583
627	503.909,452	4.165.501,184
628	503.898,118	4.165.522,557
629	503.869,222	4.165.567,808
630	503.830,300	4.165.637,040
631	503.813,044	4.165.675,901
632	503.813,044	4.165.675,901
633	503.773,807	4.165.740,666
634	503.764,374	4.165.749,164
635	503.755,095	4.165.757,414
636	503.732,450	4.165.793,696
637	503.701,096	4.165.852,333
638	504.026,838	4.165.343,164
639	504.323,116	4.165.431,227
640	504.288,241	4.165.496,411
641	504.251,407	4.165.560,646
642	504.222,227	4.165.608,027
643	504.208,914	4.165.629,052
644	504.197,600	4.165.654,788

645	504.183,011	4.165.679,302
646	504.162,277	4.165.723,846
647	504.115,818	4.165.787,614
648	504.089,220	4.165.828,841
649	504.034,245	4.165.920,098
650	504.170,712	4.164.426,164
651	504.169,223	4.164.398,781
652	504.172,187	4.164.354,377
653	504.173,929	4.164.276,346
654	503.622,014	4.164.749,583
655	503.621,200	4.164.732,838
656	503.622,422	4.164.722,695
657	503.622,422	4.164.722,695
658	503.625,874	4.164.707,576
659	503.672,806	4.164.596,246
660	503.679,954	4.164.575,117
661	503.680,901	4.164.552,723
662	503.261,976	4.165.428,381
663	503.255,918	4.165.424,925
664	503.255,918	4.165.424,925
665	504.490,635	4.163.675,297
666	504.500,148	4.163.657,857
667	504.500,512	4.163.637,484
668	504.488,657	4.163.613,774
669	504.488,657	4.163.613,774
670	504.181,174	4.163.540,091
671	504.183,721	4.163.520,574
672	504.192,306	4.163.506,183
673	504.197,716	4.163.493,673
674	504.219,947	4.163.473,994
675	504.250,694	4.163.464,933
676	504.285,189	4.163.448,412
677	504.307,524	4.163.432,912
678	504.348,925	4.163.398,841
679	504.434,568	4.163.356,643
680	503.753,885	4.163.697,046
681	503.734,234	4.163.724,684
682	503.706,538	4.163.757,676
683	503.600,964	4.163.624,791
684	503.581,454	4.163.630,505
685	503.526,140	4.163.651,038
686	503.516,119	4.163.648,787
687	503.497,063	4.163.657,653
688	503.439,144	4.163.706,563
689	503.411,029	4.163.739,585

690	503.396,103	4.163.749,417
691	503.390,515	4.163.747,155
692	503.377,220	4.163.745,247
693	503.359,615	4.163.741,144
694	503.307,279	4.163.700,700
695	503.307,279	4.163.700,700
696	503.866,169	4.163.117,934
697	503.840,294	4.163.130,317
698	503.821,356	4.163.141,139
699	503.768,539	4.163.154,264
700	503.743,367	4.163.153,457
701	503.711,681	4.163.158,905
702	503.685,536	4.163.169,124
703	503.667,754	4.163.182,942
704	503.656,994	4.163.188,418
705	503.625,087	4.163.197,628
706	503.610,678	4.163.206,421
707	503.579,511	4.163.239,480
708	503.548,135	4.163.257,051
709	503.524,528	4.163.261,987
710	503.501,549	4.163.280,979
711	503.494,825	4.163.297,082
712	503.474,339	4.163.315,448
713	503.459,360	4.163.319,860
714	503.449,913	4.163.321,161
715	503.433,674	4.163.325,351
716	503.411,845	4.163.337,780
717	503.362,231	4.163.358,693
718	503.312,955	4.163.371,293
719	503.243,213	4.163.397,461
720	503.685,536	4.163.169,124
721	503.680,436	4.163.155,612
722	503.680,436	4.163.155,612
723	503.656,228	4.163.118,523
724	503.627,770	4.163.056,969
725	505.110,023	4.162.886,292
726	505.095,058	4.162.730,145
727	504.980,374	4.162.751,704
728	504.953,591	4.162.752,176
729	504.881,698	4.162.741,265
730	504.864,972	4.162.741,557
731	504.847,833	4.162.744,775
732	504.831,398	4.162.745,110
733	504.787,185	4.162.738,667
734	504.631,190	4.162.749,082

735	504.618,073	4.162.751,754
736	504.521,725	4.162.785,317
737	504.490,703	4.162.779,673
738	504.440,976	4.162.738,202
739	504.411,447	4.162.726,663
740	504.374,793	4.162.724,832
741	504.352,644	4.162.726,190
742	504.281,255	4.162.738,624
743	504.259,986	4.162.745,146
744	504.819,298	4.162.743,347
745	504.868,454	4.162.520,887
746	504.877,308	4.162.446,816
747	504.880,538	4.162.381,244
748	504.919,911	4.162.374,411
749	504.946,920	4.162.372,904
750	504.977,598	4.162.377,167
751	504.988,390	4.162.377,490
752	505.034,757	4.162.373,852
753	505.062,574	4.162.376,171
754	505.091,434	4.162.384,206
755	505.107,028	4.162.389,999
756	505.136,865	4.162.397,667
757	505.142,318	4.162.400,872
758	504.112,483	4.162.364,799
759	504.075,638	4.162.372,250
760	504.043,136	4.162.392,990
761	503.993,994	4.162.413,185
762	503.954,032	4.162.421,781
763	503.913,196	4.162.425,362
764	503.855,514	4.162.438,844
765	503.831,362	4.162.443,182
766	503.809,364	4.162.452,417
767	503.789,261	4.162.452,088
768	504.219,961	4.161.752,175
769	504.198,319	4.161.736,094
770	504.141,479	4.161.698,745
771	504.219,961	4.161.752,175
772	504.232,792	4.161.723,959
773	504.244,974	4.161.683,604
774	504.300,731	4.161.681,553
775	504.306,362	4.161.668,497
776	504.308,025	4.161.654,242
777	504.307,580	4.161.639,903
778	504.308,624	4.161.630,695
779	504.307,927	4.161.603,143

780	504.301,880	4.161.566,501
781	504.300,689	4.161.544,862
782	504.303,961	4.161.483,874
783	504.313,814	4.161.451,646
784	504.319,149	4.161.442,741
785	504.322,704	4.161.429,982
786	504.938,539	4.161.666,632
787	505.002,742	4.161.672,130
788	505.041,392	4.161.677,066
789	505.073,291	4.161.684,885
790	505.080,150	4.161.634,616
791	505.087,047	4.161.605,724
792	505.099,009	4.161.513,754
793	505.107,164	4.161.485,559
794	505.115,119	4.161.470,739
795	505.118,174	4.161.462,073
796	505.122,339	4.161.439,825
797	505.132,721	4.161.422,217
798	505.152,897	4.161.405,551
799	505.161,439	4.161.381,125
800	505.155,839	4.161.354,535
801	505.155,330	4.161.344,067
802	505.161,963	4.161.325,861
803	505.166,681	4.161.318,535
804	505.204,282	4.161.228,851
805	505.164,405	4.161.186,049
806	505.137,653	4.161.151,502
807	505.110,879	4.161.114,625
808	505.059,705	4.161.054,072
809	504.971,596	4.160.948,804
810	505.204,282	4.161.228,851
811	505.207,075	4.161.235,400
812	505.207,075	4.161.235,400
813	506.276,201	4.166.111,642
814	506.271,021	4.166.114,912

APÉNDICE 4: VÉRTICE GEODÉSICO



Área de Geodesia

Subdirección General de Geodesia y Cartografía

Reseña Vértice Geodésico

1-jun-2020

Número.....:	97199
Nombre.....:	Cuevas
Municipios:	Zújar
Provincias:	Granada
Fecha de Construcción.....:	19 de julio de 1989
Pilar sin centrado forzado.:	1,20 m de alto, 0,30 m de diámetro.
Último cuerpo.....:	1,00 m de alto, 1,00 m de ancho.
Total cuerpos.....:	1 de 1,00 m de alto.

Coordenadas Geográficas:		
Sistema de Ref.:	ED 50	ETRS89
Longitud.....:	- 2° 51' 44,2909"	- 2° 51' 48,79838" ±0.123 m
Latitud.....:	37° 39' 23,3439"	37° 39' 18,86163" ±0.136 m
Alt. Elipsoidal...:		998,452 m ±0.162 (BP)
Compensación.:	01 de julio de 1991	01 de noviembre de 2009
		Ellipse de error al 95% de confianza.

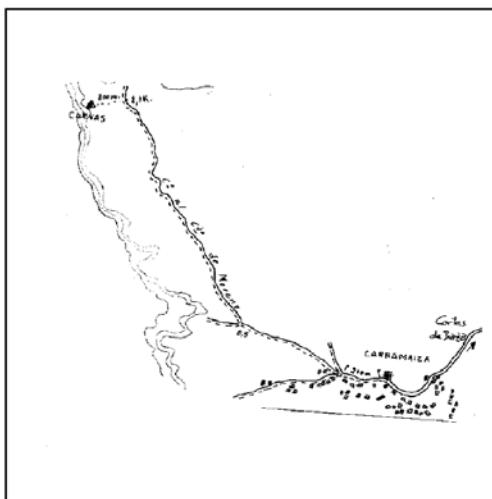
Coordenadas UTM. Huso 30 :		
Sistema de Ref.:	ED 50	ETRS89
X.....:	512146,15 m	512035,365 m
Y.....:	4167780,00 m	4167572,986 m
Factor escala....:	0,999601817	0,999601784
Convergencia...:	0° 05' 03"	0° 05' 00"
Altitud sobre el nivel medio del mar:		948,802 m. (BP)

Situación:		
		Situado en los Llanos de Carramaiza, al borde del cortado que da al río Guadalentín, próximo a unos pinos.

Acceso:		
		Desde Cortes de Baza, por la carretera a Carramaiza, al llegar a esta aldea la carretera acaba a su mitad y continúa un camino que se sigue durante 200 m., para torcer a la derecha por el camino al cortijo del Moreno; de los dos que salen juntos, es el de la izquierda. Recorridos 500 m. por este camino, se deja otro a la izquierda y al llegar a los 2.100 m. se deja el vehículo. A pie, hacia la izquierda por terreno de labor, unos 300 m. hasta la señal.

Horizonte GPS:		
		Despejado

CF: Centrado Forzado. CP: Cabeza Pilar. BP: Base Pilar. CN: Clavo Nivelado. CS: Clavo Suelo.
© anulado, ☒ no pertenece a bloque de compensación, ☓ reciclado, reparado o reconstruido.



Observaciones:
Informe del estado del Vértice: http://ftp.geodesia.ign.es/utilidades/infoRG.pdf

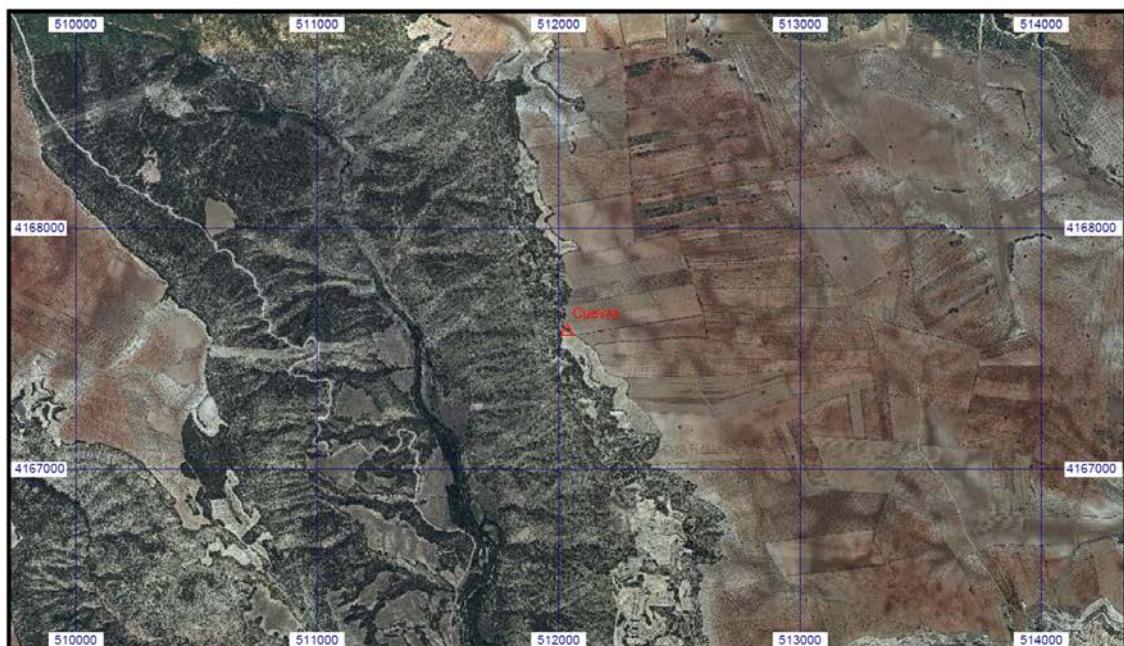
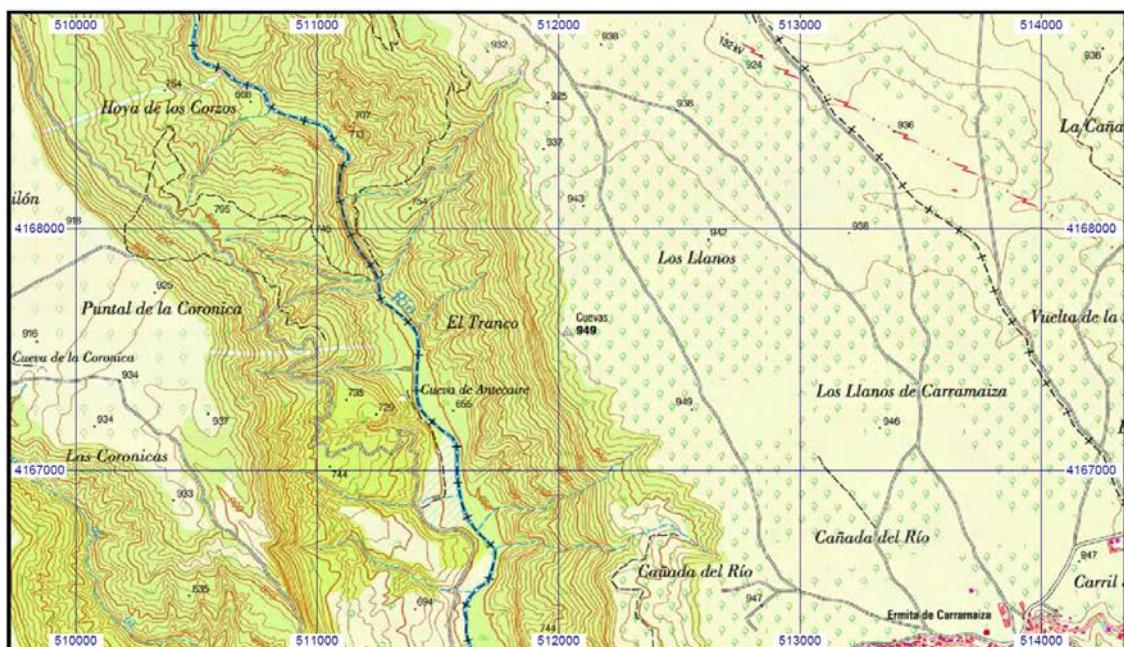
Cartografía de situación

1-jun-2020

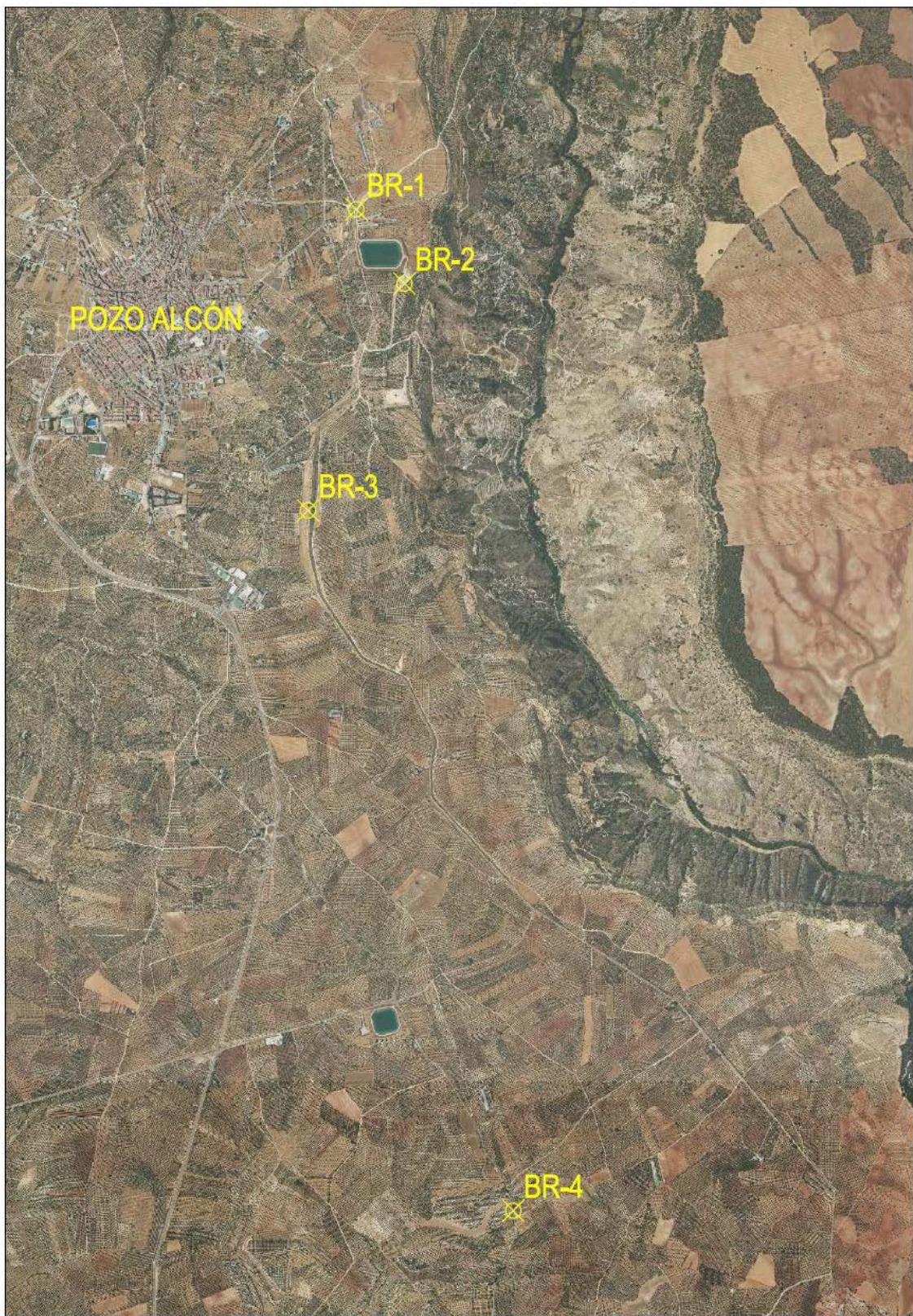
Escala 1:25.000

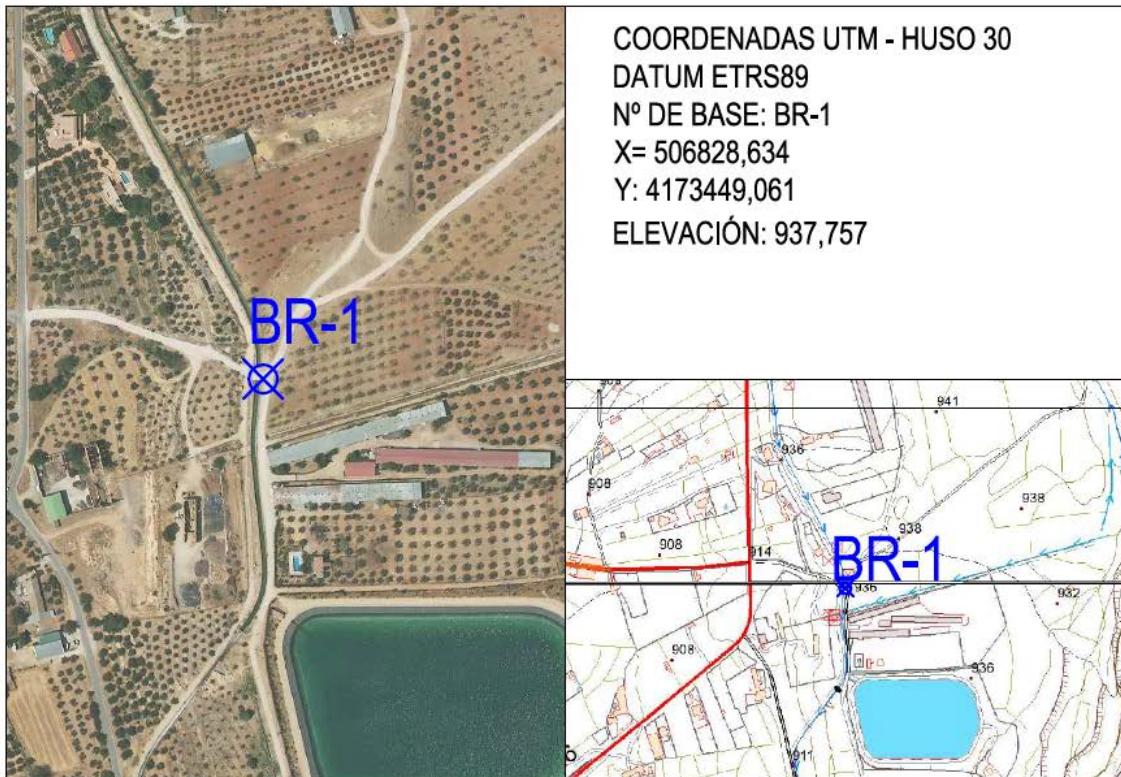
097199 Cuevas

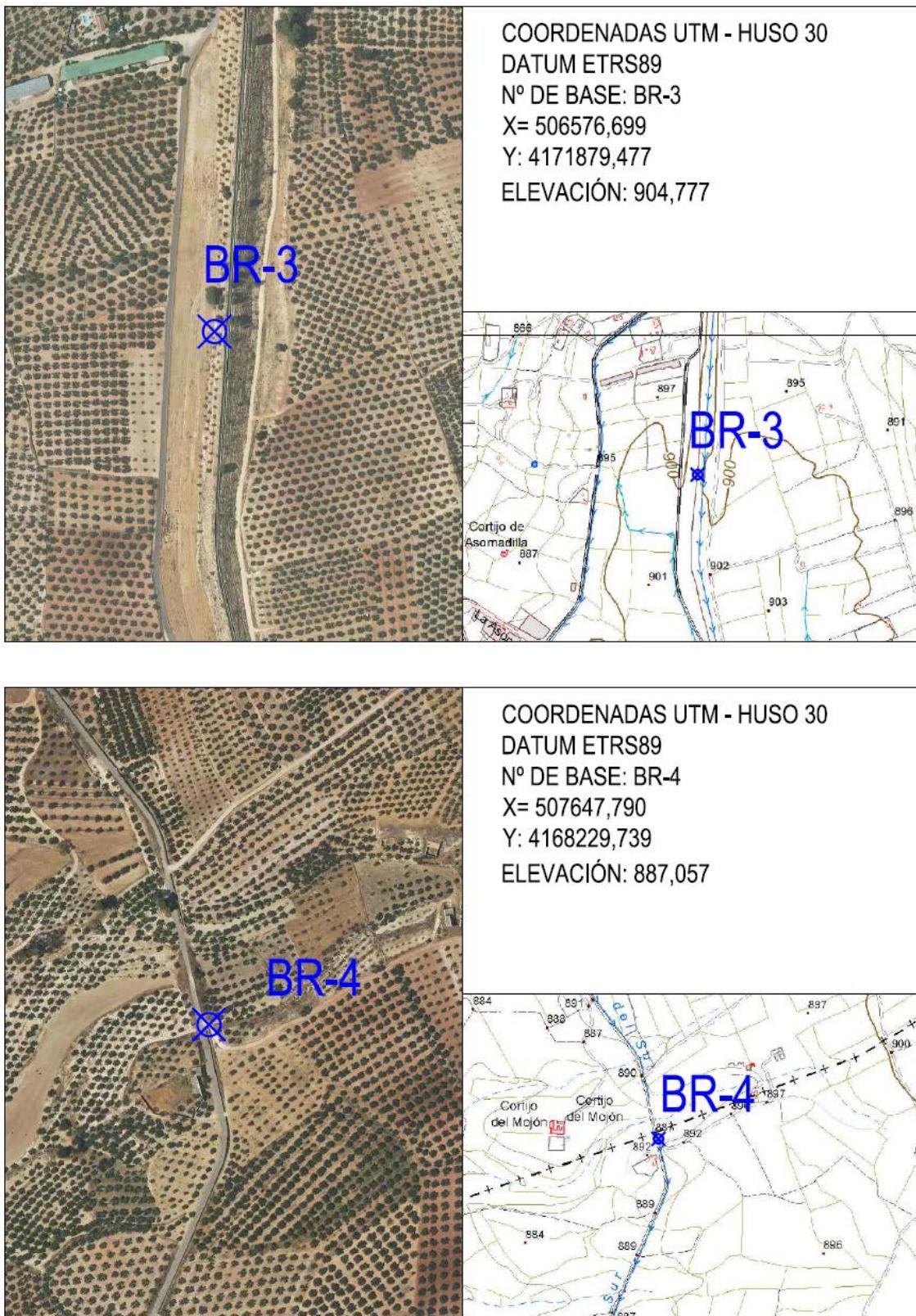
Coordenadas ETRS89. Huso 30



APÉNDICE 5: RESEÑAS BASES DE REPLANTEO







**APÉNDICE 6: LEVANTAMIENTO PARCELA PLANTA
FOTOVOLTAICA**

PUNTOS LEVANTAMIENTO PARCELA PLANTA FOTOVOLTAICA

PUNTO	X	Y	Z	DESCRIPCIÓN
446	507687,84	4168214,858	891,252	Carretera
447	507693,233	4168217,412	891,358	Carretera
448	507697,898	4168220,828	891,48	Carretera
449	507703,88	4168225,407	891,609	Carretera
450	507709,999	4168228,932	891,825	Carretera
451	507717,174	4168232,452	892,025	Carretera
452	507724,848	4168235,944	892,302	Carretera
453	507730,254	4168238,484	892,484	Carretera
454	507737,035	4168242,379	892,787	Carretera
455	507747,047	4168248,861	893,179	Carretera
456	507748,002	4168246,116	893,248	Carretera
457	507741,97	4168242,225	892,967	Carretera
458	507735,466	4168238,302	892,755	Carretera
459	507729,057	4168234,881	892,524	Carretera
460	507723,29	4168232,327	892,346	Carretera
461	507717,626	4168229,972	892,12	Carretera
462	507711,96	4168227,165	891,925	Carretera
463	507708,382	4168225,167	891,802	Carretera
464	507708,46	4168224,247	891,819	Carretera
465	507712,847	4168224,032	891,946	Carretera
466	507717,705	4168222,535	891,945	Carretera
467	507723,271	4168219,548	891,989	Carretera
468	507727,685	4168215,704	891,984	Carretera
469	507731,37	4168211,199	892,014	Carretera
470	507734,137	4168206,103	891,966	Carretera
471	507737,289	4168198,127	891,846	Carretera
472	507740,796	4168191,223	891,812	Carretera
473	507743,83	4168186,766	891,821	Carretera
474	507747,379	4168183,685	891,913	Carretera
475	507753,678	4168179,821	892,009	Carretera
476	507758,051	4168177,363	891,94	Carretera
477	507763,389	4168175,025	892,015	Carretera
478	507768,162	4168172,627	892,129	Carretera
479	507772,305	4168169,535	892,216	Carretera
480	507774,694	4168173,609	892,715	Olivo
481	507773,637	4168181,768	892,644	Olivo
482	507766,887	4168190,309	892,601	Olivo
483	507762,58	4168197,375	892,588	Olivo
484	507757,796	4168205,412	892,623	Olivo
485	507752,746	4168213,4	892,659	Olivo
486	507747,749	4168220,897	892,628	Olivo

487	507742,317	4168228,419	892,675	Olivo
488	507738,316	4168234,306	892,716	Olivo
489	507745,344	4168239,601	893,073	Olivo
490	507750,93	4168233,253	893,06	Olivo
491	507755,768	4168226,498	893,063	Olivo
492	507760,086	4168218,976	893,08	Olivo
493	507764,096	4168210,432	892,942	Olivo
494	507767,162	4168179,651	892,49	Olivo
495	507761,556	4168186,316	892,281	Olivo
496	507755,618	4168193,018	892,274	Olivo
497	507749,608	4168201,759	892,206	Olivo
498	507746,19	4168209,469	892,339	Olivo
499	507741,558	4168216,995	892,391	Olivo
500	507735,991	4168223,76	892,436	Olivo
501	507730,837	4168230,475	892,476	Olivo
502	507716,666	4168225,048	892,033	Olivo
503	507722,746	4168226,451	892,274	Olivo
504	507729,28	4168220,659	892,228	Olivo
505	507735,793	4168214,184	892,185	Olivo
506	507739,663	4168204,572	892,106	Olivo
507	507742,805	4168197,1	892,004	Olivo
508	507747,723	4168188,858	891,955	Olivo
509	507756,849	4168183,342	892,142	Olivo
511	507770,612	4168168,04	892,082	Carretera
512	507770,61	4168168,058	892,063	Carretera
513	507766,797	4168170,685	892,005	Carretera
514	507760,986	4168173,541	891,866	Carretera
515	507756,025	4168175,857	891,826	Carretera
516	507749,643	4168179,459	891,876	Carretera
517	507744,287	4168183,184	891,812	Carretera
518	507739,088	4168188,966	891,708	Carretera
519	507735,442	4168196,631	891,791	Carretera
520	507733,203	4168202,201	891,891	Carretera
521	507731,213	4168206,739	891,92	Carretera
522	507726,406	4168213,569	891,864	Carretera
523	507720,001	4168218,532	891,839	Carretera
524	507712,574	4168221,396	891,826	Carretera
525	507704,251	4168221,133	891,629	Carretera
540	507698,202	4168225,16	891,159	Relleno
542	507687,596	4168221,628	891,285	Olivo
563	507699,723	4168218,757	891,51	Carretera
564	507694,784	4168215,41	891,395	Carretera
565	507688,642	4168212,202	891,283	Carretera
626	507701,822	4168137,956	889,204	Olivo
629	507702,223	4168149,953	889,229	Olivo

630	507706,554	4168144,698	889,188	Olivo
631	507711,462	4168140,331	889,282	Olivo
632	507718,001	4168144,289	890,242	Olivo
633	507712,718	4168149,396	890,206	Olivo
634	507707,246	4168154,565	890,064	Olivo
635	507701,69	4168160,545	889,968	Olivo
636	507696,216	4168165,457	890,047	Olivo
645	507696,562	4168176,185	890,414	Olivo
646	507702,38	4168171,253	890,431	Olivo
647	507707,271	4168166,382	890,436	Olivo
648	507713,707	4168161,022	890,472	Olivo
649	507719,577	4168156,072	890,534	Olivo
650	507724,637	4168150,286	890,657	Olivo
651	507731,768	4168154,74	890,586	Olivo
652	507725,993	4168161,038	890,575	Olivo
653	507719,883	4168166,096	890,573	Olivo
654	507713,713	4168171,868	890,509	Olivo
655	507708,592	4168177,501	890,429	Olivo
656	507702,754	4168181,88	890,405	Olivo
657	507697,527	4168187	890,36	Olivo
658	507692,073	4168191,316	890,425	Olivo
662	507693,192	4168207,455	891,054	Olivo
663	507693,995	4168201,288	890,711	Olivo
664	507701,807	4168202,826	890,572	Olivo
665	507697,222	4168197,041	890,455	Olivo
666	507702,432	4168192,963	890,452	Olivo
667	507707,929	4168199,054	890,468	Olivo
668	507714,075	4168193,896	890,515	Olivo
669	507707,861	4168188,069	890,464	Olivo
670	507714,046	4168182,815	890,485	Olivo
671	507719,832	4168188,902	890,535	Olivo
672	507725,579	4168184,145	890,565	Olivo
673	507719,808	4168178,975	890,527	Olivo
674	507726,305	4168172,668	890,576	Olivo
675	507731,876	4168177,634	890,606	Olivo
676	507731,906	4168166,787	890,621	Olivo
677	507737,694	4168172,33	890,689	Olivo
678	507743,016	4168167,569	890,703	Olivo
679	507738,401	4168160,173	890,608	Olivo
680	507744,24	4168175,143	891,085	Olivo
681	507736,133	4168182,164	891,014	Olivo
682	507730,553	4168188,352	890,658	Olivo
683	507724,265	4168193,879	890,456	Olivo
684	507727,604	4168197,645	891,003	Olivo
685	507723,66	4168204,017	890,83	Olivo

686	507719,699	4168209,43	890,848	Olivo
687	507713,675	4168203,878	890,366	Olivo
688	507714,875	4168213,208	891,148	Olivo
689	507708,885	4168208,082	890,663	Olivo
690	507702,465	4168212,802	891,237	Olivo
691	507711,003	4168218,909	891,51	Olivo
692	507716,23	4168218,963	891,561	Olivo
693	507721,149	4168216,699	891,739	Olivo
694	507725,643	4168212,447	891,575	Olivo
695	507729,262	4168209,08	891,949	Olivo
696	507731,773	4168202,714	891,58	Olivo
697	507734,426	4168196,147	891,486	Olivo
698	507737,164	4168189,34	891,545	Olivo
699	507742,651	4168181,104	891,541	Olivo
700	507752,883	4168175,344	891,757	Olivo
701	507750,525	4168172,051	891,636	Olivo
702	507748,294	4168174,898	891,543	LineaRotura
703	507747,086	4168164,813	891,037	LineaRotura
704	507744,111	4168158,324	890,887	LineaRotura
705	507738,086	4168152,34	890,818	LineaRotura
706	507729,334	4168145,945	890,883	LineaRotura
707	507724,649	4168143,18	890,709	LineaRotura
708	507718,98	4168140,221	890,584	LineaRotura
709	507713,618	4168137,373	889,822	LineaRotura
710	507707,306	4168133,227	889,315	LineaRotura
729	507710,82	4168128,861	891,192	Olivo
730	507710,375	4168132,384	890,941	LineaRotura
731	507716,11	4168134,378	891,29	Olivo
732	507719,853	4168137,038	891,245	Olivo
733	507719,072	4168138,776	891,174	LineaRotura
734	507722,611	4168140,23	891,331	Olivo
735	507727,652	4168143,073	891,324	Olivo
736	507732,79	4168146,054	891,537	Olivo
737	507740,7	4168151,548	891,553	Olivo
738	507746,641	4168158,888	891,551	Olivo
739	507749,014	4168163,263	891,606	Olivo
740	507749,251	4168167,901	891,771	Olivo
741	507763,377	4168170,505	891,881	Olivo
742	507758,272	4168164,215	891,762	Olivo
743	507752,57	4168158,268	891,857	Olivo
744	507746,921	4168152,222	891,687	Olivo
745	507741,668	4168146,072	891,731	Olivo
746	507736,572	4168140,08	891,655	Olivo
747	507729,919	4168134,039	891,629	Olivo
748	507724,554	4168127,844	891,61	Olivo

749	507718,093	4168121,764	891,31	Olivo
1003	507769,9917	4168202,275	892,9	Olivo
1004	507774,7956	4168194,857	893,5	Olivo
1005	507779,4391	4168186,409	893,01	Olivo
1006	507783,3372	4168178,129	892,9	Olivo
1007	507787,7347	4168169,645	892,86	Olivo
1008	507782,834	4168166,46	892,7	Olivo
1009	507790,8662	4168161,446	892,96	Olivo
1010	507797,6021	4168155,363	893,18	Olivo
1011	507803,0287	4168158,098	893,25	Olivo
1012	507798,9007	4168166,071	893,22	Olivo
1013	507794,9143	4168174,147	893,18	Olivo
1014	507790,7916	4168182,256	893,25	Olivo
1015	507786,6642	4168190,409	893,3	Olivo
1016	507782,4033	4168198,833	893,41	Olivo
1017	507778,3731	4168208,119	893,45	Olivo
1018	507773,1287	4168215,139	893,42	Olivo
1019	507768,4907	4168223,433	893,4	Olivo
1020	507763,9433	4168231,445	893,38	Olivo
1021	507759,5838	4168238,435	893,39	Olivo
1022	507753,9649	4168244,472	893,35	Olivo
1023	507761,9165	4168249,745	893,62	Olivo
1024	507767,3479	4168242,747	893,6	Olivo
1025	507771,915	4168235,329	893,62	Olivo
1026	507775,822	4168227,562	893,63	Olivo
1027	507780,5468	4168219,656	893,72	Olivo
1028	507784,7527	4168212,164	893,74	Olivo
1029	507789,6142	4168203,287	893,75	Olivo
1030	507793,5132	4168195,47	893,59	Olivo
1031	507797,8379	4168186,928	893,51	Olivo
1032	507801,4423	4168178,876	893,4	Olivo
1033	507806,0658	4168170,598	893,37	Olivo
1034	507809,7816	4168162,675	893,39	Olivo
1035	507818,5288	4168167,448	893,59	Olivo
1036	507814,1121	4168175,809	893,57	Olivo
1037	507810,1377	4168183,083	893,6	Olivo
1038	507805,6167	4168191,053	893,74	Olivo
1039	507801,7967	4168199,757	893,9	Olivo
1040	507796,7119	4168208,532	894,05	Olivo
1041	507792,6477	4168216,617	894,04	Olivo
1042	507788,4038	4168224,721	894,09	Olivo
1043	507783,7685	4168232,351	893,98	Olivo
1044	507778,9665	4168239,84	893,9	Olivo
1045	507774,9581	4168247,841	893,88	Olivo
1046	507769,4507	4168255,179	893,94	Olivo

1047	507826,0781	4168172,16	893,8	Olivo
1048	507821,0451	4168180,202	893,81	Olivo
1049	507817,2527	4168187,301	893,89	Olivo
1050	507812,7668	4168195,912	894,02	Olivo
1051	507808,3142	4168204,057	894,15	Olivo
1052	507803,7399	4168212,39	894,21	Olivo
1053	507799,3063	4168220,596	894,26	Olivo
1054	507795,9973	4168228,98	894,22	Olivo
1055	507790,5691	4168235,455	894,2	Olivo
1056	507786,7525	4168245,118	894,18	Olivo
1057	507783,0607	4168251,771	894,21	Olivo
1058	507776,984	4168259,077	894,24	Olivo
1059	507785,1044	4168264,31	894,4	Olivo
1060	507789,5521	4168256,234	894,41	Olivo
1061	507794,4518	4168249,492	894,42	Olivo
1062	507798,8025	4168240,665	894,39	Olivo
1063	507802,7959	4168232,844	894,42	Olivo
1064	507806,5037	4168225,037	894,48	Olivo
1065	507811,9871	4168217,055	894,47	Olivo
1066	507815,3853	4168208,166	894,35	Olivo
1067	507820,7646	4168200,507	894,26	Olivo
1068	507824,6966	4168192,361	894,11	Olivo
1069	507828,731	4168184,702	894,01	Olivo
1070	507832,6793	4168176,52	893,92	Olivo
1071	507836,4495	4168168,923	893,9	Olivo
1072	507829,3065	4168164,542	893,81	Olivo
1073	507821,7776	4168159,66	893,63	Olivo
1074	507814,9458	4168155,685	893,53	Olivo
1075	507806,3363	4168149,775	893,4	Olivo
1076	507801,1175	4168143,708	893,38	Olivo
1077	507791,7823	4168149,337	893,13	Olivo
1078	507782,8671	4168156,099	892,74	Olivo
1079	507767,6107	4168156,289	892,15	Olivo
1080	507775,9891	4168150,641	892,49	Olivo
1081	507754,7025	4168251,03	893,51	Carretera
1082	507763,0339	4168256,416	893,73	Carretera
1083	507770,0958	4168260,753	893,92	Carretera
1084	507775,8599	4168264,397	894,1	Carretera
1085	507783,7155	4168268,357	894,38	Carretera
1086	507782,4407	4168270,906	894,32	Carretera
1087	507774,9641	4168266,842	894	Carretera
1088	507768,6244	4168263,364	893,91	Carretera
1089	507761,4578	4168259,06	893,71	Carretera
1090	507753,6316	4168253,648	893,52	Carretera

**APÉNDICE 7: REPLANTEO CIMENTACIÓN PLANTA
FOTOVOLTAICA**

PUNTOS REPLANTEO CIMENTACIÓN PLANTA FOTOVOLTAICA

NÚMERO	X	Y
1	507809,335	4168166,338
2	507812,529	4168166,338
3	507717,012	4168192,063
4	507720,206	4168192,063
5	507723,400	4168192,063
6	507726,594	4168192,063
7	507729,788	4168192,063
8	507732,982	4168192,063
9	507735,581	4168192,063
10	507738,775	4168192,063
11	507741,969	4168192,063
12	507745,163	4168192,063
13	507748,357	4168192,063
14	507751,551	4168192,063
15	507754,150	4168192,063
16	507757,344	4168192,063
17	507760,538	4168192,063
18	507763,732	4168192,063
19	507766,926	4168192,063
20	507770,120	4168192,063
21	507772,719	4168192,063
22	507775,913	4168192,063
23	507779,107	4168192,063
24	507782,301	4168192,063
25	507785,495	4168192,063
26	507788,689	4168192,063
27	507791,288	4168192,063
28	507794,482	4168192,063
29	507797,676	4168192,063
30	507800,870	4168192,063
31	507804,064	4168192,063
32	507807,258	4168192,063
33	507717,012	4168189,668
34	507720,206	4168189,668
35	507723,400	4168189,668
36	507726,594	4168189,668
37	507729,788	4168189,668
38	507732,982	4168189,668
39	507735,581	4168189,668
40	507738,775	4168189,668
41	507741,969	4168189,668

NÚMERO	X	Y
42	507745,163	4168189,668
43	507748,357	4168189,668
44	507751,551	4168189,668
45	507754,150	4168189,668
46	507757,344	4168189,668
47	507760,538	4168189,668
48	507763,732	4168189,668
49	507766,926	4168189,668
50	507770,120	4168189,668
51	507772,719	4168189,668
52	507775,913	4168189,668
53	507779,107	4168189,668
54	507782,301	4168189,668
55	507785,495	4168189,668
56	507788,689	4168189,668
57	507791,288	4168189,668
58	507794,482	4168189,668
59	507797,676	4168189,668
60	507800,870	4168189,668
61	507804,064	4168189,668
62	507807,258	4168189,668
63	507718,769	4168184,286
64	507721,963	4168184,286
65	507725,157	4168184,286
66	507728,351	4168184,286
67	507731,545	4168184,286
68	507734,739	4168184,286
69	507737,338	4168184,286
70	507740,532	4168184,286
71	507743,726	4168184,286
72	507746,920	4168184,286
73	507750,114	4168184,286
74	507753,308	4168184,286
75	507755,907	4168184,286
76	507759,101	4168184,286
77	507762,295	4168184,286
78	507765,489	4168184,286
79	507768,683	4168184,286
80	507771,877	4168184,286
81	507774,476	4168184,286
82	507777,670	4168184,286
83	507780,864	4168184,286
84	507784,058	4168184,286
85	507787,252	4168184,286

NÚMERO	X	Y
86	507790,446	4168184,286
87	507793,045	4168184,286
88	507796,239	4168184,286
89	507799,433	4168184,286
90	507802,627	4168184,286
91	507805,821	4168184,286
92	507809,015	4168184,286
93	507718,769	4168181,891
94	507721,963	4168181,891
95	507725,157	4168181,891
96	507728,351	4168181,891
97	507731,545	4168181,891
98	507734,739	4168181,891
99	507737,338	4168181,891
100	507740,532	4168181,891
101	507743,726	4168181,891
102	507746,920	4168181,891
103	507750,114	4168181,891
104	507753,308	4168181,891
105	507755,907	4168181,891
106	507759,101	4168181,891
107	507762,295	4168181,891
108	507765,489	4168181,891
109	507768,683	4168181,891
110	507771,877	4168181,891
111	507774,476	4168181,891
112	507777,670	4168181,891
113	507780,864	4168181,891
114	507784,058	4168181,891
115	507787,252	4168181,891
116	507790,446	4168181,891
117	507793,045	4168181,891
118	507796,239	4168181,891
119	507799,433	4168181,891
120	507802,627	4168181,891
121	507805,821	4168181,891
122	507809,015	4168181,891
123	507720,526	4168176,510
124	507723,720	4168176,510
125	507726,914	4168176,510
126	507730,108	4168176,510
127	507733,302	4168176,510
128	507736,496	4168176,510
129	507739,095	4168176,510

NÚMERO	X	Y
130	507742,289	4168176,510
131	507745,483	4168176,510
132	507748,677	4168176,510
133	507751,871	4168176,510
134	507755,065	4168176,510
135	507757,664	4168176,510
136	507760,858	4168176,510
137	507764,052	4168176,510
138	507767,246	4168176,510
139	507770,440	4168176,510
140	507773,634	4168176,510
141	507776,233	4168176,510
142	507779,427	4168176,510
143	507782,621	4168176,510
144	507785,815	4168176,510
145	507789,009	4168176,510
146	507792,203	4168176,510
147	507794,802	4168176,510
148	507797,996	4168176,510
149	507801,190	4168176,510
150	507804,384	4168176,510
151	507807,578	4168176,510
152	507810,772	4168176,510
153	507720,526	4168174,115
154	507723,720	4168174,115
155	507726,914	4168174,115
156	507730,108	4168174,115
157	507733,302	4168174,115
158	507736,496	4168174,115
159	507739,095	4168174,115
160	507742,289	4168174,115
161	507745,483	4168174,115
162	507748,677	4168174,115
163	507751,871	4168174,115
164	507755,065	4168174,115
165	507757,664	4168174,115
166	507760,858	4168174,115
167	507764,052	4168174,115
168	507767,246	4168174,115
169	507770,440	4168174,115
170	507773,634	4168174,115
171	507776,233	4168174,115
172	507779,427	4168174,115
173	507782,621	4168174,115

NÚMERO	X	Y
174	507785,815	4168174,115
175	507789,009	4168174,115
176	507792,203	4168174,115
177	507794,802	4168174,115
178	507797,996	4168174,115
179	507801,190	4168174,115
180	507804,384	4168174,115
181	507807,578	4168174,115
182	507810,772	4168174,115
183	507722,283	4168168,733
184	507725,477	4168168,733
185	507728,671	4168168,733
186	507731,865	4168168,733
187	507735,059	4168168,733
188	507738,253	4168168,733
189	507740,852	4168168,733
190	507744,046	4168168,733
191	507747,240	4168168,733
192	507750,434	4168168,733
193	507753,628	4168168,733
194	507756,822	4168168,733
195	507759,421	4168168,733
196	507762,615	4168168,733
197	507765,809	4168168,733
198	507769,003	4168168,733
199	507772,197	4168168,733
200	507775,391	4168168,733
201	507777,990	4168168,733
202	507781,184	4168168,733
203	507784,378	4168168,733
204	507787,572	4168168,733
205	507790,766	4168168,733
206	507793,960	4168168,733
207	507796,559	4168168,733
208	507799,753	4168168,733
209	507802,947	4168168,733
210	507806,141	4168168,733
211	507809,335	4168168,733
212	507812,529	4168168,733
213	507722,283	4168166,338
214	507725,477	4168166,338
215	507728,671	4168166,338
216	507731,865	4168166,338
217	507735,059	4168166,338

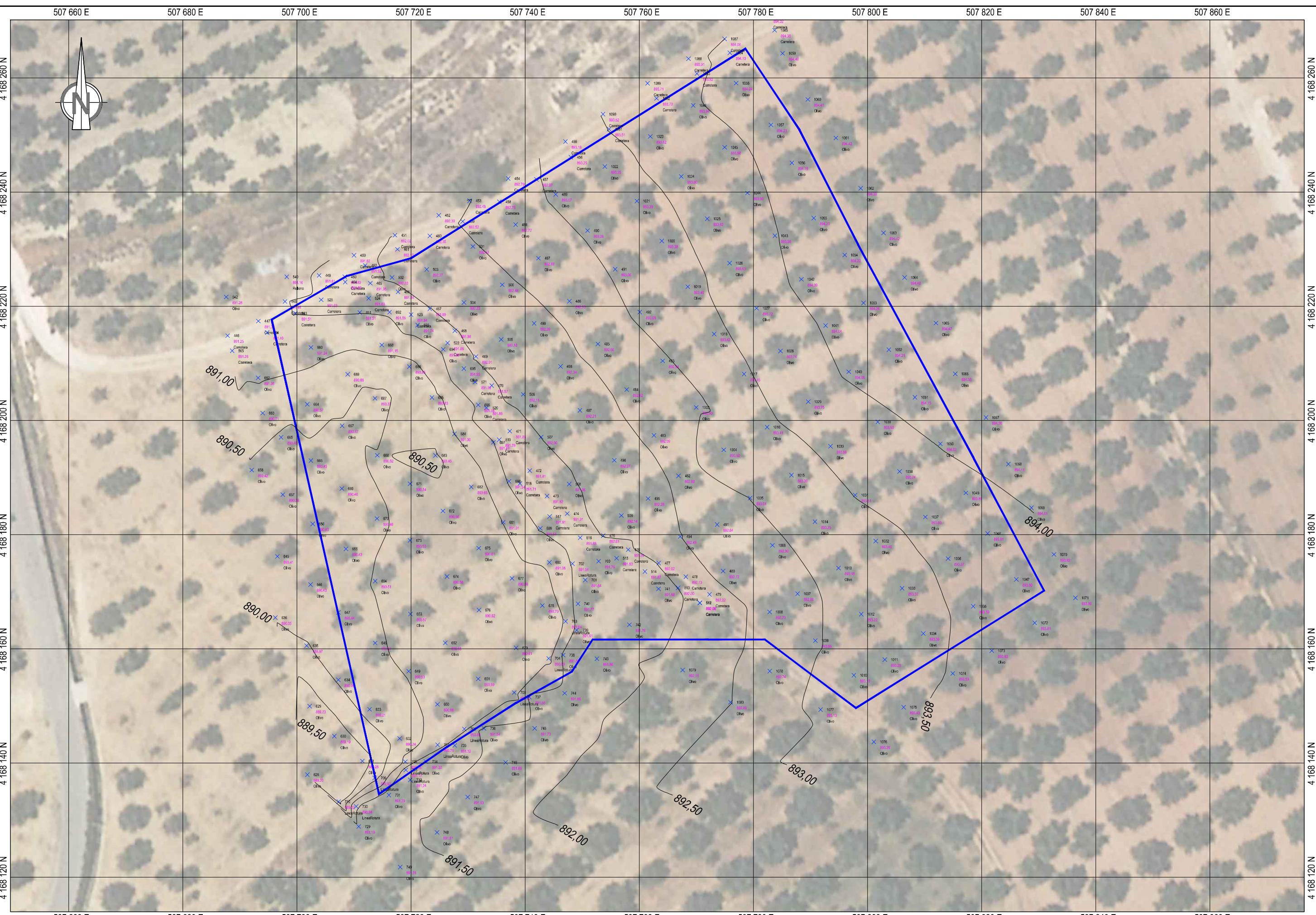
NÚMERO	X	Y
218	507738,253	4168166,338
219	507740,852	4168166,338
220	507744,046	4168166,338
221	507747,240	4168166,338
222	507750,434	4168166,338
223	507753,628	4168166,338
224	507756,822	4168166,338
225	507759,421	4168166,338
226	507762,615	4168166,338
227	507765,809	4168166,338
228	507769,003	4168166,338
229	507772,197	4168166,338
230	507775,391	4168166,338
231	507777,990	4168166,338
232	507781,184	4168166,338
233	507784,378	4168166,338
234	507787,572	4168166,338
235	507790,766	4168166,338
236	507793,960	4168166,338
237	507796,559	4168166,338
238	507799,753	4168166,338
239	507802,947	4168166,338
240	507806,141	4168166,338

APÉNDICE 8: PLANOS

ÍNDICE

PLANO N° 1: APÉNDICE 8. PUNTOS LEVANTAMIENTO PARCELA PLANTA FOTOVOLTAICA

PLANO N° 2: APÉNDICE 8. REPLANTEO CIMENTACIÓN PLANTA FOTOVOLTAICA





☒ 3 ☒ 4 ☒ 5 ☒ 6 ☒ 7 ☒ 8 ☒ 9 ☒ 10 ☒ 11 ☒ 12 ☒ 13 ☒ 14 ☒ 15 ☒ 16 ☒ 17 ☒ 18 ☒ 19 ☒ 20 ☒ 21 ☒ 22 ☒ 23 ☒ 24 ☒ 25 ☒ 26 ☒ 27 ☒ 28 ☒ 29 ☒ 30 ☒ 31 ☒ 32

☒ 33 ☒ 34 ☒ 35 ☒ 36 ☒ 37 ☒ 38 ☒ 39 ☒ 40 ☒ 41 ☒ 42 ☒ 43 ☒ 44 ☒ 45 ☒ 46 ☒ 47 ☒ 48 ☒ 49 ☒ 50 ☒ 51 ☒ 52 ☒ 53 ☒ 54 ☒ 55 ☒ 56 ☒ 57 ☒ 58 ☒ 59 ☒ 60 ☒ 61 ☒ 62

☒ 63 ☒ 64 ☒ 65 ☒ 66 ☒ 67 ☒ 68 ☒ 69 ☒ 70 ☒ 71 ☒ 72 ☒ 73 ☒ 74 ☒ 75 ☒ 76 ☒ 77 ☒ 78 ☒ 79 ☒ 80 ☒ 81 ☒ 82 ☒ 83 ☒ 84 ☒ 85 ☒ 86 ☒ 87 ☒ 88 ☒ 89 ☒ 90 ☒ 91 ☒ 92

☒ 93 ☒ 94 ☒ 95 ☒ 96 ☒ 97 ☒ 98 ☒ 99 ☒ 100 ☒ 101 ☒ 102 ☒ 103 ☒ 104 ☒ 105 ☒ 106 ☒ 107 ☒ 108 ☒ 109 ☒ 110 ☒ 111 ☒ 112 ☒ 113 ☒ 114 ☒ 115 ☒ 116 ☒ 117 ☒ 118 ☒ 119 ☒ 120 ☒ 121 ☒ 122

☒ 123 ☒ 124 ☒ 125 ☒ 126 ☒ 127 ☒ 128 ☒ 129 ☒ 130 ☒ 131 ☒ 132 ☒ 133 ☒ 134 ☒ 135 ☒ 136 ☒ 137 ☒ 138 ☒ 139 ☒ 140 ☒ 141 ☒ 142 ☒ 143 ☒ 144 ☒ 145 ☒ 146 ☒ 147 ☒ 148 ☒ 149 ☒ 150 ☒ 151 ☒ 152

☒ 153 ☒ 154 ☒ 155 ☒ 156 ☒ 157 ☒ 158 ☒ 159 ☒ 160 ☒ 161 ☒ 162 ☒ 163 ☒ 164 ☒ 165 ☒ 166 ☒ 167 ☒ 168 ☒ 169 ☒ 170 ☒ 171 ☒ 172 ☒ 173 ☒ 174 ☒ 175 ☒ 176 ☒ 177 ☒ 178 ☒ 179 ☒ 180 ☒ 181 ☒ 182

☒ 183 ☒ 184 ☒ 185 ☒ 186 ☒ 187 ☒ 188 ☒ 189 ☒ 190 ☒ 191 ☒ 192 ☒ 193 ☒ 194 ☒ 195 ☒ 196 ☒ 197 ☒ 198 ☒ 199 ☒ 200 ☒ 201 ☒ 202 ☒ 203 ☒ 204 ☒ 205 ☒ 206 ☒ 207 ☒ 208 ☒ 209 ☒ 210 ☒ 211 ☒ 212

☒ 213 ☒ 214 ☒ 215 ☒ 216 ☒ 217 ☒ 218 ☒ 219 ☒ 220 ☒ 221 ☒ 222 ☒ 223 ☒ 224 ☒ 225 ☒ 226 ☒ 227 ☒ 228 ☒ 229 ☒ 230 ☒ 231 ☒ 232 ☒ 233 ☒ 234 ☒ 235 ☒ 236 ☒ 237 ☒ 238 ☒ 239 ☒ 240 ☒ 1 ☒ 2