



Consultoría. Dirección Integrada de Proyectos

	Colegio de Ingenieros Técnicos de Obras Públicas e Ingenieros Civiles Extremadura
FECHA : 26/01/2018 VISADO : 63180008PC/1	
Título del Trabajo : PROYECTO MODIFICACIÓN DEL ACCESO EXISTENTE EN LA CTRA. CONVENCIONAL N-630 EN EL P.K. 625+695, MARGEN DERECHA, SENTIDO GIJÓN-SEVILLA, EN EL T.M. DE MÉRIDA	

ANEJO Nº2.- TOPOGRÁFICO.



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ÍNDICE

1.- INTRODUCCIÓN.....	3
2.- CARACTERÍSTICAS DE LOS TRABAJOS.....	3
3.- OBTENCIÓN DE DATOS.....	4
4.- BASES DE REPLANTEO.....	5
5.- RESEÑAS DE LOS VÉRTICES GEODÉSICOS.....	5
6.- INSTRUMENTOS UTILIZADOS.....	6
6.1.- LEICA 1200+.....	6
7.- LISTADO DE PUNTOS.....	8

ANEJO Nº2.- TOPOGRÁFICO

1.- INTRODUCCIÓN.

El objeto del presente anejo es el de desarrollar los trabajos topográficos llevados a cabo en el término municipal de Mérida, en la provincia de Badajoz, para la ejecución del **PROYECTO DE REMODELACIÓN DE ACCESO EXISTENTE EN LA CTRA. CONVENCIONAL N-630 EN EL PK 625+695, MARGEN DERECHA**, justificando los métodos empleados en función de las limitaciones técnicas por el material empleado y las características del terreno.

2.- CARACTERÍSTICAS DE LOS TRABAJOS.

Los trabajos topográficos realizados, tiene el fin de obtener la cartografía a escala 1.1000 y las curvas de nivel de equidistancia de 50 cm, para obtener los perfiles longitudinales relacionado con la planta en coordenadas UTM Huso 29, ETRS 89.

Para poder determinar el levantamiento topográfico exacto de la zona y los puntos singulares, y teniendo en cuenta la Red de Puntos de Nivelación existente a la largo del núcleo urbano de Mérida, se ha seguido un criterio que permitiera una clara toma de datos y definición geométrica de la actuación proyectada, tanto en la fase de redacción de Proyecto como en la de ejecución de obras, habiéndose procedido, a fijar unas bases de trabajo referenciadas a dichos puntos de Nivelación, con coordenadas y cotas absolutas, enlazadas con el sistema existente en la zona de ubicación de las obras.

En este sentido se fijaron en lugares inequívocos e inalterables por las obras previstas unas bases o estaciones permanentes de trabajo, identificadas mediante “clavos de acero de replanteo”.

A partir de aquí se tomaron las cotas que han definido la actuación durante el desarrollo del presente Proyecto. El levantamiento (en planimetría y altimetría) se realizó fijando inicialmente los puntos singulares de la zona, a fin de marcar todos los elementos existentes y poder determinar con exactitud el marco de actuación.

Primeramente se tomaron las esquinas y alineaciones de fachadas, viales, acerados, muro de cerramiento, pozos de registro, arquetas, registros y todos aquellos que se consideraron de utilidad. Seguidamente, a fin de poder realizar un levantamiento altimétrico veraz, se realizó

una radiación con puntos de relleno, primero marcando las líneas curvas y definitivas del terreno, y luego completando hasta disponer de los datos suficientes para poder triangular y mallar la zona, y determinar las curvas de nivel. Los puntos singulares de los ejes de viales se replantearon en el terreno y se tomó directamente la cota de tierras, sin recurrir a procesos de interpolación sobre los datos tomados.

A partir de aquí se procesaron los puntos obtenidos, sobre la planta definida inicialmente, para, mediante programas específicos de curvado, fijar las líneas de nivel y obtener cotas interpoladas

3.- OBTENCIÓN DE DATOS.

El trabajo se ha realizado mediante técnicas GPS, contando para su ejecución con equipos LEICA System 1200+, compuestos por receptores de doble frecuencia que trabajan con observables de código P y unidades de control portátiles.

El criterio seguido para la elección de las estaciones de referencia ha sido que se tratase de un lugar despejado, sin obstrucciones por encima de 15º de elevación y que su situación fuese la idónea en la zona de trabajo.

Sobre el terreno se ha creado un fichero de datos para cada punto observado con su numeración definitiva, introduciendo los datos propios del punto.

El proceso de datos para el cálculo de las observaciones, se ha realizado mediante el software SKI-Pro de la casa LEICA, obteniendo a partir de las observaciones GPS, las coordenadas de todos los puntos en el sistema U.T.M..

Dadas las características técnicas de los instrumentos GPS utilizados (equipos de doble frecuencia) y la metodología de observación (método estático), las precisiones que se obtienen en la observación de un punto son las siguientes:

$$5 \text{ mm} + 1 \text{ ppm}$$

Siendo ppm, partes por millón de la longitud de la línea base. Es decir, para una longitud entre el receptor de la estación de referencia y un punto observado a 5.000 metros, el error máximo cometido es: $5 \text{ mm} + 5 \text{ mm} = 10 \text{ mm}$

En gabinete, los datos obtenidos en el terreno se han representado en ordenador mediante un programa de diseño gráfico, desde donde se han obtenido las líneas que definen la planta y, con programas de aplicación específicos, realizado el cálculo de las curvas de nivel

4.- BASES DE REPLANTEO.

Los datos de las bases de replanteo materializadas sobre el terreno son los siguientes:

NOMBRE	COOR X	COOR Y	COOR Z
BR-1	728360.133	4308963.959	255.185
BR-2	728360.872	4308950.569	255.060
BR-3	728362.805	4308982.821	255.693

5.- RESEÑAS DE LOS VÉRTICES GEODÉSICOS.

El vértice geodésico utilizado como referencia es:

VERTICE	X	Y	Z	OBSERVACIONES
MÉRIDA	729880.664	4310828.686	235.987	VERTICE G.

ESTACIÓN GNSS DE MÉRIDA: MEDA

COORDENADAS CON ALTURAS ELIPSOIDALES				(*): Altura ortométrica
CARTESIANAS	ETRS-89	4938922,354 m	-549499,384 m	3985271,868 m
GEODÉSICAS	ETRS-89	6 20'54",81474 W	38 54'58",60413 N	289,914 m
UTM Huso 29	ETRS-89	729880,664 m	4310828,686 m	289,914 m
UTM Huso 29	ED50	730004,151 m	4311041,761 m	235,987 m*

NOTA: Para el cambio de datum entre ED50 y ETRS89 se utilizó la rejilla GRID_SHIFT_FILE V2009 del IGN en formato NTV2



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SITUACIÓN EQUIPOS

Dirección	C/ Moreñas s/n
Instalación	Edificio Consejerías
Persona contacto	Juan Morillo Barragán
Correo electrónico	rep@unex.es



INSTRUMENTACIÓN

Fecha instalación		17/09/08	
SENSOR	GRX 1200 GG PRO	Nº DE SERIE	355910
ANTENA	AX1202 GG	Nº DE SERIE	08060154
NÚMERO DOMO	19399M001	VERSIÓN DE FIRMWARE	8.2

6.- INSTRUMENTOS UTILIZADOS

Para la determinación del levantamiento taquimétrico de la zona donde se ubicará la obra, el equipo utilizado es LEICA GPS 1200+.

A continuación se describe las cualidades y características del equipo utilizado.

6.1.- LEICA 1200+.

A continuación se describen las cualidades y características generales:

- Especificaciones técnicas.



Leica GPS1200+ Especificaciones técnicas y características del sistema

Receptores GPS1200+	GX1230+ GNSS/ ATX1230+ GNSS	GX1220+ GNSS	GX1230+	GX1220+	GX1210+
GNSS technology	SmartTrack+	SmartTrack+	SmartTrack	SmartTrack	SmartTrack
Type	Triple frecuencia	Triple frecuencia	Doble frecuencia	Doble frecuencia	Monofrecuencia
Channels	120 canales L1/L2/L5 GPS L1/L2 GLONASS E1/E5a/ E5b/ Alt-BOC Galileo Compass ¹ 4 SBAS	120 canales L1/L2/L5 GPS L1/L2 GLONASS E1/E5a/ E5b/ Alt-BOC Galileo Compass ¹ 4 SBAS (con opción DGPS)	16 L1 + 16 L2 GPS 4 SBAS	16 L1 + 16 L2 GPS 4 SBAS (con opción DGPS)	16 L1 GPS 4 SBAS (con opción DGPS)
Ampliado a					
GX1230+ GNSS	-	Si	Si	Si	Si
RTK	SmartCheck+	No	SmartCheck	No	No
Indicadores de estado	3 indicadores LED (GX1200+): para alimentación, seguimiento, memoria				

Receptores GPS1200+	GX1230+ (GNSS) / GX1220+ (GNSS)	GX1210+	ATX1230+ GNSS
Puertos	1 puerto de alimentación, 3 puertos seriales, 1 puerto de controlador, 1 puerto de antena		1 puerto alimentación/controlador, Puerto de tecnología inalámbrica Bluetooth*
Tensión de alimentación, Nominal	12 VCC		Nominal 12 VCC
Consumo	receptor 4,6 W + controlador + antena		1,8 W
Entradas y PPS	Opcional: 1 puerto de salida PPS 2 puertos de entrada	Opcional: 1 puerto de salida PPS 2 puertos de entrada	
Antena estándar	SmartTrack+ AX1203+ GNSS	SmartTrack AX1201	SmartTrack+ ATX1230+ GNSS
Plano de tierra integrado	Plano de tierra integrado	Plano de tierra integrado	Plano de tierra integrado

Lo siguiente es aplicable a todos los receptores excepto en lo señalado.

Fuente de alimentación	Dos baterías ión-litio 4,4 Ah/7,4 V en interior del receptor. Una ión-litio 2,2 Ah/7,4 V insertada en ATX1230+ GNSS y RX1250.
Baterías Ion-Li insertables	Alimentan receptor + controlador + antena SmartTrack durante 17 horas (para registro de datos).
Lo mismo para GNSS y TPS	Alimentan receptor + controlador + antena SmartTrack + radiomódem de baja potencia o teléfono durante 11 horas (para RTK/DGPS). Alimenta SmartAntenna + controlador RX1250 durante unas 6 horas (para RTK/DGPS)
Alimentación externa	Entrada de alimentación externa 10,5 V a 28 V.
Pesos	Receptor 1,20 kg. Controlador 0,48 kg (RX1210) y 0,75 kg (RX1250). Antena SmartTrack 0,44 kg. SmartAntenna 1,12 kg. Batería Ion-Li insertable 0,11 kg (2,2 Ah) y 0,2 kg (4,4 Ah). Bastón de fibra de carbono con antena SmartTrack y controlador RX1210: 1,80 kg. Todo en bastón: bastón de fibra de carbono con SmartAntenna, controlador RX1250 y baterías insertables: 2,74 kg.

Temperatura	Funcionamiento: Receptor -40°C hasta +65 °C ISO9022 Antenas -40°C hasta +70 °C MIL-STD-810F Controladores -30°C hasta +65 °C Controlador RX1250c -30°C hasta +50 °C Almacenamiento: Receptor -40°C hasta +80 °C Antenas -55°C hasta +85 °C Controladores -40°C hasta +80 °C Controlador RX1250c -40°C hasta +80 °C
Humedad	Receptor, antenas y controladores hasta 100 % humedad.
Protección contra agua, polvo y arena	Receptor, antenas y controladores: Resistente al agua a inmersión temporal de 1 m. IP67, MIL-STD-810F Hermético al polvo
Choque/Caída contra superficie dura	Receptor: resiste la caída de 1 m contra una superficie dura. Antenas: resiste la caída de 1 m sobre una superficie dura.
Dejar caer bastón	Receptor, antenas y controladores: resisten la caída si se viene abajo el bastón.
Vibraciones	Receptor, antenas y controladores: Aguantan vibraciones sobre grandes máquinas de construcción. Sin pérdidas de señal. ISO9022 MIL-STD-810F

7.- LISTADO DE PUNTOS.

A continuación se adjunta un listado con las coordenadas x-y-z de los puntos tomados para el levantamiento de la zona objeto de proyecto, así como los códigos según la tipología de los puntos tomados en el levantamiento.

PUNTO	x	y	z	NOMBRE
1	728.360.872	4.308.950.569	255.060	BR-2
2	728.147.025	4.308.965.332	251.633	ALAM
3	728.152.352	4.308.961.138	251.552	ALAM
4	728.156.147	4.308.958.459	251.598	ALAM
5	728.157.623	4.308.950.111	251.678	ALAM
6	728.146.271	4.308.972.105	251.391	ALAM
7	728.145.364	4.308.983.803	252.229	ALAM
8	728.144.300	4.308.995.506	252.684	ALAM
9	728.143.471	4.309.001.827	253.269	ALAM
10	728.142.937	4.309.012.194	253.267	ALAM
11	728.148.677	4.309.015.152	253.966	ALAM
12	728.152.163	4.309.025.076	253.803	ALAM
13	728.155.705	4.309.035.667	253.418	ALAM
14	728.158.953	4.309.046.003	253.210	ALAM
15	728.162.313	4.309.056.242	253.397	ALAM
16	728.165.218	4.309.068.364	254.343	ALAM
17	728.168.168	4.309.080.386	255.013	ALAM
18	728.171.146	4.309.092.450	255.811	ALAM
19	728.173.690	4.309.104.309	256.368	ALAM
20	728.176.256	4.309.115.994	256.806	ALAM
21	728.178.826	4.309.127.644	257.155	ALAM
22	728.181.351	4.309.138.361	257.561	ALAM
23	728.183.073	4.309.145.418	257.617	ALAM
24	728.184.660	4.309.151.239	257.652	ALAM
25	728.187.885	4.309.162.848	257.679	ALAM
26	728.186.156	4.309.136.953	257.498	ALAM
27	728.195.343	4.309.134.719	257.389	ALAM
28	728.205.578	4.309.132.379	257.397	ALAM
29	728.215.081	4.309.130.124	257.317	ALAM
30	728.224.686	4.309.127.603	257.266	ALAM
31	728.234.000	4.309.125.134	257.255	ALAM
32	728.238.355	4.309.124.058	257.240	ALAM
33	728.342.892	4.309.173.510	257.991	CERR

34	728.345.837	4.309.173.338	257.959	RLL
35	728.349.825	4.309.174.558	257.990	RLL
36	728.351.053	4.309.174.655	257.838	CT
37	728.352.627	4.309.174.964	257.052	CU
38	728.353.082	4.309.174.943	257.012	CU
39	728.354.277	4.309.175.304	257.299	CT
40	728.354.786	4.309.175.990	257.452	HI
41	728.355.389	4.309.175.033	257.426	RLL
42	728.355.532	4.309.175.046	257.532	BC
43	728.357.453	4.309.175.095	257.602	LB
45	728.364.620	4.309.175.207	257.676	LB
46	728.367.581	4.309.175.484	257.627	LB
47	728.368.492	4.309.175.673	257.587	BC
48	728.368.632	4.309.176.362	257.409	HI
49	728.369.362	4.309.175.335	257.018	CU-H
50	728.369.727	4.309.175.479	256.831	CU-H
51	728.370.426	4.309.175.488	256.794	CU-H
52	728.372.211	4.309.175.651	257.904	HOR
53	728.374.627	4.309.175.694	257.986	RLL
54	728.378.395	4.309.175.699	258.039	RLL
55	728.378.409	4.309.167.025	258.010	RLL
56	728.378.738	4.309.163.385	257.731	RLL
57	728.374.332	4.309.162.874	257.669	RLL
58	728.374.153	4.309.166.899	257.938	RLL
59	728.372.697	4.309.166.785	257.890	HOR
60	728.372.592	4.309.162.946	257.671	HOR
61	728.371.056	4.309.163.019	256.772	CU-H
62	728.370.191	4.309.163.080	256.802	CU-H
63	728.369.792	4.309.163.078	257.004	CU-H
64	728.368.670	4.309.163.094	257.602	BC
65	728.367.904	4.309.163.139	257.620	LB
66	728.365.534	4.309.163.089	257.658	LB
68	728.358.348	4.309.162.675	257.560	LB
69	728.356.499	4.309.162.609	257.496	BC
70	728.356.242	4.309.162.561	257.385	RLL
71	728.355.485	4.309.162.544	257.302	CT
72	728.353.990	4.309.162.456	256.996	CU
73	728.353.535	4.309.162.378	257.005	CU
74	728.351.346	4.309.162.461	258.153	CT
75	728.349.602	4.309.162.228	258.184	RLL

76	728.345.877	4.309.161.972	258.080	RLL
77	728.343.890	4.309.161.993	258.075	CERR
78	728.344.445	4.309.155.402	257.981	CERR
79	728.339.741	4.309.156.399	257.688	CERR
80	728.339.397	4.309.154.969	257.274	RLL
81	728.342.436	4.309.154.072	257.252	RLL
82	728.345.229	4.309.154.233	257.888	RLL
83	728.344.733	4.309.153.595	257.814	CT
84	728.344.920	4.309.151.366	257.604	CT
85	728.344.752	4.309.148.380	257.312	CT
86	728.343.906	4.309.149.315	257.303	PT
87	728.343.469	4.309.151.975	257.342	PT
88	728.343.120	4.309.154.285	257.372	PT
89	728.339.585	4.309.155.386	257.365	PT
90	728.347.766	4.309.154.613	257.867	RLL
91	728.340.079	4.309.148.585	257.204	RLL
92	728.345.299	4.309.148.144	257.365	RLL
93	728.350.339	4.309.148.408	257.397	RLL
94	728.352.825	4.309.148.277	257.712	CT
95	728.354.797	4.309.148.142	256.821	CU
96	728.355.228	4.309.148.133	256.865	CU
97	728.356.567	4.309.148.196	257.218	CT
98	728.357.160	4.309.148.162	257.354	RLL
99	728.357.348	4.309.148.212	257.468	BC
100	728.359.197	4.309.148.388	257.534	LB
102	728.366.303	4.309.148.488	257.629	LB
103	728.367.805	4.309.148.506	257.584	LB
104	728.368.707	4.309.148.366	257.588	BC
105	728.370.265	4.309.148.175	256.907	CU-H
106	728.370.764	4.309.148.240	256.631	CU-H
107	728.371.471	4.309.148.303	256.644	CU-H
108	728.372.766	4.309.148.222	257.630	HOR
109	728.374.510	4.309.148.358	257.661	RLL
110	728.378.954	4.309.148.412	257.702	RLL
111	728.380.576	4.309.134.762	257.721	RLL
112	728.375.940	4.309.134.542	257.671	RLL
113	728.373.426	4.309.134.577	257.602	HOR
114	728.372.094	4.309.134.527	256.614	CU-H
115	728.371.441	4.309.134.514	256.562	CU-H
116	728.370.897	4.309.134.505	256.893	CU-H

117	728.372.747	4.309.130.146	256.893	TU
118	728.372.787	4.309.129.786	256.914	TU
119	728.372.585	4.309.129.924	256.802	LA
120	728.369.382	4.309.134.870	257.519	BC
121	728.367.724	4.309.134.894	257.560	LB
122	728.366.967	4.309.134.948	257.564	LB
124	728.360.035	4.309.134.899	257.508	LB
125	728.358.240	4.309.135.086	257.439	BC
126	728.358.040	4.309.135.084	257.351	RLL
127	728.357.518	4.309.135.111	257.226	CT
128	728.356.365	4.309.135.218	256.938	CU
129	728.355.739	4.309.135.186	256.898	CU
130	728.353.830	4.309.135.008	257.485	CT
131	728.351.867	4.309.135.268	257.570	RLL
132	728.351.069	4.309.136.758	257.535	P-TLF
133	728.350.618	4.309.134.783	257.535	RLL
134	728.349.605	4.309.134.762	257.231	RLL
135	728.344.140	4.309.134.290	257.138	RLL
136	728.341.703	4.309.134.227	257.147	RLL
137	728.341.561	4.309.121.919	257.199	RLL
138	728.346.806	4.309.121.650	257.212	RLL
139	728.352.210	4.309.121.865	257.375	RLL
140	728.355.582	4.309.121.605	257.386	CT
141	728.356.470	4.309.121.816	256.909	CU
142	728.356.929	4.309.121.726	256.898	CU
143	728.357.868	4.309.121.543	257.240	CT
144	728.357.668	4.309.121.949	257.190	CT
145	728.357.154	4.309.122.530	257.204	PASO
146	728.356.275	4.309.122.488	257.184	PASO
147	728.355.913	4.309.122.506	257.329	CT
148	728.355.687	4.309.122.113	257.390	CT
149	728.355.451	4.309.124.931	257.293	CT
150	728.355.995	4.309.124.312	257.231	CT
151	728.356.289	4.309.124.067	257.218	PASO
152	728.357.140	4.309.124.086	257.232	PASO
153	728.357.285	4.309.124.214	257.213	CT
154	728.357.733	4.309.125.848	257.240	CT
155	728.356.965	4.309.124.183	256.950	CU
156	728.356.608	4.309.124.194	256.955	CU
157	728.356.922	4.309.122.493	256.972	CU

158	728.356.591	4.309.122.377	256.912	CU
159	728.358.058	4.309.126.650	257.383	HI
160	728.358.778	4.309.121.943	257.325	RLL
161	728.358.931	4.309.121.915	257.404	BC
162	728.360.678	4.309.121.943	257.474	LB
164	728.367.783	4.309.122.169	257.488	LB
165	728.368.103	4.309.122.179	257.495	LB
166	728.370.065	4.309.122.231	257.443	BC
167	728.367.437	4.309.129.262	257.543	LB
168	728.367.785	4.309.129.333	257.548	LB
169	728.370.238	4.309.126.987	257.307	HI
170	728.370.810	4.309.125.457	256.873	SE
171	728.368.699	4.309.113.819	257.427	LB
172	728.368.356	4.309.113.774	257.446	LB
173	728.370.044	4.309.122.800	257.428	BC
174	728.371.442	4.309.122.739	256.754	CU-H
175	728.371.944	4.309.122.886	256.515	CU-H
176	728.372.521	4.309.122.935	256.530	CU-H
177	728.374.050	4.309.123.084	257.564	HOR
178	728.375.231	4.309.123.520	257.594	RLL
179	728.380.126	4.309.123.706	257.658	RLL
180	728.380.363	4.309.112.459	257.641	RLL
181	728.376.349	4.309.112.315	257.539	RLL
182	728.374.617	4.309.112.419	257.484	HOR
183	728.373.119	4.309.112.288	256.456	CU-H
184	728.372.545	4.309.112.259	256.459	CU-H
185	728.372.011	4.309.112.283	256.756	CU-H
186	728.370.575	4.309.112.402	257.378	BC
187	728.368.467	4.309.112.207	257.410	LB
189	728.361.293	4.309.112.005	257.386	LB
190	728.359.464	4.309.111.885	257.324	BC
191	728.359.319	4.309.111.890	257.221	RLL
192	728.358.789	4.309.111.918	257.112	CT
193	728.357.391	4.309.112.084	256.825	CU
194	728.357.028	4.309.112.025	256.823	CU
195	728.356.028	4.309.112.094	257.385	CT
196	728.354.578	4.309.112.007	257.462	RLL
197	728.351.392	4.309.111.681	257.138	RLL
198	728.345.267	4.309.112.174	257.058	RLL
199	728.342.870	4.309.112.079	257.020	RLL

200	728.342.664	4.309.101.489	256.902	RLL
201	728.348.744	4.309.101.386	257.000	RLL
202	728.353.441	4.309.101.569	257.157	RLL
203	728.356.423	4.309.101.378	257.251	CT
204	728.357.447	4.309.101.233	256.709	CU
205	728.357.793	4.309.101.224	256.693	CU
206	728.359.184	4.309.101.270	257.053	CT
207	728.359.857	4.309.101.206	257.182	RLL
208	728.360.018	4.309.101.223	257.253	BC
209	728.361.849	4.309.101.033	257.312	LB
211	728.369.059	4.309.100.986	257.332	LB
212	728.371.122	4.309.100.989	257.293	BC
213	728.372.590	4.309.100.861	256.596	CU-H
214	728.373.214	4.309.100.943	256.370	CU-H
215	728.373.710	4.309.101.040	256.380	CU-H
216	728.375.220	4.309.101.190	257.301	HOR
217	728.376.357	4.309.101.445	257.380	RLL
218	728.381.694	4.309.101.373	257.593	RLL
219	728.378.147	4.309.097.773	257.438	PO-TLF
220	728.381.336	4.309.091.456	257.677	PO-A
221	728.381.585	4.309.088.757	257.722	RLL
222	728.377.232	4.309.088.915	257.553	RLL
223	728.375.916	4.309.088.762	257.436	HOR
224	728.374.426	4.309.088.661	256.344	CU-H
225	728.373.926	4.309.088.633	256.343	CU-H
226	728.373.178	4.309.088.729	256.572	CU-H
227	728.372.786	4.309.088.709	256.622	PT
228	728.371.729	4.309.088.653	257.161	BC
229	728.372.321	4.309.085.887	256.932	HI
230	728.369.762	4.309.089.080	257.228	LB
232	728.362.484	4.309.088.816	257.220	LB
233	728.360.652	4.309.088.771	257.150	BC
234	728.360.492	4.309.088.729	257.072	RLL
235	728.359.743	4.309.088.641	257.003	CT
236	728.360.237	4.309.086.036	257.044	HI
237	728.358.280	4.309.088.556	256.624	CU
238	728.357.949	4.309.088.544	256.625	CU
239	728.357.243	4.309.088.700	256.928	CT
240	728.355.742	4.309.088.778	256.932	RLL
241	728.352.872	4.309.088.866	256.975	RLL

242	728.353.060	4.309.090.099	257.036	P-TLF
243	728.349.623	4.309.088.904	256.955	RLL
244	728.344.119	4.309.088.810	256.860	RLL
245	728.343.531	4.309.076.394	256.572	RLL
246	728.349.242	4.309.076.885	256.626	RLL
247	728.354.391	4.309.076.790	256.751	RLL
248	728.355.898	4.309.076.810	257.197	RLL
249	728.357.183	4.309.076.645	257.197	CT
250	728.360.643	4.309.076.084	256.871	CT
251	728.361.087	4.309.076.089	256.930	RLL
252	728.361.259	4.309.076.076	257.004	BC
253	728.363.161	4.309.076.087	257.070	LB
255	728.370.386	4.309.076.123	257.090	LB
256	728.372.328	4.309.076.171	257.036	BC
257	728.372.734	4.309.076.171	256.887	CT
258	728.373.386	4.309.076.117	256.607	PT
259	728.373.835	4.309.076.143	256.580	CU-H
260	728.374.466	4.309.076.126	256.269	CU-H
261	728.375.057	4.309.076.112	256.273	CU-H
262	728.376.621	4.309.075.847	257.506	HOR
263	728.378.023	4.309.075.796	257.616	RLL
264	728.382.501	4.309.075.607	257.689	RLL
265	728.383.279	4.309.065.629	257.612	RLL
266	728.378.617	4.309.065.763	257.506	RLL
267	728.377.193	4.309.065.726	257.353	HOR
268	728.377.681	4.309.055.689	257.256	HOR
269	728.378.933	4.309.055.939	257.396	RLL
270	728.384.251	4.309.055.586	257.507	RLL
271	728.384.978	4.309.051.375	257.494	CERR
272	728.384.627	4.309.051.393	257.561	CT
273	728.383.671	4.309.050.043	257.448	CT
274	728.381.657	4.309.049.991	257.593	CT
275	728.380.069	4.309.050.259	257.497	CT
276	728.378.575	4.309.051.227	257.071	CT
277	728.377.845	4.309.051.889	257.230	HOR
278	728.378.263	4.309.049.029	256.402	CT
279	728.378.641	4.309.049.187	256.525	PT
280	728.379.989	4.309.048.408	256.433	PT
281	728.381.676	4.309.047.762	256.422	PT
282	728.383.572	4.309.047.814	256.394	PT

283	728.385.137	4.309.047.942	256.577	CERR
284	728.376.167	4.309.051.807	255.849	CU-H
285	728.375.669	4.309.051.788	255.858	CU-H
286	728.375.054	4.309.051.791	256.081	CU-H
287	728.376.202	4.309.051.685	255.789	CU
288	728.375.591	4.309.051.596	255.782	CU
289	728.374.644	4.309.051.762	256.119	PT
290	728.374.157	4.309.051.665	256.281	CT
291	728.374.128	4.309.050.585	256.290	CT
292	728.373.566	4.309.051.540	256.596	BC
293	728.371.693	4.309.051.635	256.666	LB
295	728.364.401	4.309.051.490	256.705	LB
296	728.362.571	4.309.051.492	256.658	BC
297	728.362.334	4.309.051.453	256.554	RLL
298	728.361.636	4.309.051.460	256.451	BC
299	728.360.126	4.309.051.556	256.050	CU
300	728.359.500	4.309.051.630	256.083	CU
301	728.357.934	4.309.051.884	256.455	CT
302	728.356.712	4.309.051.887	256.381	RLL
303	728.351.702	4.309.052.101	256.293	RLL
304	728.345.586	4.309.052.198	256.210	RLL
305	728.344.911	4.309.063.465	256.441	RLL
306	728.349.636	4.309.063.902	256.456	RLL
307	728.353.886	4.309.063.753	256.548	RLL
308	728.355.427	4.309.063.623	256.729	RLL
309	728.357.528	4.309.067.402	256.872	CT
310	728.358.832	4.309.064.857	256.356	CU
311	728.359.275	4.309.064.889	256.323	CU
312	728.360.997	4.309.063.837	256.685	BC
313	728.361.717	4.309.063.796	256.764	RLL
314	728.361.892	4.309.063.779	256.840	BC
315	728.363.746	4.309.063.666	256.902	LB
317	728.371.040	4.309.063.680	256.909	LB
318	728.372.962	4.309.063.635	256.847	BC
319	728.373.341	4.309.063.602	256.685	CT
320	728.374.079	4.309.063.576	256.372	PT
321	728.374.441	4.309.063.589	256.338	CU-H
322	728.375.105	4.309.063.628	256.064	CU-H
323	728.375.666	4.309.063.632	256.084	CU-H
324	728.385.388	4.309.042.518	256.358	CERR

325	728.383.603	4.309.042.714	256.355	RLL
326	728.379.794	4.309.042.570	256.281	RLL
327	728.378.551	4.309.042.591	256.373	CT
328	728.376.675	4.309.042.515	255.516	CU
329	728.376.081	4.309.042.618	255.454	CU
330	728.374.387	4.309.042.559	256.254	CT
331	728.373.951	4.309.042.602	256.431	BC
332	728.372.084	4.309.042.499	256.512	LB
334	728.364.799	4.309.042.331	256.541	LB
335	728.362.871	4.309.042.309	256.475	BC
336	728.362.688	4.309.042.317	256.395	RLL
337	728.361.916	4.309.042.365	256.294	BC
338	728.360.404	4.309.042.451	255.867	CU
339	728.359.760	4.309.042.485	255.841	CU
340	728.358.578	4.309.042.445	256.390	CT
341	728.356.599	4.309.042.269	256.154	RLL
342	728.355.193	4.309.041.151	256.140	P-TLF
343	728.353.784	4.309.042.287	256.031	RLL
344	728.348.414	4.309.041.987	255.903	RLL
345	728.343.313	4.309.042.091	255.903	RLL
346	728.342.602	4.309.032.033	255.720	RLL
347	728.347.903	4.309.031.078	255.666	RLL
348	728.355.064	4.309.030.930	255.640	RLL
349	728.358.919	4.309.030.900	255.895	RLL
350	728.359.808	4.309.030.805	255.923	CT
351	728.360.444	4.309.030.838	255.591	CU
352	728.360.894	4.309.030.682	255.565	CU
353	728.362.654	4.309.030.781	256.152	BC
354	728.363.247	4.309.030.741	256.189	RLL
355	728.363.453	4.309.030.759	256.280	BC
356	728.362.620	4.309.025.673	256.027	HI
357	728.356.128	4.309.023.271	255.628	T-HOR
358	728.365.307	4.309.030.660	256.352	LB
360	728.372.540	4.309.030.695	256.343	LB
361	728.374.520	4.309.030.704	256.290	BC
362	728.374.836	4.309.030.688	256.084	CT
363	728.375.156	4.309.025.287	256.004	HI
364	728.376.709	4.309.030.602	255.285	CU
365	728.377.191	4.309.030.659	255.319	CU
366	728.379.183	4.309.030.589	256.117	CT

367	728.380.660	4.309.030.564	256.097	RLL
368	728.384.413	4.309.030.710	256.016	RLL
369	728.386.006	4.309.030.514	256.146	CERR
370	728.386.608	4.309.017.664	255.972	CERR
371	728.384.959	4.309.017.737	255.852	RLL
372	728.380.505	4.309.017.734	255.754	RLL
373	728.379.257	4.309.017.667	255.638	CT
374	728.378.272	4.309.017.657	255.243	CU
375	728.377.281	4.309.017.709	255.201	CU
376	728.375.485	4.309.017.635	255.896	CT
377	728.375.130	4.309.017.626	256.072	BC
378	728.373.254	4.309.017.677	256.128	LB
380	728.366.034	4.309.017.466	256.146	LB
381	728.364.060	4.309.017.549	256.110	BC
382	728.363.202	4.309.017.572	255.994	BC
383	728.362.666	4.309.017.559	255.790	CT
384	728.361.350	4.309.017.643	255.314	CU
385	728.360.672	4.309.017.650	255.262	CU
386	728.359.340	4.309.017.670	255.560	CT
387	728.358.159	4.309.017.613	255.431	RLL
388	728.352.906	4.309.017.785	255.183	RLL
389	728.346.455	4.309.018.259	255.207	RLL
390	728.345.398	4.309.007.373	255.017	RLL
391	728.351.604	4.309.007.246	254.791	RLL
392	728.357.131	4.309.006.902	254.822	RLL
393	728.359.339	4.309.006.971	255.153	RLL
394	728.360.249	4.309.006.764	255.218	CT
395	728.360.880	4.309.006.667	255.015	CU
396	728.361.367	4.309.006.720	255.022	CU
397	728.363.348	4.309.006.740	255.694	CT
398	728.363.798	4.309.006.710	255.833	BC
399	728.364.286	4.309.006.749	255.868	RLL
400	728.364.519	4.309.006.743	255.985	BC
401	728.366.421	4.309.006.830	256.043	LB
403	728.373.689	4.309.006.657	255.987	LB
404	728.375.608	4.309.006.580	255.916	BC
405	728.375.922	4.309.006.549	255.763	CT
406	728.377.646	4.309.006.508	255.122	CU
407	728.378.723	4.309.006.311	255.132	CU
408	728.380.115	4.309.006.139	255.583	CT

409	728.382.076	4.309.006.039	255.744	RLL
410	728.385.307	4.309.005.582	255.723	RLL
411	728.387.360	4.309.004.979	255.774	CERR
412	728.387.390	4.309.002.845	255.754	CERR
413	728.389.958	4.309.002.905	255.676	CERR
414	728.385.726	4.309.000.190	255.819	PO-A
415	728.386.161	4.309.000.497	255.448	HOR
416	728.385.414	4.309.000.630	255.633	HOR
417	728.385.552	4.308.999.586	255.551	HOR
418	728.386.890	4.308.995.683	255.340	RLL
419	728.382.965	4.308.995.551	255.285	RLL
420	728.381.113	4.308.995.746	255.358	CT
421	728.379.406	4.308.996.013	254.843	CU
422	728.378.572	4.308.996.047	254.779	CU
423	728.376.612	4.308.996.255	255.551	CT
424	728.376.261	4.308.996.212	255.664	RLL
425	728.376.048	4.308.996.198	255.813	BC
426	728.374.215	4.308.996.241	255.902	LB
428	728.367.002	4.308.996.454	255.937	LB
429	728.365.060	4.308.996.446	255.877	BC
430	728.364.826	4.308.996.426	255.761	RLL
431	728.364.224	4.308.996.394	255.721	BC
432	728.363.183	4.308.996.368	255.537	CT
433	728.361.411	4.308.996.350	254.888	CU
434	728.360.479	4.308.996.348	254.757	CU
435	728.359.459	4.308.996.505	254.947	CT
436	728.359.001	4.308.996.455	254.936	CT
437	728.357.445	4.308.996.666	254.524	PT
438	728.356.112	4.308.996.755	254.540	RLL
439	728.351.586	4.308.997.080	254.562	RLL
440	728.348.202	4.308.997.445	254.683	RLL
441	728.358.386	4.309.008.814	254.972	PT
442	728.359.209	4.309.008.662	255.210	CT
443	728.362.805	4.308.982.821	255.693	BR-3
444	728.346.392	4.308.984.804	254.156	RLL
445	728.351.249	4.308.983.840	254.396	RLL
446	728.354.947	4.308.983.212	254.602	RLL
447	728.356.058	4.308.982.966	254.688	PT
448	728.357.680	4.308.982.823	255.120	CT
449	728.358.640	4.308.982.762	255.038	CT

450	728.359.870	4.308.982.923	254.649	CU
451	728.361.015	4.308.983.896	254.640	CU
452	728.361.266	4.308.983.905	254.629	OF
453	728.361.444	4.308.984.269	254.879	OF
454	728.362.504	4.308.983.180	254.631	TU
455	728.362.514	4.308.982.793	254.565	LA
456	728.362.554	4.308.982.401	254.618	TU
457	728.361.469	4.308.981.544	254.758	OF
458	728.360.743	4.308.981.391	254.640	CU
459	728.362.519	4.308.980.602	255.236	CT
460	728.362.669	4.308.981.850	255.337	OF
461	728.363.070	4.308.981.909	255.397	OF
462	728.362.966	4.308.983.700	255.432	OF
463	728.362.565	4.308.983.703	255.105	OF
464	728.362.597	4.308.984.996	255.182	CT
465	728.364.902	4.308.982.839	255.618	BC
466	728.365.431	4.308.982.717	255.655	RLL
467	728.365.560	4.308.982.693	255.757	BC
468	728.367.524	4.308.982.598	255.832	LB
470	728.374.749	4.308.982.834	255.808	LB
471	728.376.681	4.308.982.909	255.744	BC
472	728.377.450	4.308.984.253	255.485	OF
473	728.377.875	4.308.984.318	255.376	OF
474	728.377.479	4.308.982.528	255.455	OF
475	728.377.888	4.308.982.541	255.377	OF
476	728.377.922	4.308.983.021	254.596	TU
477	728.377.913	4.308.983.780	254.613	TU
478	728.377.946	4.308.983.401	254.538	LA
479	728.379.493	4.308.982.056	254.627	OF
480	728.379.428	4.308.981.595	254.742	OF
481	728.379.631	4.308.981.996	254.617	CU
482	728.379.668	4.308.984.898	254.580	CU
483	728.379.551	4.308.984.865	254.580	OF
484	728.379.560	4.308.985.285	254.592	OF
485	728.380.203	4.308.983.929	254.706	CU
486	728.381.415	4.308.984.523	255.180	CT
487	728.383.263	4.308.985.445	255.062	RLL
488	728.388.267	4.308.986.188	255.300	RLL
489	728.390.467	4.308.986.533	255.376	RLL
490	728.390.666	4.308.989.024	255.407	ARQ

491	728.390.573	4.308.989.945	255.393	ARQ
492	728.389.608	4.308.989.888	255.387	ARQ
493	728.389.698	4.308.988.921	255.356	ARQ
494	728.384.977	4.308.982.070	255.384	T-METAL
495	728.385.117	4.308.981.141	255.087	T-METAL
496	728.390.692	4.308.977.402	254.967	RLL
497	728.385.833	4.308.977.123	254.923	RLL
498	728.381.373	4.308.977.125	255.278	CT
499	728.380.340	4.308.977.334	254.737	CU
500	728.379.597	4.308.977.373	254.688	CU
501	728.377.337	4.308.977.611	255.437	CT
503	728.376.938	4.308.977.462	255.663	BC
504	728.375.013	4.308.977.642	255.758	LB
506	728.367.847	4.308.977.612	255.804	LB
507	728.365.782	4.308.977.506	255.726	BC
508	728.365.575	4.308.977.458	255.608	RLL
509	728.365.070	4.308.977.442	255.555	BC
511	728.362.836	4.308.977.599	255.224	CT
512	728.361.065	4.308.977.735	254.518	CU
513	728.360.555	4.308.977.744	254.464	CU
514	728.359.203	4.308.977.662	255.100	CT
515	728.355.898	4.308.977.397	255.084	CERR
516	728.357.043	4.308.980.617	255.049	CT
517	728.356.058	4.308.981.000	254.771	PT
518	728.356.184	4.308.979.933	254.997	PT
519	728.355.834	4.308.978.977	255.056	CERR
520	728.353.570	4.308.979.396	254.716	CERR
521	728.353.478	4.308.980.484	254.781	RLL
522	728.348.373	4.308.981.557	254.406	RLL
523	728.348.171	4.308.980.521	254.370	CERR
524	728.356.225	4.308.969.378	255.191	CERR
525	728.358.023	4.308.969.468	255.266	T-HOR
526	728.359.593	4.308.969.912	255.122	CT
527	728.361.284	4.308.970.745	254.421	CU
528	728.361.886	4.308.970.718	254.440	CU
529	728.362.851	4.308.970.710	255.132	BC
530	728.362.777	4.308.974.806	255.120	BC
531	728.364.073	4.308.975.110	255.389	BC
532	728.365.087	4.308.975.298	255.539	BC
533	728.364.478	4.308.971.339	255.415	RLL

534	728.365.628	4.308.971.563	255.568	RLL
535	728.365.912	4.308.971.607	255.672	BC
536	728.364.731	4.308.976.798	255.473	HI
537	728.365.876	4.308.972.282	255.685	BC
538	728.367.992	4.308.972.236	255.751	LB
540	728.375.219	4.308.972.323	255.701	LB
541	728.377.147	4.308.972.345	255.637	BC
542	728.377.578	4.308.972.340	255.443	CT
543	728.377.434	4.308.977.052	255.421	HI
544	728.380.005	4.308.972.234	254.615	CU
545	728.380.555	4.308.972.156	254.580	CU
546	728.381.640	4.308.972.302	254.992	CT
547	728.383.353	4.308.972.430	254.882	RLL
548	728.387.066	4.308.972.443	254.800	RLL
549	728.387.734	4.308.961.148	254.787	RLL
550	728.384.463	4.308.961.219	254.919	RLL
551	728.381.909	4.308.961.208	254.937	CT
552	728.381.161	4.308.961.273	254.611	CU
553	728.380.512	4.308.961.417	254.611	CU
554	728.378.024	4.308.961.500	255.328	CT
555	728.377.716	4.308.961.558	255.421	RLL
556	728.377.499	4.308.961.581	255.579	BC
557	728.375.709	4.308.961.638	255.649	LB
559	728.368.541	4.308.961.844	255.690	LB
560	728.366.545	4.308.961.888	255.623	BC
561	728.363.951	4.308.961.925	255.347	RLL
562	728.357.843	4.308.960.997	254.942	RLL
563	728.356.631	4.308.961.462	254.944	CERR
564	728.356.481	4.308.961.449	254.906	EN
565	728.356.511	4.308.960.648	254.939	EN
566	728.356.687	4.308.960.636	255.125	CERR
567	728.356.704	4.308.959.566	254.854	CERR
568	728.356.239	4.308.959.554	254.842	EN
569	728.356.573	4.308.952.172	254.844	EN
570	728.357.032	4.308.952.178	254.895	CERR
571	728.356.609	4.308.961.956	254.884	BC
572	728.356.601	4.308.962.123	254.997	BO
573	728.358.367	4.308.962.853	255.085	BO
574	728.358.421	4.308.962.765	254.994	BC
575	728.359.742	4.308.963.575	255.063	BC

576	728.359.677	4.308.963.683	255.152	BO
577	728.360.358	4.308.964.293	255.088	CT
578	728.360.437	4.308.964.231	255.090	BO
579	728.360.484	4.308.964.150	255.093	BC
580	728.361.723	4.308.965.050	255.184	BC
581	728.361.604	4.308.965.124	255.108	BO
582	728.362.777	4.308.966.017	255.147	BO
583	728.362.841	4.308.965.881	255.260	BC
584	728.363.509	4.308.966.535	255.318	BC
585	728.363.454	4.308.966.604	255.322	BO
586	728.363.489	4.308.967.047	255.169	BC
587	728.364.303	4.308.967.360	255.381	RLL
588	728.364.401	4.308.967.316	255.449	BC
589	728.365.101	4.308.968.225	255.536	BC
590	728.365.048	4.308.968.311	255.472	RLL
591	728.365.551	4.308.969.278	255.542	RLL
592	728.365.702	4.308.969.218	255.654	BC
593	728.365.880	4.308.970.263	255.660	BC
594	728.365.764	4.308.970.315	255.569	RLL
595	728.361.938	4.308.966.289	254.357	CU
596	728.361.382	4.308.966.194	254.305	CU
597	728.361.764	4.308.965.311	254.296	TU
598	728.361.276	4.308.965.158	254.334	TU
599	728.361.497	4.308.965.251	254.292	LA
600	728.357.626	4.308.954.928	254.945	RLL
601	728.361.235	4.308.953.995	255.120	RLL
602	728.365.048	4.308.953.568	255.358	RLL
603	728.366.799	4.308.953.836	255.571	BC
604	728.368.841	4.308.953.440	255.643	LB
606	728.375.933	4.308.953.580	255.616	LB
607	728.377.709	4.308.953.632	255.538	BC
608	728.377.961	4.308.953.640	255.390	RLL
609	728.378.657	4.308.953.621	255.180	CT
610	728.380.345	4.308.953.604	254.632	CU
611	728.381.140	4.308.953.525	254.629	CU
612	728.382.128	4.308.953.621	254.898	CT
613	728.383.495	4.308.953.446	254.917	RLL
614	728.390.537	4.308.953.518	254.800	RLL
615	728.391.607	4.308.942.410	254.902	RLL
616	728.385.784	4.308.942.276	254.955	RLL

617	728.382.289	4.308.942.195	254.905	CT
618	728.381.546	4.308.942.084	254.652	CU
619	728.380.921	4.308.942.102	254.656	CU
620	728.378.767	4.308.942.179	255.357	CT
621	728.378.413	4.308.942.221	255.394	RLL
622	728.378.292	4.308.942.159	255.476	BC
623	728.376.576	4.308.942.126	255.546	LB
625	728.369.427	4.308.942.140	255.559	LB
626	728.367.264	4.308.942.022	255.478	BC
627	728.367.071	4.308.942.017	255.360	RLL
628	728.366.800	4.308.942.011	255.342	BC
629	728.365.820	4.308.941.979	255.095	CT
630	728.363.688	4.308.941.708	254.329	CU
631	728.362.728	4.308.941.582	254.207	CU
632	728.361.229	4.308.941.302	254.988	CT
633	728.359.257	4.308.941.317	254.958	RLL
634	728.359.386	4.308.940.756	255.026	P-TLF
635	728.357.430	4.308.941.788	254.803	CERR
636	728.357.339	4.308.943.689	254.412	CERR
637	728.358.017	4.308.943.523	254.396	CT
638	728.357.615	4.308.943.745	253.636	CU
639	728.357.719	4.308.944.167	253.565	CU
640	728.358.954	4.308.944.155	254.007	CU
641	728.358.933	4.308.943.631	254.076	CU
642	728.359.358	4.308.942.742	254.776	CT
643	728.360.467	4.308.941.997	254.830	CT
644	728.360.962	4.308.942.930	254.223	CU
645	728.362.282	4.308.941.827	254.309	CU
647	728.363.132	4.308.943.521	254.186	CU
648	728.362.760	4.308.945.944	254.151	CU
649	728.362.370	4.308.945.942	254.149	CU
650	728.362.111	4.308.945.313	254.115	CU
651	728.360.890	4.308.944.678	254.106	CU
652	728.360.586	4.308.947.015	254.990	CT
653	728.360.096	4.308.946.223	254.840	CT
654	728.358.819	4.308.945.656	254.759	CT
655	728.357.764	4.308.944.875	254.657	CT
656	728.357.303	4.308.944.535	254.535	CERR
657	728.357.159	4.308.947.754	255.020	CERR
658	728.358.210	4.308.947.917	255.135	RLL

659	728.360.053	4.308.948.026	255.130	RLL
660	728.360.890	4.308.948.055	255.085	CT
661	728.361.737	4.308.948.643	254.940	CT
662	728.362.128	4.308.948.688	254.966	OF
663	728.362.116	4.308.948.808	254.975	OF
664	728.363.090	4.308.948.833	254.972	OF
665	728.363.115	4.308.948.713	254.966	OF
666	728.362.285	4.308.947.946	254.220	OF
667	728.363.003	4.308.948.099	254.287	OF
668	728.362.791	4.308.947.379	254.191	CU
669	728.362.451	4.308.947.321	254.159	CU
670	728.362.317	4.308.948.632	254.126	TU
671	728.362.874	4.308.948.640	254.204	TU
672	728.362.557	4.308.948.603	254.089	LA
673	728.367.117	4.308.944.051	255.461	BC
674	728.366.719	4.308.944.046	255.362	BC
675	728.366.845	4.308.944.002	255.394	RLL
676	728.366.690	4.308.944.843	255.410	BC
677	728.365.957	4.308.946.176	255.312	BC
678	728.365.380	4.308.947.205	255.238	BC
679	728.365.301	4.308.947.156	255.244	BO
680	728.365.907	4.308.943.320	255.175	CT
681	728.365.199	4.308.944.814	255.065	CT
682	728.364.273	4.308.946.998	255.005	CT
683	728.363.571	4.308.948.385	254.856	CT
684	728.364.760	4.308.947.853	255.151	BO
685	728.364.859	4.308.947.958	255.222	BC
686	728.364.319	4.308.948.552	255.161	BC
687	728.364.241	4.308.948.408	255.114	BO
688	728.363.297	4.308.949.144	255.067	BO
689	728.363.401	4.308.949.268	255.101	BC
690	728.362.086	4.308.950.083	255.033	BC
691	728.361.984	4.308.949.951	255.041	BO
692	728.361.088	4.308.950.424	255.016	BO
693	728.361.135	4.308.950.552	254.991	BC
694	728.359.939	4.308.951.003	254.948	BC
695	728.359.934	4.308.950.896	254.984	BO
696	728.358.489	4.308.951.319	254.987	BO
697	728.358.458	4.308.951.456	254.925	BC
698	728.357.572	4.308.951.655	254.905	BC

699	728.357.535	4.308.951.519	254.975	BO
700	728.357.907	4.308.930.772	254.891	CERR
701	728.360.209	4.308.930.777	255.076	RLL
702	728.362.648	4.308.930.481	254.890	CT
703	728.363.963	4.308.930.338	254.307	CU
704	728.364.591	4.308.930.288	254.348	CU
705	728.366.808	4.308.930.373	255.151	CT
706	728.367.452	4.308.930.281	255.309	BC
707	728.367.658	4.308.930.241	255.334	RLL
708	728.367.828	4.308.930.238	255.403	BC
709	728.365.952	4.308.935.410	255.176	SE
710	728.367.319	4.308.926.029	255.220	HI
711	728.369.872	4.308.931.492	255.495	LB
712	728.373.302	4.308.931.462	255.590	E
713	728.376.982	4.308.931.490	255.502	LB
714	728.378.756	4.308.931.469	255.451	BC
715	728.378.902	4.308.931.492	255.389	RLL
716	728.379.294	4.308.931.425	255.329	CT
717	728.379.868	4.308.935.935	255.069	SE
718	728.379.684	4.308.926.537	255.267	HI
719	728.381.329	4.308.931.271	254.679	CU
720	728.381.969	4.308.931.184	254.665	CU
721	728.382.918	4.308.931.170	254.913	CT
722	728.384.268	4.308.931.155	254.949	RLL
723	728.390.796	4.308.931.126	254.959	RLL
724	728.385.164	4.308.923.345	254.910	HI
725	728.385.192	4.308.923.183	254.913	HI
726	728.384.994	4.308.923.166	254.941	HI
727	728.384.955	4.308.923.312	254.959	HI
728	728.389.284	4.308.917.095	254.933	RLL
729	728.385.587	4.308.916.927	254.891	RLL
730	728.383.382	4.308.916.970	254.809	CT
731	728.382.657	4.308.916.932	254.636	CU
732	728.381.923	4.308.917.017	254.615	CU
733	728.380.043	4.308.917.112	255.290	CT
734	728.379.624	4.308.917.163	255.336	RLL
735	728.379.484	4.308.917.169	255.429	BC
736	728.377.696	4.308.917.035	255.481	LB
737	728.374.026	4.308.916.965	255.588	E
738	728.370.474	4.308.917.226	255.483	LB

739	728.368.427	4.308.917.127	255.394	BC
740	728.368.294	4.308.917.109	255.307	RLL
741	728.368.072	4.308.917.066	255.288	BC
742	728.367.090	4.308.917.041	255.000	CT
743	728.365.636	4.308.916.976	254.384	CU
744	728.365.073	4.308.917.128	254.373	CU
745	728.363.670	4.308.917.044	255.014	CT
746	728.361.951	4.308.917.049	255.120	RLL
747	728.359.686	4.308.917.034	254.984	RLL
748	728.358.593	4.308.917.181	254.937	CERR
749	728.358.947	4.308.907.448	254.858	RLL
750	728.363.129	4.308.907.721	255.019	RLL
751	728.367.101	4.308.907.911	255.243	RLL
752	728.358.543	4.308.911.056	254.896	EN
753	728.359.024	4.308.911.086	254.979	CERR
754	728.359.206	4.308.911.238	254.918	BC
755	728.359.155	4.308.911.378	254.988	BO
756	728.361.779	4.308.911.311	255.047	BO
757	728.361.750	4.308.911.169	255.018	BC
758	728.362.952	4.308.911.369	255.016	BC
759	728.362.952	4.308.911.482	255.053	BO
760	728.364.329	4.308.911.828	255.096	BO
761	728.364.356	4.308.911.674	255.064	BC
762	728.365.549	4.308.912.431	255.127	BC
763	728.365.445	4.308.912.558	255.131	BO
764	728.366.706	4.308.913.135	255.135	BO
765	728.366.879	4.308.912.960	255.216	BC
766	728.367.617	4.308.913.407	255.227	BC
767	728.368.138	4.308.914.072	255.325	BC
768	728.368.108	4.308.914.495	255.315	BC
769	728.368.366	4.308.914.555	255.384	BC
770	728.368.293	4.308.914.334	255.361	BC
771	728.367.219	4.308.914.599	255.053	CT
772	728.367.075	4.308.913.913	255.054	CT
773	728.366.398	4.308.913.586	255.025	OF
774	728.366.397	4.308.913.467	255.036	OF
775	728.365.653	4.308.913.461	255.046	OF
776	728.365.661	4.308.913.574	255.040	OF
777	728.365.192	4.308.913.332	255.053	CT
778	728.364.491	4.308.913.564	255.079	CT

779	728.363.687	4.308.914.688	255.096	CT
780	728.365.582	4.308.914.831	254.370	CU
781	728.365.886	4.308.914.793	254.436	CU
782	728.366.293	4.308.914.434	254.534	OF
783	728.365.640	4.308.914.242	254.431	OF
784	728.366.243	4.308.913.682	254.378	TU
785	728.365.762	4.308.913.647	254.340	TU
786	728.366.019	4.308.913.692	254.340	LA
787	728.358.895	4.308.903.429	254.901	EN
788	728.359.324	4.308.903.427	254.913	CERR
789	728.359.726	4.308.903.364	254.934	BC
790	728.359.701	4.308.903.202	255.013	BO
791	728.362.668	4.308.903.449	255.064	BO
792	728.362.631	4.308.903.542	255.032	BC
793	728.365.735	4.308.903.419	255.173	BC
794	728.365.749	4.308.903.302	255.167	BO
795	728.366.996	4.308.903.068	255.168	BO
796	728.367.049	4.308.903.185	255.196	BC
797	728.367.957	4.308.902.847	255.305	BC
798	728.368.570	4.308.901.986	255.384	BC
799	728.368.822	4.308.901.281	255.385	BC
800	728.368.751	4.308.900.763	255.355	BC
801	728.368.963	4.308.900.844	255.413	BC
802	728.369.084	4.308.899.954	255.437	BC
803	728.368.979	4.308.899.925	255.348	RLL
804	728.368.772	4.308.899.897	255.330	BC
805	728.367.739	4.308.899.905	254.989	CT
806	728.366.860	4.308.900.068	254.543	CU
807	728.366.408	4.308.900.115	254.479	CU
808	728.366.590	4.308.901.614	254.478	CU
809	728.366.295	4.308.901.597	254.489	CU
810	728.366.871	4.308.901.862	254.645	OF
811	728.365.976	4.308.901.764	254.626	OF
812	728.366.179	4.308.902.867	254.478	TU
813	728.366.585	4.308.902.824	254.466	TU
814	728.366.391	4.308.902.826	254.455	LA
815	728.366.045	4.308.902.961	255.084	OF
816	728.366.694	4.308.902.920	255.088	OF
817	728.365.330	4.308.902.779	255.234	SE
818	728.365.736	4.308.902.770	255.103	CT

819	728.365.140	4.308.900.316	255.146	CT
820	728.362.622	4.308.899.993	255.195	RLL
821	728.359.465	4.308.899.878	255.236	CERR
822	728.368.678	4.308.907.870	255.422	BC
823	728.370.856	4.308.907.981	255.501	LB
824	728.374.341	4.308.907.845	255.609	E
825	728.378.074	4.308.907.794	255.519	LB
826	728.379.877	4.308.907.842	255.446	BC
827	728.380.126	4.308.907.840	255.347	RLL
828	728.380.713	4.308.907.846	255.277	CT
829	728.382.163	4.308.907.910	254.771	CU
830	728.382.865	4.308.907.819	254.741	CU
831	728.383.745	4.308.907.712	254.839	CT
832	728.385.001	4.308.907.732	254.930	RLL
833	728.389.034	4.308.907.912	255.066	RLL
834	728.390.097	4.308.899.339	255.032	RLL
835	728.387.820	4.308.899.302	255.171	RLL
836	728.384.244	4.308.899.368	254.986	CT
837	728.383.583	4.308.899.413	254.753	CU
838	728.382.915	4.308.899.393	254.747	CU
839	728.381.145	4.308.899.455	255.265	CT
840	728.380.436	4.308.899.474	255.340	RLL
841	728.380.274	4.308.899.459	255.451	BC
842	728.378.470	4.308.899.443	255.517	LB
843	728.374.863	4.308.899.445	255.606	E
844	728.371.323	4.308.899.336	255.509	LB
845	728.361.325	4.308.893.122	255.259	P-TLF
846	728.359.923	4.308.888.333	255.274	CERR
847	728.362.873	4.308.888.251	255.360	RLL
848	728.365.745	4.308.888.075	255.289	CT
849	728.366.931	4.308.888.111	254.590	CU
850	728.367.420	4.308.887.952	254.616	CU
851	728.369.172	4.308.887.837	255.246	CT
852	728.369.439	4.308.887.872	255.353	BC
853	728.369.650	4.308.887.822	255.366	RLL
854	728.369.823	4.308.887.848	255.438	BC
855	728.371.729	4.308.887.946	255.503	LB
856	728.375.373	4.308.887.902	255.625	E
857	728.378.980	4.308.887.920	255.536	LB
858	728.380.737	4.308.887.915	255.478	BC

859	728.380.906	4.308.887.915	255.357	RLL
860	728.381.570	4.308.887.945	255.285	CT
861	728.383.194	4.308.887.885	254.796	CU
862	728.383.846	4.308.887.845	254.764	CU
863	728.384.465	4.308.887.827	254.973	CT
864	728.387.111	4.308.887.773	255.208	RLL
865	728.392.007	4.308.888.323	255.151	RLL
866	728.392.743	4.308.875.851	255.289	RLL
867	728.389.007	4.308.875.431	255.345	RLL
868	728.385.453	4.308.875.278	255.096	CT
869	728.384.423	4.308.875.317	254.879	CU
870	728.383.651	4.308.875.399	254.853	CU
871	728.381.694	4.308.875.503	255.447	CT
872	728.381.393	4.308.875.523	255.507	BC
873	728.381.835	4.308.877.655	255.372	HI
874	728.379.581	4.308.875.350	255.567	LB
875	728.376.027	4.308.875.230	255.675	E
876	728.372.409	4.308.875.173	255.566	LB
877	728.370.387	4.308.874.943	255.486	BC
878	728.370.209	4.308.874.946	255.410	RLL
879	728.370.035	4.308.874.918	255.396	BC
880	728.369.372	4.308.874.914	255.178	CT
881	728.369.589	4.308.876.239	255.327	HI
882	728.367.933	4.308.874.923	254.658	CU
883	728.367.434	4.308.874.937	254.654	CU
884	728.366.297	4.308.874.861	255.305	CT
885	728.363.717	4.308.874.730	255.337	RLL
886	728.360.524	4.308.874.543	255.417	CERR
887	728.362.043	4.308.874.108	255.348	DI-TLF
888	728.356.136	4.308.977.703	255.044	DI-ELEC
889	728.349.376	4.309.174.843	257.936	DI-TLF
890	728.361.011	4.309.175.029	257.675	E
891	728.362.014	4.309.162.712	257.658	E
892	728.362.793	4.309.148.305	257.633	E
893	728.363.549	4.309.135.052	257.614	E
894	728.364.231	4.309.121.794	257.540	E
895	728.364.872	4.309.111.959	257.459	E
896	728.365.399	4.309.100.998	257.416	E
897	728.366.112	4.309.088.893	257.315	E
898	728.366.722	4.309.076.719	257.173	E

899	728.367.452	4.309.063.867	256.995	E
900	728.367.947	4.309.051.948	256.778	E
901	728.368.469	4.309.041.656	256.595	E
902	728.368.993	4.309.030.888	256.423	E
903	728.369.632	4.309.017.367	256.220	E
904	728.370.114	4.309.006.568	256.095	E
905	728.370.616	4.308.995.275	255.988	E
906	728.371.140	4.308.983.516	255.921	E
907	728.371.425	4.308.976.733	255.858	E
908	728.371.564	4.308.973.013	255.825	E
909	728.372.135	4.308.961.695	255.762	E
910	728.372.508	4.308.953.369	255.713	E
911	728.373.023	4.308.941.954	255.633	E
912	728.360.133	4.308.963.959	255.185	BR-1
913	728.358.400	4.309.076.443	256.488	CU
914	728.358.794	4.309.076.320	256.468	CU
915	728.357.339	4.308.943.754	253.634	CU
916	728.357.318	4.308.944.164	253.564	CU