ANEJO 4. TOPOGRAFÍA Y TRAZADO

ÍNDICE

1. INTRODUCCIÓN Y OBJETO DEL ANEJO 2
2. METODOLOGÍA EMPLEADA PARA LA MEDICIÓN GPS 2
3. DATOS GEOMETRICOS DE LA RED 2
3.1. TRAZADO DE ZANJAS PARA LAS REDES 2

Apéndice 1. LISTADO ZONA DE TOMA EB Y BALSAS

Apéndice 2. LISTADO DE TRAZADO DE RAMALES

1. INTRODUCCIÓN Y OBJETO DEL ANEJO

Como información de apoyo para la realización del presente proyecto se utilizó la siguiente documentación:

- Ortofotos en formato .jp2 a escala 1:5000 en proyección UTM (ETRS89) zona 31N.
- Cartografía con curvas de nivel cada 5 metros en proyección UTM (ETRS89) zona 31N.
- Modelo Digital de Elevaciones con tamaño de celda de 2x2 en proyección UTM (ETRS89) zona 31N.

Se utiliza Modelo Digital de Elevaciones, para la topografía de la red de riego. El modelo de elevaciones del terreno de Cataluña se obtiene a partir de los datos del proyecto LiDARCAT, es un modelo digital del terreno de malla regular que contiene alturas ortométricas distribuidas según una cuadrícula con un paso de malla de 2 metros.

- Sistema geodésico de referencia es el ETRS89.
- El sistema de representación planimétrica es el de la proyección conforme Universal Transversa Mercator (UTM).
- Las alturas están referidas a la superficie definida por el nivel medir del mar. En Cataluña, el origen de alturas es el nivel medio del mar en Alicante. El geoide empleado es el EGM08D595.

Dicha cartografía ha sido completada con la toma directa en campo, por procedimientos de topografía, mediante GPS Leica Viva CS15, en las obras de toma de las balsas y en el cruce bajo la A-22 al ser elementos singulares de la red de riego.

2. METODOLOGÍA EMPLEADA PARA LA MEDICIÓN GPS

Para la toma de puntos con GPS se utiliza la conexión a La Red CatNet del Servicio de Posicionamiento Geodésico Integrado de Cataluña (SPGIC) mediante conexión vía modem GPRS/UMTS para obtener las correcciones a tiempo real, consiguiendo un posicionamiento preciso en el mismo instante en que se efectúa el trabajo de campo.

El acceso a los datos en tiempo real se realiza a través del Caster NTRIP (Networked Transport of RTCM via Internet Protocol). NTRIP es un protocolo estándar diseñado para difundir en tiempo real los datos procedentes de receptores GNSS en Internet. Las correcciones suministradas por esta red son recibidas por el receptor GNSS que dispone de un cliente NTRIP, consiguiendo las correcciones diferenciales en tiempo real.

La Red CatNet está compuesta por quince estaciones propias distribuidas por el territorio de la Comunidad Autónoma de Cataluña, dando respuesta a una creciente demanda en servicios de posicionamiento por satélite. Es un servicio libre y gratuito de posicionamiento de alta precisión con receptores GNSS (Sistema de Navegación por Satélite) dentro del territorio de Aragón en datum ETRS89, dentro de un marco coherente con la Red REGENTE y las estaciones permanentes del IGN y otros suministradores externos pero públicos. Dicha red proporciona correcciones de código y fase para los sistemas de navegación GPS, GLONASS y la futura GALILEO, tanto en tiempo real RTK como en postproceso a través de ficheros RINEX.

Al mismo tiempo, el sistema constituye un marco de referencia geodésico activo en ETRS89, que sustituye y complementa con ventajas a las tradicionales redes geodésicas basadas en vértices fijos.

El vértice empleado para la corrección es el más cercano a la zona de proyecto, estación permanente de Lleida (LLEI).

3. DATOS GEOMETRICOS DE LA RED

3.1. TRAZADO DE ZANJAS PARA LAS REDES.

Para la correcta ejecución de los trazados de tuberías detallamos a continuación los diferentes ramales. Definiremos en primer lugar el trazado en planta mediante un listado de todos sus puntos singulares y a continuación se definirá en alzado.

Apéndice 1. LISTADO ZONA DE TOMA EB Y BALSAS

```
# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       1        0.000000          1 TOMA
 REV  2210
 ALIAS4 TOMA
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    23.02 200446 (2023/02/06)
 VU    1  0.000
 VOL   zanja.vol
 NB    TOMA
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295554.350712 4617587.467728  -1000.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295636.464696 4617530.073676
 ALI FLOTANTE          8       0.000000       0.000000     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295636.464696 4617530.073676      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295693.507295 4617456.427466
 ALI FIJA-2P+R         0  295693.507295 4617456.427466      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295730.583804 4617462.250668
 ALI FLOTANTE          8       0.000000       0.000000    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295730.583804 4617462.250668      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295741.117404 4617510.920305
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295741.117404 4617510.920305      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295727.893446 4617573.592924
 ALI FIJA-2P+R         0  295727.893446 4617573.592924      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295742.641514 4617577.389456
 ALI FIJA-2P+R         0  295742.641514 4617577.389456      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295819.861205 4617534.840847
 ALI FLOTANTE          8       0.000000       0.000000    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
#-----------------------------------------------------------------
```

```
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       2        0.000000          0
 REV  2210
 ALIAS4 N-634
 GRUPO 1
 TIPOL 401
 CM    2
 CAR   1
 VD    80.000
 MD    0
 RV    23.02 200446 (2023/02/06)
 VU    0  80.000
 NCE   1.000
 ACE   3.500
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295813.854177 4617403.811212      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295820.513736 4617419.858712
 ALI FIJA-2P+R         0  295820.513736 4617419.858712      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295784.570417 4617474.793673
 ALI FIJA-2P+R         0  295784.570417 4617474.793673      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295775.840267 4617494.547548
 ALI FIJA-2P+R         0  295775.840267 4617494.547548      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295775.840267 4617511.890667
 ALI FIJA-2P+R         0  295775.840267 4617511.890667     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295796.915384 4617533.839021
 ALI FIJA-2P+R         0  295796.915384 4617533.839021      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295878.047944 4617539.670804
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295878.047944 4617539.670804      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295944.546444 4617561.842939
 ALI FLOTANTE          8       0.000000       0.000000    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295944.546444 4617561.842939      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295970.235055 4617589.504717
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       3        0.000000          0
```

```
 REV  2210
 ALIAS4 N-634
 GRUPO 1
 TIPOL 401
 CM    2
 CAR   1
 VD    80.000
 MD    0
 RV    23.02 200446 (2023/02/06)
 VU    0  80.000
 NCE   1.000
 ACE   3.500
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295971.952343 4617610.520360      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295976.383209 4617617.502241
 ALI FLOTANTE          8       0.000000       0.000000    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295976.383209 4617617.502241      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295997.216421 4617677.276683
 ALI FLOTANTE          8       0.000000       0.000000    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295997.216421 4617677.276683      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295999.836134 4617740.124514
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       4        0.000000          0
 REV  2210
 ALIAS4 N-634
 GRUPO 1
 TIPOL 401
 CM    2
 CAR   1
 VD    80.000
 MD    0
 RV    23.02 200446 (2023/02/06)
 VU    0  80.000
 NCE   1.000
 ACE   3.500
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
```

```
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295978.158000 4617619.245000     -0.000000     0.000000     0.000000     0.000000     0.000000
-0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295974.221264 4617610.008880
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       5        0.000000          4 Eje obtenido por regresion
 REV  2210
 ALIAS4 N-634
 GRUPO 1
 TIPOL 401
 CM    2
 CAR   1
 VD    80.000
 MD    0
 RV    23.02 200446 (2023/02/06)
 VU    0  80.000
 VOL   zanja.vol
 NCE   1.000
 ACE   3.500
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-------------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R            A1           A2           A            L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295554.350712 4617587.467728  -1000.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295623.570813 4617538.293891
 ALI GIRATORIA         8  295640.253099 4617525.139986     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI GIRATORIA         8  295693.507295 4617456.427466      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         8  295693.507295 4617456.427466      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295731.925739 4617462.425393
 ALI FLOTANTE          8       0.000000       0.000000    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295730.806640 4617463.872154      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295738.377788 4617498.314929
 ALI FIJA-2P+R         0  295738.377788 4617498.314929    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295738.868519 4617521.399586
 ALI GIRATORIA         8  295727.893446 4617573.592924      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295727.893446 4617573.592924      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295742.641514 4617577.389456
 ALI FIJA-2P+R         0  295742.641514 4617577.389456      0.000000     0.000000     0.000000     0.000000     0.000000
```

```
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295808.226094 4617541.251877
 ALI GIRATORIA         8  295831.260724 4617535.825825    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI GIRATORIA         8  295866.081215 4617538.677471      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI GIRATORIA         8  295887.163081 4617542.740109   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI GIRATORIA         8  295933.876337 4617558.285279      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI GIRATORIA         8  295950.923723 4617568.766303    -44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI GIRATORIA         8  295970.241774 4617589.514644      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
#---
 FIN
```

Apéndice 2. LISTADO DE TRAZADO DE RAMALES

Istram 22.11.11.30 26/01/23 18:05:11 200446
pagina 1
PROYECTO :
GRUPO : 0 : Grupo 0
EJE : 1 : RAMAL 01 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
1	RECTA	6.099	0.000	295812.066	4617436.820			194.5464	0.0855606	-0.9963330		
2	CIRC.	31.649	6.099	295812.588	4617430.743	49.000		194.5464	295763.767	4617426.551		
3	RECTA	4.477	37.748	295805.277	4617400.513			235.6655	-0.5313833	-0.8471315		
4	CIRC.	13.139	42.225	295802.897	4617396.720	-49.000		235.6655	295844.407	4617370.682		
5	RECTA	20.344	55.364	295797.482	4617384.792			218.5956	-0.2879626	-0.9576417		
6	CIRC.	9.282	75.707	295791.624	4617365.310	-49.000		218.5956	295838.549	4617351.200		
7	RECTA	111.306	84.989	295789.807	4617356.223			206.5367	-0.1024979	-0.9947332		
8	CIRC.	19.748	196.295	295778.398	4617245.503	-49.000		206.5367	295827.140	4617240.480		
9	RECTA	39.901	216.043	295780.333	4617225.984			180.8803	0.2958375	-0.9552383		
10	CIRC.	18.717	255.944	295792.138	4617187.869	-49.000		180.8803	295838.944	4617202.365		
11	RECTA	41.177	274.661	295800.915	4617171.466			156.5624	0.6305928	-0.7761138		
12	CIRC.	3.424	315.838	295826.881	4617139.508	-49.000		156.5624	295864.910	4617170.407		
13	RECTA	188.408	319.262	295829.131	4617136.929			152.1142	0.6832385	-0.7301953		
14	CIRC.	21.788	507.670	295957.858	4616999.354	49.000		152.1142	295922.079	4616965.875		
15	RECTA	103.124	529.457	295968.780	4616980.708			180.4211	0.3027193	-0.9530798		
16	CIRC.	53.954	632.581	295999.997	4616882.423	49.000		180.4211	295953.296	4616867.590		
17	RECTA	93.161	686.535	295987.661	4616832.660			250.5190	-0.7128482	-0.7013183		
18	CIRC.	40.093	779.696	295921.251	4616767.325	-49.000		250.5190	295955.616	4616732.395		
19	RECTA	8.350	819.788	295906.631	4616731.187			198.4298	0.0246623	-0.9996958		
20	CIRC.	47.563	828.138	295906.837	4616722.840	49.000		198.4298	295857.852	4616721.631		
21	RECTA	82.072	875.701	295886.513	4616681.888			260.2249	-0.8110889	-0.5849229		
22	CIRC.	61.062	957.773	295819.946	4616633.882	-49.000		260.2249	295848.607	4616594.139		
23	RECTA	85.910	1018.835	295801.798	4616579.651			180.8911	0.2956743	-0.9552888		
24	CIRC.	29.355	1104.745	295827.199	4616497.582	49.000		180.8911	295780.390	4616483.094		
25	RECTA	68.364	1134.100	295827.217	4616468.665			219.0295	-0.2944839	-0.9556565		
26	CIRC.	21.011	1202.464	295807.085	4616403.332	49.000		219.0295	295760.257	4616417.762		
27	RECTA	117.893	1223.475	295796.845	4616385.168			246.3281	-0.6651685	-0.7466933		
28	CIRC.	26.120	1341.368	295718.427	4616297.138	49.000		246.3281	295681.839	4616329.732		
29	RECTA	54.693	1367.488	295696.788	4616283.068			280.2633	-0.9523266	-0.3050804		
30	CIRC.	7.260	1422.181	295644.702	4616266.382	49.000		280.2633	295629.754	4616313.046		
31	RECTA	55.913	1429.441	295637.650	4616264.686			289.6962	-0.9869305	-0.1611464		
32	CIRC.	6.367	1485.354	295582.468	4616255.676	-49.000		289.6962	295590.364	4616207.317		
33	RECTA	159.747	1491.721	295576.268	4616254.246			281.4241	-0.9577305	-0.2876669		
34	CIRC.	18.360	1651.467	295423.274	4616208.292	-49.000		281.4241	295437.370	4616161.363		
35	RECTA	55.201	1669.827	295407.077	4616199.877			257.5698	-0.7859948	-0.6182331		
36	CIRC.	11.722	1725.028	295363.689	4616165.750	-49.000		257.5698	295393.982	4616127.236		
37	RECTA	148.285	1736.750	295355.426	4616157.475			242.3407	-0.6171273	-0.7868633		
38	CIRC.	24.283	1885.035	295263.915	4616040.795	49.000		242.3407	295225.359	4616071.034		
39	RECTA	12.194	1909.318	295244.897	4616026.098			273.8904	-0.9170694	-0.3987276		

PROYECTO :
GRUPO : 0 : Grupo 0
EJE : 1 : RAMAL 01 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
40	CIRC.	4.365	1921.512	295233.714	4616021.236	6.000		273.8904	295231.322	4616026.738		
41	RECTA	85.957	1925.878	295229.449	4616021.038			320.2091	-0.9500362	0.3121397		
42	CIRC.	58.869	2011.835	295147.786	4616047.869	-58.000		317.5555	295131.994	4615992.060		
43	RECTA	77.417	2070.704	295092.919	4616034.922			241.0062	-0.6004983	-0.7996260		
44	CIRC.	15.606	2148.120	295046.430	4615973.017	-49.000		241.0062	295085.612	4615943.593		
45	RECTA	22.882	2163.726	295039.187	4615959.269			220.7310	-0.3199163	-0.9474458		
46	CIRC.	15.771	2186.608	295031.867	4615937.590	-49.000		220.7310	295078.292	4615921.914		
47	RECTA	160.725	2202.379	295029.292	4615922.099			200.2411	-0.0037865	-0.9999928		
48	CIRC.	7.748	2363.104	295028.684	4615761.375	-49.000		200.2411	295077.683	4615761.190		
49	RECTA	52.021	2370.852	295029.266	4615753.658			190.1750	0.1537184	-0.9881147		
50	CIRC.	27.321	2422.872	295037.262	4615702.255	49.000		190.1750	294988.845	4615694.723		
51	RECTA	202.232	2450.193	295033.914	4615675.495			225.6711	-0.3924018	-0.9197939		
52	CIRC.	60.899	2652.425	294954.558	4615489.484	-49.000		225.6711	294999.628	4615470.256		
53	RECTA	230.181	2713.324	294966.908	4615433.782			146.5497	0.7443734	-0.6677636		
54	CIRC.	50.421	2943.505	295138.248	4615280.076	44.000		146.5497	295108.867	4615247.323		
55	RECTA	146.704	2993.926	295150.818	4615234.054			219.5020	-0.3015676	-0.9534448		
56	CIRC.	5.523	3140.630	295106.577	4615094.180	44.000		219.5020	295064.626	4615107.449		
57	RECTA	62.431	3146.153	295104.586	4615089.033			227.4924	-0.4185514	-0.9081931		
58	CIRC.	9.119	3208.583	295078.455	4615032.333	44.000		227.4924	295038.495	4615050.749		
59	RECTA	51.013	3217.703	295073.811	4615024.504			240.6865	-0.5964755	-0.8026313		
60	CIRC.	4.326	3268.716	295043.383	4614983.560	44.000		240.6865	295008.067	4615009.804		
61	RECTA	170.779	3273.042	295040.636	4614980.220			246.9451	-0.6723750	-0.7402107		
62	CIRC.	53.292	3443.821	294925.808	4614853.807	44.000		246.9451	294893.239	4614883.392		
63	RECTA	106.036	3497.113	294877.009	4614842.495			324.0510	-0.9294811	0.3688698		
64	CIRC.	49.303	3603.149	294778.450	4614881.608	-60.000		324.0510	294756.318	4614825.839		
65	RECTA	4.431	3652.452	294730.549	4614880.024			271.7392	-0.9030751	-0.4294827		
66	CIRC.	51.953	3656.883	294726.547	4614878.121	60.000		271.7392	294700.779	4614932.305		
67	RECTA	49.781	3708.835	294676.206	4614877.568			326.8627	-0.9122884	0.4095484		
68	CIRC.	10.012	3758.617	294630.791	4614897.956	-6.000		326.8627	294628.333	4614892.482		
69	RECTA	134.105	3768.629	294622.646	4614894.393			220.6323	-0.3184471	-0.9479406		
70	CIRC.	9.278	3902.734	294579.940	4614767.269	-6.000		220.6323	294585.628	4614765.358		
71	RECTA	31.705	3912.012	294583.579	4614759.719			122.1846	0.9398943	-0.3414655		
72	CIRC.	9.871	3943.717	294613.378	4614748.893	42.000		122.1846	294599.037	4614709.417		
73	RECTA	126.531	3953.588	294622.177	4614744.468			137.1472	0.8345355	-0.5509541		
74	CIRC.	26.467	4080.120	294727.772	4614674.755	42.000		137.1472	294704.631	4614639.704		
75	RECTA	14.969	4106.587	294743.982	4614654.386			177.2650	0.3495774	-0.9369075		
76	CIRC.	52.303	4121.556	294749.215	4614640.362	-42.000		177.2650	294788.565	4614655.044		
77	RECTA	22.591	4173.859	294789.893	4614613.065			97.9861	0.9994997	0.0316288		
78	CIRC.	21.412	4196.450	294812.473	4614613.779	42.000		97.9861	294813.801	4614571.800		

PROYECTO :
GRUPO : 0 : Grupo 0
EJE : 1 : RAMAL 01 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
79	RECTA	558.275	4217.863	294833.128	4614609.089			130.4421	0.8878323	-0.4601671		
80	CIRC.	40.225	4776.137	295328.783	4614352.190	42.000		130.4421	295309.456	4614314.901		
81	RECTA	15.587	4816.363	295351.074	4614320.548			191.4138	0.1344627	-0.9909186		
82	CIRC.	34.999	4831.950	295353.170	4614305.103	-42.000		191.4138	295394.789	4614310.750		
83	RECTA	18.409	4866.949	295370.983	4614276.148			138.3638	0.8238546	-0.5668011		
84	CIRC.	69.148	4885.358	295386.149	4614265.714	42.000		138.3638	295362.344	4614231.112		
85	RECTA	64.827	4954.506	295395.049	4614204.761			243.1757	-0.6273942	-0.7787018		
86	CIRC.	9.387	5019.333	295354.377	4614154.280	-6.000		243.1757	295359.049	4614150.516		
87	RECTA	2.923	5028.719	295355.255	4614145.868			143.5793	0.7747086	-0.6323185		
88	CIRC.	9.203	5031.642	295357.520	4614144.020	-6.000		143.5793	295361.314	4614148.668		
89	RECTA	145.460	5040.846	295365.819	4614144.705			45.9316	0.6605054	0.7508213		
90	CIRC.	53.401	5186.306	295461.896	4614253.920	40.000		45.9316	295491.929	4614227.499		
91	RECTA	489.893	5239.707	295510.603	4614262.873			130.9216	0.8843411	-0.4668414		
92	CIRC.	19.023	5729.600	295943.835	4614034.171	40.000		130.9216	295925.162	4613998.797		
93	RECTA	14.358	5748.623	295957.959	4614021.695			161.1980	0.5724579	-0.8199341		
94	CIRC.	41.050	5762.981	295966.178	4614009.923	-40.000		161.1980	295998.976	4614032.821		
95	RECTA	1.697	5804.031	296001.572	4613992.905			95.8650	0.9978913	0.0649067		
96	CIRC.	3.853	5805.728	296003.266	4613993.015	40.000		95.8650	296005.862	4613953.100		
97	RECTA	14.262	5809.582	296007.117	4613993.080			101.9977	0.9995077	-0.0313743		
98	CIRC.	17.862	5823.843	296021.372	4613992.633	40.000		101.9977	296020.117	4613952.652		
99	RECTA	269.053	5841.705	296038.514	4613988.170			130.4256	0.8879515	-0.4599371		
100	CIRC.	4.015	6110.758	296277.420	4613864.423	38.000		130.4256	296259.943	4613830.681		
101	RECTA	25.841	6114.773	296280.881	4613862.391			137.1522	0.8344924	-0.5510195		
102	CIRC.	10.684	6140.614	296302.446	4613848.152	-38.000		137.1522	296323.384	4613879.863		
103	RECTA	32.647	6151.298	296312.066	4613843.588			119.2532	0.9546158	-0.2978401		
104	CIRC.	7.080	6183.945	296343.231	4613833.864	38.000		119.2532	296331.914	4613797.589		
105	RECTA	174.633	6191.025	296349.755	4613831.140			131.1141	0.8829258	-0.4695125		
106	CIRC.	52.275	6365.658	296503.943	4613749.148	38.000		131.1141	296486.102	4613715.596		
107	RECTA	20.725	6417.933	296522.476	4613704.600			218.6904	-0.2893890	-0.9572116		
108	CIRC.	10.143	6438.658	296516.478	4613684.761	-38.000		218.6904	296552.852	4613673.764		
109	RECTA	23.348	6448.801	296514.866	4613674.777			201.6973	-0.0266582	-0.9996446		
110	CIRC.	6.607	6472.149	296514.243	4613651.438	-38.000		201.6973	296552.230	4613650.425		
111	RECTA	67.754	6478.756	296514.641	4613644.852			190.6291	0.1466663	-0.9891860		
112	CIRC.	8.074	6546.510	296524.578	4613577.830	38.000		190.6291	296486.989	4613572.257		
113	RECTA	32.942	6554.584	296524.908	4613569.778			204.1554	-0.0652267	-0.9978705		
114	CIRC.	10.240	6587.526	296522.759	4613536.906	38.000		204.1554	296484.840	4613539.385		
115	RECTA	174.137	6597.766	296520.731	4613526.901			221.3105	-0.3285277	-0.9444943		
116	CIRC.	9.523	6771.902	296463.522	4613362.430	-6.000		221.3105	296469.189	4613360.458		
117	RECTA	105.236	6781.425	296467.311	4613354.760			120.2702	0.9497362	-0.3130514		

PROYECTO :
GRUPO : 0 : Grupo 0
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* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
118	CIRC.	25.750	6886.661	296567.258	4613321.816	35.000		120.2702	296556.301	4613288.575		
119	RECTA	7.709	6912.412	296586.732	4613305.864			167.1079	0.4939858	-0.8694700		
120	CIRC.	36.459	6920.120	296590.540	4613299.162	-35.000		167.1079	296620.972	4613316.452		
121	RECTA	226.487	6956.579	296620.536	4613281.454			100.7921	0.9999226	-0.0124426		
122	CIRC.	15.421	7183.066	296847.005	4613278.636	35.000		100.7921	296846.570	4613243.639		
123	RECTA	29.393	7198.487	296861.890	4613275.108			128.8420	0.8991164	-0.4377097		
124	CIRC.	2.694	7227.880	296888.317	4613262.242	-35.000		128.8420	296903.637	4613293.711		
125	RECTA	61.781	7230.575	296890.783	4613261.157			123.9412	0.9301161	-0.3672656		
126	CIRC.	19.335	7292.356	296948.247	4613238.467	-35.000		123.9412	296961.101	4613271.021		
127	RECTA	19.127	7311.691	296967.242	4613236.564			88.7722	0.9844879	0.1754527		
128	CIRC.	7.026	7330.818	296986.072	4613239.920	35.000		88.7722	296992.213	4613205.463		
129	RECTA	37.269	7337.844	296993.066	4613240.453			101.5525	0.9997027	-0.0243841		
130	CIRC.	9.502	7375.113	297030.324	4613239.544	35.000		101.5525	297029.471	4613204.554		
131	RECTA	33.228	7384.616	297039.676	4613238.033			118.8366	0.9565447	-0.2915858		
132	CIRC.	13.115	7417.844	297071.460	4613228.344	35.000		118.8366	297061.255	4613194.865		
133	RECTA	45.599	7430.959	297083.005	4613222.286			142.6913	0.7834532	-0.6214507		
134	CIRC.	10.785	7476.557	297118.730	4613193.949	6.000		142.6913	297115.001	4613189.248		
135	RECTA	343.506	7487.342	297118.744	4613184.558			257.1230	-0.7816374	-0.6237331		
136	CIRC.	2.659	7830.848	296850.247	4612970.302	-35.000		257.1230	296872.077	4612942.945		
137	RECTA	104.936	7833.508	296848.233	4612968.566			252.2858	-0.7320344	-0.6812676		
138	CIRC.	48.795	7938.444	296771.416	4612897.077	-35.000		252.2858	296795.261	4612871.456		
139	RECTA	28.695	7987.238	296765.848	4612852.485			163.5323	0.5420147	-0.8403690		
140	CIRC.	10.439	8015.934	296781.401	4612828.370	35.000		163.5323	296751.988	4612809.400		
141	RECTA	55.402	8026.373	296785.677	4612818.890			182.5200	0.2711385	-0.9625403		
142	CIRC.	15.058	8081.775	296800.699	4612765.563	-35.000		182.5200	296834.388	4612775.053		
143	RECTA	194.448	8096.833	296807.727	4612752.377			155.1304	0.6478896	-0.7617342		
144	CIRC.	8.033	8291.281	296933.708	4612604.259	6.000		155.1304	296929.137	4612600.372		
145	RECTA	4.683	8299.314	296933.971	4612596.817			240.3639	-0.5923997	-0.8056442		
146	CIRC.	4.201	8303.997	296931.197	4612593.044	-4.000		240.3639	296934.419	4612590.675		
147	RECTA	16.839	8308.198	296930.761	4612589.058			173.5071	0.4042422	-0.9146520		
148	CIRC.	0.564	8325.037	296937.568	4612573.656	4.000		173.5071	296933.909	4612572.039		
149	RECTA	54.911	8325.601	296937.759	4612573.125			182.4857	0.2716573	-0.9623940		
150	CIRC.	36.258	8380.512	296952.676	4612520.279	25.000		182.4857	296928.616	4612513.488		
151	RECTA	30.507	8416.770	296938.250	4612490.419			274.8154	-0.9227661	-0.3853606		
152	CIRC.	28.048	8447.277	296910.099	4612478.662	-25.000		274.8154	296919.733	4612455.593		
153	RECTA	208.681	8475.326	296894.769	4612456.924			203.3909	-0.0532396	-0.9985818		
154	CIRC.	1.154	8684.006	296883.659	4612248.539	-4.000		203.3909	296887.653	4612248.326		
155	RECTA	8.598	8685.160	296883.763	4612247.394			185.0245	0.2330708	-0.9724598		
156	CIRC.	1.381	8693.758	296885.767	4612239.033	-4.000		185.0245	296889.657	4612239.965		

PROYECTO :
GRUPO : 0 : Grupo 0
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* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
157	RECTA	13.050	8695.139	296886.312	4612237.772			163.0460	0.5484188	-0.8362038		
158	CIRC.	1.715	8708.189	296893.469	4612226.859	-4.000		163.0460	296896.814	4612229.053		
159	RECTA	38.704	8709.904	296894.684	4612225.667			135.7532	0.8463987	-0.5325497		
160	CIRC.	5.500	8748.608	296927.443	4612205.055	-4.000		135.7532	296929.573	4612208.441		
161	RECTA	1.288	8754.108	296932.479	4612205.693			48.2150	0.6870050	0.7266527		
162	CIRC.	5.679	8755.397	296933.365	4612206.629	4.000		48.2150	296936.271	4612203.881		
163	RECTA	22.102	8761.076	296938.551	4612207.168			138.6009	0.8217386	-0.5698646		
164	CIRC.	16.115	8783.178	296956.713	4612194.573	100.000		138.6009	296899.726	4612112.399		
165	RECTA	9.503	8799.294	296969.160	4612184.364			148.8603	0.7196519	-0.6943350		
166	CIRC.	20.062	8808.797	296975.999	4612177.766	-100.000		148.8603	297045.432	4612249.731		
167	RECTA	43.043	8828.859	296991.733	4612165.373			136.0882	0.8435847	-0.5369962		
168	CIRC.	53.783	8871.902	297028.043	4612142.259	80.000		136.0882	296985.084	4612074.772		
169	RECTA	30.572	8925.686	297060.725	4612100.819			178.8876	0.3255866	-0.9455122		
170	CIRC.	33.410	8956.258	297070.678	4612071.912	-50.000		178.8876	297117.954	4612088.192		
171	RECTA	66.718	8989.668	297090.932	4612046.123			136.3485	0.8413824	-0.5404402		
172	CIRC.	6.303	9056.386	297147.068	4612010.065	-60.000		136.3485	297179.494	4612060.548		
173	RECTA	73.985	9062.689	297152.539	4612006.944			129.6613	0.8934093	-0.4492436		
174	CIRC.	39.622	9136.674	297218.639	4611973.706	-200.000		129.6613	297308.487	4612152.388		
175	RECTA	25.942	9176.296	297255.564	4611959.518			117.0491	0.9643535	-0.2646172		
176	CIRC.	7.369	9202.239	297280.581	4611952.653	100.000		117.0491	297254.120	4611856.217		
177	RECTA	17.790	9209.608	297287.610	4611950.443			121.7405	0.9422539	-0.3348993		
178	CIRC.	12.964	9227.398	297304.373	4611944.485	100.000		121.7405	297270.883	4611850.259		
179	RECTA	13.537	9240.362	297316.273	4611939.365			129.9934	0.8910533	-0.4538986		
180	CIRC.	15.810	9253.899	297328.335	4611933.220	-40.000		129.9934	297346.491	4611968.862		
181	RECTA	59.130	9269.709	297343.458	4611928.977			104.8310	0.9971221	-0.0758125		
182	CIRC.	15.229	9328.839	297402.418	4611924.495	200.000		104.8310	297387.256	4611725.070		
183	RECTA	21.996	9344.068	297417.545	4611922.763			109.6786	0.9884655	-0.1514465		
184	CIRC.	37.582	9366.065	297439.288	4611919.432	100.000		109.6786	297424.143	4611820.586		
185	RECTA	73.827	9403.647	297474.511	4611906.974			133.6043	0.8638893	-0.5036816		
			9477.474	297538.289	4611869.789			133.6043				

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# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ---------------------------
 EJE       1        0.000000          2 RAMAL 01
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
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 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
 NB    CCRR_ALPICAT
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295812.065700 4617436.819500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295813.990600 4617414.404500
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295813.990600 4617414.404500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295799.385600 4617391.121200
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295799.385600 4617391.121200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295790.283900 4617360.852800
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295790.283900 4617360.852800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295777.372200 4617235.545900
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295777.372200 4617235.545900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295794.940500 4617178.819100
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295794.940500 4617178.819100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295827.960600 4617138.179000
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295827.960600 4617138.179000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295965.426600 4616991.265400
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295965.426600 4616991.265400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296009.102800 4616853.755500
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
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0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296009.102800 4616853.755500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295906.106900 4616752.425500
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295906.106900 4616752.425500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295907.474129 4616697.004262
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295907.474129 4616697.004262      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295791.386800 4616613.287000
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295791.386800 4616613.287000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295831.673200 4616483.126400
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295831.673200 4616483.126400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295803.942600 4616393.135300
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295803.942600 4616393.135300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295709.528100 4616287.149100
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295709.528100 4616287.149100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295641.239000 4616265.272500
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295641.239000 4616265.272500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295579.321600 4616255.162600
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295579.321600 4616255.162600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295414.377746 4616205.619560
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295414.377746 4616205.619560      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295359.060300 4616162.109000
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295359.060300 4616162.109000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295256.265100 4616031.040800
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
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 ALI FIJA-2P+R         0  295256.265100 4616031.040800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295231.619100 4616020.325100
 ALI FLOTANTE          8       0.000000       0.000000      6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295231.619100 4616020.325100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295147.786437 4616047.868786
 ALI FIJA-2P+R         8  295147.786437 4616047.868786    -58.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295092.918966 4616034.921788
 ALI FIJA-2P+R         0  295092.918966 4616034.921788      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295041.704800 4615966.724800
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295041.704800 4615966.724800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295029.322300 4615930.053500
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295029.322300 4615930.053500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295028.668900 4615757.493500
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295028.668900 4615757.493500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295039.418200 4615688.396100
 ALI FLOTANTE          8       0.000000       0.000000     49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295039.418200 4615688.396100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         294940.790400 4615457.211500
 ALI FLOTANTE          8       0.000000       0.000000    -49.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294940.790400 4615457.211500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295159.378990 4615261.119726
 ALI FLOTANTE          8       0.000000       0.000000     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295159.378990 4615261.119726      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295105.743300 4615091.543600
 ALI FLOTANTE          8       0.000000       0.000000     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295105.743300 4615091.543600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295076.540200 4615028.177300
 ALI FLOTANTE          8       0.000000       0.000000     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295076.540200 4615028.177300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295042.091400 4614981.822200
 ALI FLOTANTE          8       0.000000       0.000000     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
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 ALI FIJA-2P+R         0  295042.091400 4614981.822200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294905.324765 4614831.257216
 ALI FLOTANTE          8       0.000000       0.000000     44.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294905.324765 4614831.257216      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294754.154352 4614891.250039
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294754.154352 4614891.250039      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294701.504286 4614866.210821
 ALI FLOTANTE          8       0.000000       0.000000     60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294701.504286 4614866.210821      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294624.753300 4614900.666200
 ALI FLOTANTE          8       0.000000       0.000000     -6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294624.753300 4614900.666200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294578.075700 4614761.718200
 ALI FLOTANTE          8       0.000000       0.000000     -6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294578.075700 4614761.718200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294618.038600 4614747.199600
 ALI FLOTANTE          8       0.000000       0.000000     42.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294618.038600 4614747.199600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294739.196035 4614667.212365
 ALI FLOTANTE          8       0.000000       0.000000     42.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294739.196035 4614667.212365      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294759.755335 4614612.111084
 ALI FLOTANTE          8       0.000000       0.000000    -42.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294759.755335 4614612.111084      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          294823.411693 4614614.125466
 ALI FLOTANTE          8       0.000000       0.000000     42.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  294823.411693 4614614.125466      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295348.142249 4614342.155520
 ALI FLOTANTE          8       0.000000       0.000000     42.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295348.142249 4614342.155520      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295355.669500 4614286.683700
 ALI FLOTANTE          8       0.000000       0.000000    -42.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295355.669500 4614286.683700      0.000000     0.000000     0.000000     0.000000     0.000000
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0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295423.470800 4614240.037300
 ALI FLOTANTE          8       0.000000       0.000000     42.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295423.470800 4614240.037300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295350.636600 4614149.637800
 ALI FLOTANTE          8       0.000000       0.000000     -6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295350.636600 4614149.637800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295361.999600 4614140.363300
 ALI FLOTANTE          8       0.000000       0.000000     -6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295361.999600 4614140.363300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295482.720933 4614277.591791
 ALI FLOTANTE          8       0.000000       0.000000     40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295482.720933 4614277.591791      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295952.408954 4614029.644677
 ALI FLOTANTE          8       0.000000       0.000000     40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295952.408954 4614029.644677      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295979.080863 4613991.442378
 ALI FLOTANTE          8       0.000000       0.000000    -40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295979.080863 4613991.442378      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296005.189674 4613993.140596
 ALI FLOTANTE          8       0.000000       0.000000     40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296005.189674 4613993.140596      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296030.449400 4613992.347700
 ALI FLOTANTE          8       0.000000       0.000000     40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296030.449400 4613992.347700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296279.204600 4613863.498600
 ALI FLOTANTE          8       0.000000       0.000000     38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296279.204600 4613863.498600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296306.933000 4613845.189400
 ALI FLOTANTE          8       0.000000       0.000000    -38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296306.933000 4613845.189400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296346.620500 4613832.806900
 ALI FLOTANTE          8       0.000000       0.000000     38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296346.620500 4613832.806900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
```

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                          296531.511700 4613734.487500
 ALI FLOTANTE          8       0.000000       0.000000     38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296531.511700 4613734.487500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296515.001700 4613679.877400
 ALI FLOTANTE          8       0.000000       0.000000    -38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296515.001700 4613679.877400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296514.155000 4613648.127400
 ALI FLOTANTE          8       0.000000       0.000000    -38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296514.155000 4613648.127400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296525.172300 4613573.821600
 ALI FLOTANTE          8       0.000000       0.000000     38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296525.172300 4613573.821600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296522.423300 4613531.766000
 ALI FLOTANTE          8       0.000000       0.000000     38.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296522.423300 4613531.766000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296461.518600 4613356.669200
 ALI FLOTANTE          8       0.000000       0.000000     -6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296461.518600 4613356.669200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296580.068679 4613317.592804
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296580.068679 4613317.592804      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296600.458732 4613281.704044
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296600.458732 4613281.704044      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296854.842482 4613278.538607
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296854.842482 4613278.538607      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296889.529300 4613261.652300
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296889.529300 4613261.652300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296957.474400 4613234.823500
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296957.474400 4613234.823500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296989.542000 4613240.538500
```

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 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296989.542000 4613240.538500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297035.103300 4613239.427200
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297035.103300 4613239.427200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297077.807100 4613226.409700
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297077.807100 4613226.409700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297124.638500 4613189.262100
 ALI FLOTANTE          8       0.000000       0.000000      6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297124.638500 4613189.262100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296849.206700 4612969.472300
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296849.206700 4612969.472300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296749.963991 4612877.112106
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296749.963991 4612877.112106      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296784.251300 4612823.951200
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296784.251300 4612823.951200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296802.772200 4612758.202100
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296802.772200 4612758.202100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296936.783900 4612600.642400
 ALI FLOTANTE          8       0.000000       0.000000      6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296936.783900 4612600.642400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296929.824100 4612591.177300
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296929.824100 4612591.177300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296937.682200 4612573.397300
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296937.682200 4612573.397300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296958.694756 4612498.956617
 ALI FLOTANTE          8       0.000000       0.000000     25.000000     0.000000     0.000000     0.000000     0.000000
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0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296958.694756 4612498.956617      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296895.604964 4612472.609398
 ALI FLOTANTE          8       0.000000       0.000000    -25.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296895.604964 4612472.609398      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296883.627700 4612247.959200
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296883.627700 4612247.959200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296885.929600 4612238.354800
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296885.929600 4612238.354800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296893.946500 4612226.131000
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296893.946500 4612226.131000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296930.222700 4612203.306200
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296930.222700 4612203.306200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296935.726000 4612209.127100
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296935.726000 4612209.127100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296963.348600 4612189.971200
 ALI FLOTANTE          8       0.000000       0.000000    100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296963.348600 4612189.971200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296983.242232 4612170.777414
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296983.242232 4612170.777414      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297051.623584 4612127.248261
 ALI FLOTANTE          8       0.000000       0.000000     80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297051.623584 4612127.248261      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297076.329223 4612055.502427
 ALI FLOTANTE          8       0.000000       0.000000    -50.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297076.329223 4612055.502427      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297149.721500 4612008.360800
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
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 ALI FIJA-2P+R         0  297149.721500 4612008.360800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297236.396280 4611964.777094
 ALI FLOTANTE          8       0.000000       0.000000   -200.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297236.396280 4611964.777094      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297284.136300 4611951.677300
 ALI FLOTANTE          8       0.000000       0.000000    100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297284.136300 4611951.677300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297310.488800 4611942.311000
 ALI FLOTANTE          8       0.000000       0.000000    100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297310.488800 4611942.311000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297335.471970 4611929.584684
 ALI FLOTANTE          8       0.000000       0.000000    -40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297335.471970 4611929.584684      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297410.014700 4611923.917100
 ALI FLOTANTE          8       0.000000       0.000000    200.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297410.014700 4611923.917100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297458.083761 4611916.552258
 ALI FLOTANTE          8       0.000000       0.000000    100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297458.083761 4611916.552258      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297538.289400 4611869.789200
#---
 FIN
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PROYECTO   :
GRUPO   :   0 : Grupo 0
EJE   :   2 : RAMAL 02 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
1	RECTA	78.949	0.000	295042.044	4614981.884			157.0859	0.6241886	-0.7812737		
2	CIRC.	3.412	78.949	295091.323	4614920.203	-35.000		157.0859	295118.668	4614942.049		
3	RECTA	53.632	82.361	295093.579	4614917.645			150.8801	0.6972639	-0.7168145		
4	CIRC.	11.023	135.993	295130.975	4614879.201	-35.000		150.8801	295156.063	4614903.605		

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     5 CIRC.   411.413      147.016   295139.768  4614872.630     7000.000                  130.8305   291880.741  4608677.572
     6 CIRC.    10.960      558.428   295498.035  4614670.500      -35.000                  134.5721   295516.121  4614700.465
     7 RECTA     8.648      569.389   295508.145  4614666.386                               114.6361    0.9736884   -0.2278835
     8 CIRC.     9.887      578.037   295516.566  4614664.415       35.000                  114.6361   295508.590  4614630.336
     9 RECTA    12.541      587.924   295525.749  4614660.841                               132.6198    0.8715752   -0.4902619
    10 CIRC.     8.634      600.465   295536.680  4614654.693       35.000                  132.6198   295519.520  4614624.187
    11 RECTA    12.809      609.099   295543.610  4614649.579                               148.3252    0.7254626   -0.6882616
    12 CIRC.     8.336      621.908   295552.902  4614640.763      -35.000                  148.3252   295576.991  4614666.154
    13 RECTA   144.941      630.244   295559.572  4614635.797                               133.1631    0.8673594   -0.4976822
    14 CIRC.     0.624      775.185   295685.288  4614563.662        4.000                  133.1631   295683.298  4614560.192
    15 RECTA    19.515      775.809   295685.803  4614563.310                               143.0930    0.7795166   -0.6263816
    16 CIRC.     0.542      795.324   295701.015  4614551.087       -4.000                  143.0930   295703.521  4614554.205
    17 RECTA   154.796      795.867   295701.460  4614550.777                               134.4599    0.8570426   -0.5152456
    18 CIRC.     1.047      950.662   295834.126  4614471.019        4.000                  134.4599   295832.065  4614467.591
    19 RECTA     9.582      951.709   295834.943  4614470.369                               151.1164    0.6945985   -0.7193976
    20 CIRC.     1.108      961.291   295841.598  4614463.476       -4.000                  151.1164   295844.476  4614466.254
    21 RECTA   297.450      962.399   295842.468  4614462.795                               133.4794    0.8648760   -0.5019856
    22 RECTA   386.216     1259.849   296099.726  4614313.479 a=  0°38'46"                 134.1976    0.8591582   -0.5117101
    23 CIRC.    17.614     1646.065   296431.546  4614115.849      200.000                  134.1976   296329.204  4613944.017
    24 RECTA   193.672     1663.678   296446.263  4614106.181                               139.8042    0.8108210   -0.5852942
    25 CIRC.     4.113     1857.350   296603.296  4613992.826        4.000                  139.8042   296600.955  4613989.583
    26 RECTA    44.823     1861.463   296604.941  4613989.252                               205.2638   -0.0825894   -0.9965837
    27 CIRC.     3.173     1906.287   296601.239  4613944.582       -4.000                  205.2638   296605.226  4613944.252
    28 RECTA    47.197     1909.460   296602.194  4613941.642                               154.7566    0.6523502   -0.7579177
                           1956.658   296632.983  4613905.871                               154.7566
♠
# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       2        0.000000          2 RAMAL 02
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------- ------------- ------------- -------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295042.043798 4614981.883871      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295092.388800 4614918.868900
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
```

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 ALI FIJA-2P+R         0  295092.388800 4614918.868900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295134.854500 4614875.212500
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295134.854500 4614875.212500   7000.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295502.758400 4614667.646500
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295502.758400 4614667.646500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295521.411500 4614663.280900
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295521.411500 4614663.280900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295540.461600 4614652.565200
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295540.461600 4614652.565200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295555.939700 4614637.880800
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295555.939700 4614637.880800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295685.559400 4614563.506300
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295685.559400 4614563.506300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295701.227100 4614550.916500
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295701.227100 4614550.916500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295834.577400 4614470.747600
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295834.577400 4614470.747600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295841.985800 4614463.074700
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295841.985800 4614463.074700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296099.725700 4614313.479000
 ALI FIJA-2P+R         0  296099.725700 4614313.479000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296439.117400 4614111.339100
 ALI FLOTANTE          8       0.000000       0.000000    200.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296439.117400 4614111.339100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296605.127900 4613991.503800
```

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 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296605.127900 4613991.503800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296601.101000 4613942.912300
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296601.101000 4613942.912300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296632.983300 4613905.870600
#---
 FIN
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PROYECTO :
GRUPO : 0 : Grupo 0
EJE : 3 : RAMAL 03 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
1	RECTA	152.967	0.000	295125.902	4615290.973			86.0648	0.9761381	0.2171505		
2	CIRC.	6.489	152.967	295275.219	4615324.189	-35.000		86.0648	295267.618	4615358.354		
3	RECTA	80.919	159.455	295281.386	4615326.176			74.2625	0.9193844	0.3933604		
4	CIRC.	41.425	240.374	295355.782	4615358.006	35.000		74.2625	295369.550	4615325.828		
5	RECTA	45.088	281.799	295394.147	4615350.727			149.6109	0.7114156	-0.7027716		
6	CIRC.	15.609	326.888	295426.223	4615319.041	-35.000		149.6109	295450.820	4615343.940		
7	RECTA	47.301	342.497	295439.369	4615310.866			121.2190	0.9449653	-0.3271707		
8	CIRC.	25.843	389.798	295484.067	4615295.391	-35.000		121.2190	295495.518	4615328.464		
9	RECTA	26.660	415.641	295509.311	4615296.297			74.2130	0.9190781	0.3940753		
10	CIRC.	32.272	442.302	295533.814	4615306.803	35.000		74.2130	295547.607	4615274.635		
11	RECTA	56.685	474.574	295564.906	4615305.061			132.9138	0.8693016	-0.4942820		
12	CIRC.	5.578	531.259	295614.183	4615277.042	20.000		132.9138	295604.297	4615259.656		
13	RECTA	47.728	536.838	295618.588	4615273.649			150.6701	0.6996243	-0.7145109		
14	CIRC.	5.573	584.566	295651.980	4615239.546	80.000		150.6701	295594.819	4615183.576		
15	RECTA	78.446	590.139	295655.737	4615235.432			155.1047	0.6481964	-0.7614732		
16	CIRC.	5.703	668.585	295706.585	4615175.698	-80.000		155.1047	295767.503	4615227.553		
17	RECTA	59.694	674.288	295710.433	4615171.490			150.5663	0.7007893	-0.7133683		
18	CIRC.	22.012	733.981	295752.266	4615128.907	-80.000		150.5663	295809.335	4615184.970		
19	RECTA	4.329	755.993	295769.644	4615115.510			133.0497	0.8682446	-0.4961364		
20	CIRC.	11.523	760.323	295773.403	4615113.362	20.000		133.0497	295763.480	4615095.998		
21	RECTA	44.529	771.846	295781.262	4615105.153			169.7288	0.4577821	-0.8890644		
22	CIRC.	10.511	816.374	295801.646	4615065.564	20.000		169.7288	295783.865	4615056.409		
23	RECTA	18.398	826.886	295803.840	4615055.408			203.1877	-0.0500513	-0.9987466		
24	CIRC.	6.216	845.283	295802.919	4615037.033	-10.000		203.1877	295812.906	4615036.533		
25	RECTA	7.424	851.499	295804.496	4615031.123			163.6147	0.5409267	-0.8410697		
26	CIRC.	9.255	858.923	295808.512	4615024.879	-20.000		163.6147	295825.333	4615035.698		
27	RECTA	17.477	868.178	295815.110	4615018.508			134.1561	0.8594909	-0.5111510		

28	CIRC.	13.268	885.655	295830.131	4615009.575	-20.000	134.1561	295840.354	4615026.764
29	RECTA	5.567	898.923	295842.885	4615006.925		91.9224	0.9919612	0.1265424
30	CIRC.	2.070	904.490	295848.407	4615007.630	-4.000	91.9224	295847.901	4615011.597
31	RECTA	29.566	906.560	295850.304	4615008.399		58.9788	0.7994846	0.6006866
32	CIRC.	22.664	936.125	295873.941	4615026.159	20.000	58.9788	295885.955	4615010.169
33	RECTA	19.351	958.790	295895.347	4615027.827		131.1218	0.8828685	-0.4696203
34	CIRC.	4.089	978.141	295912.432	4615018.739	4.000	131.1218	295910.553	4615015.208
35	RECTA	6.218	982.230	295914.546	4615015.446		196.2035	0.0595994	-0.9982224
36	CIRC.	0.833	988.448	295914.917	4615009.239	-4.000	196.2035	295918.910	4615009.478
37	RECTA	5.971	989.281	295915.052	4615008.419		182.9442	0.2647183	-0.9643258
38	CIRC.	1.206	995.252	295916.633	4615002.661	-4.000	182.9442	295920.490	4615003.720
39	RECTA	74.204	996.458	295917.122	4615001.563		163.7454	0.5391991	-0.8421784

PROYECTO :
GRUPO : 0 : Grupo 0
EJE : 3 : RAMAL 03 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf
Latitud (N)		Longitud (E)								
40	CIRC.	3.688	1070.662	295957.132	4614939.070	-4.000		163.7454	295960.501	4614941.227
41	CIRC.	163.451	1074.350	295960.184	4614937.240	-1999.908		105.0548	296118.812	4616930.846
42	CIRC.	1.752	1237.801	296123.468	4614930.944	4.000		99.8518	296123.477	4614926.944
43	RECTA	54.261	1239.552	296125.165	4614930.571			127.7317	0.9066136	-0.4219619
44	CIRC.	0.889	1293.813	296174.358	4614907.675	-4.000		127.7317	296176.046	4614911.301
45	RECTA	14.934	1294.702	296175.199	4614907.392			113.5833	0.9773236	-0.2117513
			1309.637	296189.795	4614904.229			113.5833		

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# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ---------------------------
 EJE       3        0.000000          2 RAMAL 03
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
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 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295125.902200 4615290.972700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295278.394700 4615324.896000
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295278.394700 4615324.896000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295377.410500 4615367.260100
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295377.410500 4615367.260100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295431.869400 4615313.462900
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295431.869400 4615313.462900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295496.864400 4615290.960000
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295496.864400 4615290.960000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295549.792915 4615313.654286
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295549.792915 4615313.654286      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295616.623400 4615275.654700
 ALI FLOTANTE          8       0.000000       0.000000     20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295616.623400 4615275.654700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295653.929700 4615237.554600
 ALI FLOTANTE          8       0.000000       0.000000     80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295653.929700 4615237.554600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295708.434000 4615173.525300
 ALI FLOTANTE          8       0.000000       0.000000    -80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295708.434000 4615173.525300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295760.027800 4615121.005400
 ALI FLOTANTE          8       0.000000       0.000000    -80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295760.027800 4615121.005400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295778.548700 4615110.422100
 ALI FLOTANTE          8       0.000000       0.000000     20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
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 ALI FIJA-2P+R         0  295778.548700 4615110.422100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295804.108980 4615060.781161
 ALI FLOTANTE          8       0.000000       0.000000     20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295804.108980 4615060.781161      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295802.758100 4615033.825100
 ALI FLOTANTE          8       0.000000       0.000000    -10.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295802.758100 4615033.825100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295811.060221 4615020.916396
 ALI FLOTANTE          8       0.000000       0.000000    -20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295811.060221 4615020.916396      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295836.052024 4615006.053430
 ALI FLOTANTE          8       0.000000       0.000000    -20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295836.052024 4615006.053430      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295849.457200 4615007.763500
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295849.457200 4615007.763500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295884.113474 4615033.802225
 ALI FLOTANTE          8       0.000000       0.000000     20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295884.113474 4615033.802225      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295914.412500 4615017.685400
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295914.412500 4615017.685400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295914.941700 4615008.821900
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295914.941700 4615008.821900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295916.793800 4615002.075000
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295916.793800 4615002.075000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295958.465700 4614936.987400
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295959.407996 4614937.301499  -1999.907758     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296125.963596 4614930.951499
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296125.021300 4614930.637400      0.000000     0.000000     0.000000     0.000000     0.000000
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0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296174.763000 4614907.486300
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296174.763000 4614907.486300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296189.795000 4614904.229400
#---
 FIN
```

Istram 22.11.11.30 26/01/23 18:05:11 200446
pagina 1

PROYECTO :
GRUPO : 0 : Grupo 0
EJE : 4 : RAMAL 04 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
1	RECTA	45.338	0.000	296463.455	4613362.237			235.5152	-0.5293818	-0.8483837		
2	CIRC.	4.273	45.338	296439.454	4613323.772	35.000		235.5152	296409.760	4613342.300		
3	RECTA	39.255	49.612	296436.976	4613320.294			243.2883	-0.6287702	-0.7775912		
4	CIRC.	2.512	88.866	296412.294	4613289.770	6.000		243.2883	296407.628	4613293.542		
5	RECTA	1.868	91.379	296410.357	4613288.199			269.9440	-0.8906065	-0.4547747		
6	CIRC.	8.608	93.247	296408.693	4613287.349	-6.000		269.9440	296411.422	4613282.005		
7	RECTA	14.456	101.856	296405.757	4613280.027			178.6054	0.3297749	-0.9440596		
8	CIRC.	9.660	116.311	296410.524	4613266.379	35.000		178.6054	296377.482	4613254.837		
9	RECTA	8.166	125.971	296412.419	4613256.939			196.1753	0.0600417	-0.9981959		
10	CIRC.	15.968	134.137	296412.910	4613248.788	35.000		196.1753	296377.973	4613246.686		
11	RECTA	24.221	150.105	296410.262	4613233.181			225.2201	-0.3858760	-0.9225507		
12	CIRC.	6.868	174.326	296400.916	4613210.835	35.000		225.2201	296368.626	4613224.341		
13	RECTA	63.837	181.194	296397.663	4613204.799			237.7128	-0.5583460	-0.8296082		
14	CIRC.	5.877	245.031	296362.019	4613151.839	35.000		237.7128	296332.983	4613171.381		
15	RECTA	25.166	250.909	296358.345	4613147.261			248.4032	-0.6891498	-0.7246189		
16	CIRC.	6.416	276.075	296341.002	4613129.025	35.000		248.4032	296315.640	4613153.145		
17	RECTA	128.215	282.490	296336.180	4613124.806			260.0728	-0.8096889	-0.5868594		
18	CIRC.	23.973	410.706	296232.365	4613049.562	-35.000		260.0728	296252.906	4613021.223		
19	RECTA	32.646	434.679	296219.070	4613030.176			216.4679	-0.2558020	-0.9667292		
20	CIRC.	5.313	467.325	296210.719	4612998.616	-35.000		216.4679	296244.555	4612989.663		
21	RECTA	18.648	472.638	296209.754	4612993.396			206.8044	-0.1066791	-0.9942935		
22	CIRC.	7.788	491.286	296207.765	4612974.855	6.000		206.8044	296201.799	4612975.495		
23	RECTA	8.736	499.075	296202.790	4612969.577			289.4402	-0.9862746	-0.1651133		
24	CIRC.	9.934	507.810	296194.174	4612968.135	35.000		289.4402	296188.395	4613002.654		
25	RECTA	30.330	517.745	296184.276	4612967.897			307.5101	-0.9930498	0.1176945		
26	CIRC.	15.410	548.074	296154.157	4612971.467	-35.000		307.5101	296150.037	4612936.710		
27	RECTA	12.760	563.484	296138.951	4612969.908			279.4807	-0.9485040	-0.3167652		
28	CIRC.	8.967	576.245	296126.848	4612965.866	-35.000		279.4807	296137.934	4612932.668		
29	RECTA	15.987	585.211	296118.797	4612961.973			263.1708	-0.8372771	-0.5467788		
30	CIRC.	8.280	601.198	296105.412	4612953.232	-35.000		263.1708	296124.549	4612923.927		

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   31 RECTA    14.015      609.478   296099.077  4612947.930                                248.1096   -0.6858011   -0.7277890
   32 CIRC.     8.973      623.493   296089.465  4612937.731      -35.000                   248.1096   296114.938  4612913.728
   33 RECTA     2.606      632.465   296084.212  4612930.487                                231.7894   -0.4788521   -0.8778956
   34 CIRC.     9.576      635.071   296082.964  4612928.200      -35.000                   231.7894   296113.690  4612911.440
   35 RECTA    24.958      644.647   296079.578  4612919.274                                214.3716   -0.2238367   -0.9746267
   36 CIRC.     8.491      669.605   296073.992  4612894.949       35.000                   214.3716   296039.880  4612902.784
   37 RECTA     8.891      678.096   296071.111  4612886.984                                229.8159   -0.4514118   -0.8923158
   38 CIRC.     3.798      686.987   296067.097  4612879.051        6.000                   229.8159   296061.744  4612881.759
   39 RECTA     7.325      690.785   296064.458  4612876.409                                270.1152   -0.8918264   -0.4523777
```



```
  PROYECTO   :
  GRUPO      :    0 : Grupo 0
  EJE        :    4 : RAMAL 04 ()
```

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                              ==========================================
                              * * *  LISTADO  DE  LAS  ALINEACIONES  * * *
                              ==========================================

 DATO TIPO  LONGITUD    P.K.       X TANGENCIA  Y TANGENCIA    RADIO        PARAMETRO    AZIMUT     Cos/Xc/Xinf  Sen/Yc/Yinf
Latitud (N)      Longitud (E)
 ---- ----- --------- ------------ ------------ ------------ ------------ ------------ ------------ ------------ ------------
---------------- ----------------
   40 CIRC.     5.970      698.110   296057.925  4612873.095       35.000                   270.1152   296042.092  4612904.309
   41 RECTA    26.698      704.080   296052.397  4612870.860                                280.9743   -0.9556742   -0.2944264
   42 CIRC.     6.346      730.778   296026.882  4612862.999      -20.000                   280.9743   296032.771  4612843.886
   43 RECTA   100.090      737.124   296021.213  4612860.208                                260.7753   -0.8161151   -0.5778894
                           837.214   295939.528  4612802.367                                260.7753
```

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# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       4        0.000000          2 RAMAL 04
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- ------------- ------------- ------------ ------------ ------------ ------------ ------------
```

```
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  296463.455109 4613362.236530      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296438.321200 4613321.957100
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296438.321200 4613321.957100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296411.492400 4613288.778300
 ALI FLOTANTE          8       0.000000       0.000000      6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296411.492400 4613288.778300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296404.031100 4613284.968300
 ALI FLOTANTE          8       0.000000       0.000000     -6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296404.031100 4613284.968300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296412.127400 4613261.790700
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296412.127400 4613261.790700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296413.397400 4613240.676900
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296413.397400 4613240.676900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296399.586100 4613207.656900
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296399.586100 4613207.656900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296360.374800 4613149.395500
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296360.374800 4613149.395500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296338.784700 4613126.694200
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296338.784700 4613126.694200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296222.262000 4613042.239000
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296222.262000 4613042.239000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296210.038200 4612996.042700
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296210.038200 4612996.042700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296207.279294 4612970.328560
 ALI FLOTANTE          8       0.000000       0.000000      6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
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 ALI FIJA-2P+R         0  296207.279294 4612970.328560      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296189.241900 4612967.308900
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296189.241900 4612967.308900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296146.379300 4612972.388900
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296146.379300 4612972.388900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296122.571646 4612964.438025
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296122.571646 4612964.438025      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296101.929200 4612950.957600
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296101.929200 4612950.957600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296086.371700 4612934.447600
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296086.371700 4612934.447600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296080.656700 4612923.970100
 ALI FLOTANTE          8       0.000000       0.000000    -35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296080.656700 4612923.970100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296073.036700 4612890.791200
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296073.036700 4612890.791200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296066.210400 4612877.297500
 ALI FLOTANTE          8       0.000000       0.000000      6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296066.210400 4612877.297500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296055.256600 4612871.741200
 ALI FLOTANTE          8       0.000000       0.000000     35.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296055.256600 4612871.741200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296023.824100 4612862.057400
 ALI FLOTANTE          8       0.000000       0.000000    -20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296023.824100 4612862.057400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295939.527700 4612802.367300
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 FIN
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Istram 22.11.11.30 26/01/23 18:05:11 200446
pagina 1
PROYECTO :
GRUPO : 0 : Grupo 0
EJE : 5 : RAMAL 05 ()

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
1	RECTA	20.897	0.000	297118.730	4613193.949			142.7580	0.7828015	-0.6222715		
2	CIRC.	6.204	20.897	297135.089	4613180.945	-60.000		142.7580	297172.425	4613227.913		
3	RECTA	63.440	27.101	297140.136	4613177.342			136.1754	0.8428482	-0.5381514		
4	CIRC.	11.201	90.541	297193.606	4613143.202	15.000		136.1754	297185.533	4613130.559		
5	RECTA	115.035	101.742	297200.045	4613134.355			183.7149	0.2530243	-0.9674599		
6	CIRC.	10.469	216.777	297229.152	4613023.063	-15.000		183.7149	297243.664	4613026.859		
7	RECTA	23.887	227.246	297234.984	4613014.625			139.2826	0.8155891	-0.5786315		
8	CIRC.	4.842	251.132	297254.466	4613000.803	-15.000		139.2826	297263.145	4613013.037		
9	RECTA	11.675	255.974	297258.795	4612998.682			118.7317	0.9570239	-0.2900091		
10	CIRC.	8.245	267.650	297269.969	4612995.296	-60.000		118.7317	297287.369	4613052.717		
11	RECTA	16.413	275.895	297277.999	4612993.454			109.9834	0.9877290	-0.1561774		
12	CIRC.	9.052	292.307	297294.210	4612990.890	80.000		109.9834	297281.716	4612911.872		
13	RECTA	12.603	301.360	297303.052	4612988.974			117.1872	0.9637775	-0.2667076		
14	CIRC.	0.650	313.963	297315.199	4612985.613	4.000		117.1872	297314.132	4612981.758		
15	RECTA	24.706	314.613	297315.809	4612985.390			127.5279	0.9079598	-0.4190573		
16	CIRC.	7.497	339.319	297338.240	4612975.036	-40.000		127.5279	297355.003	4613011.355		
17	RECTA	10.216	346.816	297345.301	4612972.549			115.5958	0.9701425	-0.2425356		
18	CIRC.	11.033	357.032	297355.212	4612970.071	20.000		115.5958	297350.361	4612950.669		
19	RECTA	14.735	368.065	297364.661	4612964.651			150.7154	0.6991164	-0.7150079		
20	CIRC.	12.111	382.799	297374.963	4612954.116	20.000		150.7154	297360.662	4612940.133		
21	RECTA	17.691	394.911	297380.379	4612943.489			189.2668	0.1677993	-0.9858212		
22	CIRC.	12.667	412.601	297383.347	4612926.049	200.000		189.2668	297186.183	4612892.489		
23	RECTA	69.281	425.269	297385.076	4612913.503			193.2989	0.1050665	-0.9944652		
24	CIRC.	21.934	494.550	297392.355	4612844.605	-100.000		193.2989	297491.802	4612855.112		
25	RECTA	67.174	516.483	297397.024	4612823.219			179.3355	0.3189270	-0.9477793		
26	CIRC.	8.212	583.657	297418.447	4612759.553	-60.000		179.3355	297475.314	4612778.689		
27	RECTA	11.097	591.869	297421.590	4612751.973			170.6225	0.4452560	-0.8954033		
28	CIRC.	12.734	602.965	297426.531	4612742.038	40.000		170.6225	297390.715	4612724.227		
29	RECTA	13.287	615.699	297430.306	4612729.933			190.8888	0.1426311	-0.9897759		
30	CIRC.	9.511	628.986	297432.201	4612716.781	40.000		190.8888	297392.610	4612711.076		
31	RECTA	6.272	638.497	297432.431	4612707.296			206.0258	-0.0945116	-0.9955238		
32	CIRC.	11.458	644.769	297431.838	4612701.051	60.000		206.0258	297372.106	4612706.722		
33	RECTA	63.744	656.228	297429.676	4612689.817			218.1832	-0.2817541	-0.9594867		
			719.971	297411.716	4612628.655			218.1832				

EJES EN PLANTA

#	Num Eje	P.K. inicial	N.Palabras	Titulo del Eje
EJE	5	0.000000	2	RAMAL 05

```
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  297118.730094 4613193.948766      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297137.518900 4613179.013000
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297137.518900 4613179.013000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297198.558400 4613140.039800
 ALI FLOTANTE          8       0.000000       0.000000     15.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297198.558400 4613140.039800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297230.532768 4613017.783090
 ALI FLOTANTE          8       0.000000       0.000000    -15.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297230.532768 4613017.783090      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297256.457800 4612999.390200
 ALI FLOTANTE          8       0.000000       0.000000    -15.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297256.457800 4612999.390200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297273.920300 4612994.098500
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297273.920300 4612994.098500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297298.685400 4612990.182700
 ALI FLOTANTE          8       0.000000       0.000000     80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297298.685400 4612990.182700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297315.512900 4612985.526000
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297315.512900 4612985.526000      0.000000     0.000000     0.000000     0.000000     0.000000
```

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0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297341.653800 4612973.461000
 ALI FLOTANTE          8       0.000000       0.000000    -40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297341.653800 4612973.461000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297360.703800 4612968.698500
 ALI FLOTANTE          8       0.000000       0.000000     20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297360.703800 4612968.698500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297379.330500 4612949.648400
 ALI FLOTANTE          8       0.000000       0.000000     20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297379.330500 4612949.648400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297384.410500 4612919.803400
 ALI FLOTANTE          8       0.000000       0.000000    200.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297384.410500 4612919.803400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297393.512200 4612833.654900
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297393.512200 4612833.654900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297419.758900 4612755.655600
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297419.758900 4612755.655600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297429.389800 4612736.288000
 ALI FLOTANTE          8       0.000000       0.000000     40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297429.389800 4612736.288000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297432.882300 4612712.052100
 ALI FLOTANTE          8       0.000000       0.000000     40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297432.882300 4612712.052100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297431.294800 4612695.330400
 ALI FLOTANTE          8       0.000000       0.000000     60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  297431.294800 4612695.330400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          297411.715600 4612628.655300
#---
 FIN
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  PROYECTO   :
  GRUPO      :    1 : Grupo 1
  EJE        :    6 : RAMAL 06 ()
```

* * * LISTADO DE LAS ALINEACIONES * * *

DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
1	RECTA	11.799	0.000	295358.857	4614143.201			259.7790	-0.8069721	-0.5905896		
2	CIRC.	12.512	11.799	295349.335	4614136.232	-100.000		259.7790	295408.394	4614055.535		
3	RECTA	47.136	24.311	295339.726	4614128.231			251.8137	-0.7269623	-0.6866774		
4	CIRC.	5.437	71.447	295305.460	4614095.864	-4.000		251.8137	295308.207	4614092.956		
5	RECTA	17.935	76.884	295304.787	4614090.882			165.2871	0.5186478	-0.8549880		
6	CIRC.	10.424	94.818	295314.089	4614075.548	-100.000		165.2871	295399.587	4614127.413		
7	RECTA	32.543	105.243	295319.950	4614066.933			158.6508	0.6047971	-0.7963796		
8	CIRC.	8.992	137.785	295339.631	4614041.017	80.000		158.6508	295275.921	4613992.633		
9	RECTA	2.405	146.777	295344.656	4614033.566			165.8064	0.5116572	-0.8591897		
10	CIRC.	18.987	149.182	295345.887	4614031.499	80.000		165.8064	295277.151	4613990.566		
11	RECTA	4.333	168.169	295353.584	4614014.191			180.9158	0.2953047	-0.9554031		
12	CIRC.	8.674	172.503	295354.863	4614010.051	-20.000		180.9158	295373.971	4614015.957		
13	RECTA	25.151	181.176	295359.114	4614002.568			153.3066	0.6694426	-0.7428638		
14	CIRC.	14.375	206.327	295375.951	4613983.885	-100.000		153.3066	295450.237	4614050.829		
15	RECTA	19.957	220.701	295386.307	4613973.933			144.1555	0.7689541	-0.6393040		
16	CIRC.	16.667	240.659	295401.653	4613961.175	100.000		144.1555	295337.723	4613884.279		
17	RECTA	29.581	257.325	295413.524	4613949.504			154.7657	0.6522420	-0.7580108		
18	CIRC.	14.184	286.907	295432.818	4613927.080	-300.000		154.7657	295660.221	4614122.753		
19	RECTA	18.042	301.091	295442.320	4613916.551			151.7557	0.6873389	-0.7263368		
20	CIRC.	14.818	319.133	295454.721	4613903.447	80.000		151.7557	295396.614	4613848.460		
21	RECTA	10.644	333.951	295463.854	4613891.804			163.5479	0.5418094	-0.8405014		
22	CIRC.	9.547	344.596	295469.622	4613882.858	-80.000		163.5479	295536.862	4613926.203		
23	RECTA	12.246	354.142	295475.260	4613875.161			155.9509	0.6380181	-0.7700214		
24	CIRC.	9.233	366.389	295483.074	4613865.731	-80.000		155.9509	295544.675	4613916.772		
25	RECTA	26.477	375.622	295489.361	4613858.977			148.6033	0.7224486	-0.6914246		
26	CIRC.	9.436	402.099	295508.489	4613840.670	-200.000		148.6033	295646.774	4613985.160		
27	RECTA	13.951	411.535	295515.458	4613834.309			145.5997	0.7542548	-0.6565818		
28	CIRC.	21.092	425.486	295525.981	4613825.149	-100.000		145.5997	295591.639	4613900.574		
29	RECTA	7.924	446.579	295543.227	4613813.074			132.1719	0.8750029	-0.4841176		
30	CIRC.	5.964	454.502	295550.160	4613809.238	-100.000		132.1719	295598.572	4613896.738		
31	RECTA	13.139	460.466	295555.462	4613806.508			128.3753	0.9023014	-0.4311058		
32	CIRC.	12.187	473.606	295567.317	4613800.843	-40.000		128.3753	295584.562	4613836.935		
33	RECTA	14.342	485.793	295578.939	4613797.333			108.9785	0.9900712	-0.1405670		
34	CIRC.	10.917	500.135	295593.138	4613795.317	-40.000		108.9785	295598.761	4613834.919		
35	RECTA	7.193	511.051	295604.021	4613795.267			91.6039	0.9913156	0.1315042		
36	CIRC.	5.972	518.244	295611.152	4613796.213	-20.000		91.6039	295608.522	4613816.039		
37	RECTA	12.452	524.216	295616.868	4613797.864			72.5956	0.9087708	0.4172956		
38	CIRC.	3.311	536.668	295628.183	4613803.060	-20.000		72.5956	295619.837	4613821.235		
39	RECTA	25.772	539.979	295631.065	4613804.684			62.0558	0.8275732	0.5613578		
			565.751	295652.393	4613819.151			62.0558				

EJES EN PLANTA

#	Num Eje	P.K. inicial	N.Palabras	Titulo del Eje
EJE	6	0.000000	2	RAMAL 06

```
 REV  2210
 ALIAS4 N-634
 GRUPO 1
 TIPOL 401
 CM    2
 CAR   1
 VD    80.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
 NCE   1.000
 ACE   3.500
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295358.856616 4614143.200970      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295344.279800 4614132.532800
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295344.279800 4614132.532800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295303.110700 4614093.645100
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295303.110700 4614093.645100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295316.794400 4614071.087600
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295316.794400 4614071.087600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295342.353200 4614037.432500
 ALI FLOTANTE          8       0.000000       0.000000     80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295342.353200 4614037.432500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295350.767000 4614023.303800
 ALI FLOTANTE          8       0.000000       0.000000     80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295350.767000 4614023.303800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295356.164500 4614005.841200
 ALI FLOTANTE          8       0.000000       0.000000    -20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295356.164500 4614005.841200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295380.770800 4613978.536200
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
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0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295380.770800 4613978.536200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295408.075900 4613955.834900
 ALI FLOTANTE          8       0.000000       0.000000    100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295408.075900 4613955.834900      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295437.444700 4613921.703600
 ALI FLOTANTE          8       0.000000       0.000000   -300.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295437.444700 4613921.703600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295459.828500 4613898.049800
 ALI FLOTANTE          8       0.000000       0.000000     80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295459.828500 4613898.049800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295472.211000 4613878.841000
 ALI FLOTANTE          8       0.000000       0.000000    -80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295472.211000 4613878.841000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295486.022300 4613862.172200
 ALI FLOTANTE          8       0.000000       0.000000    -80.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295486.022300 4613862.172200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295511.898600 4613837.407100
 ALI FLOTANTE          8       0.000000       0.000000   -200.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295511.898600 4613837.407100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295533.964900 4613818.198300
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295533.964900 4613818.198300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295552.770354 4613807.793705
 ALI FLOTANTE          8       0.000000       0.000000   -100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295552.770354 4613807.793705      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295572.858700 4613798.195800
 ALI FLOTANTE          8       0.000000       0.000000    -40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295572.858700 4613798.195800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295598.576300 4613794.544500
 ALI FLOTANTE          8       0.000000       0.000000    -40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295598.576300 4613794.544500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          295614.133800 4613796.608300
 ALI FLOTANTE          8       0.000000       0.000000    -20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
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 ALI FIJA-2P+R         0  295614.133800 4613796.608300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295629.691300 4613803.752100
 ALI FLOTANTE          8       0.000000       0.000000    -20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295629.691300 4613803.752100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295652.392600 4613819.150800
#---
 FIN
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  Istram 22.11.11.30 26/01/23 18:05:11   200446
pagina   1
  PROYECTO   :
  GRUPO      :    0 : Grupo 0
  EJE        :    7 : RAMAL 07 ()
```

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                              ==========================================
                              * * *  LISTADO  DE  LAS  ALINEACIONES  * * *
                              ==========================================

 DATO TIPO  LONGITUD    P.K.       X TANGENCIA  Y TANGENCIA    RADIO        PARAMETRO    AZIMUT     Cos/Xc/Xinf  Sen/Yc/Yinf
Latitud (N)      Longitud (E)
 ---- ----- --------- ------------ ------------ ------------ ------------ ------------ ------------ ------------ ------------
---------------- ----------------
    1 RECTA   182.503        0.000   296099.726  4614313.479                                38.4432    0.5678275    0.8231476
    2 CIRC.     6.312      182.503   296203.356  4614463.706        4.000                   38.4432   296206.648  4614461.434
    3 RECTA    81.123      188.814   296208.943  4614464.710                               138.8990    0.8190608   -0.5737068
    4 CIRC.     6.413      269.938   296275.388  4614418.169       -4.000                  138.8990   296277.683  4614421.446
    5 RECTA    27.835      276.351   296281.032  4614419.259                                36.8283    0.5467668    0.8372849
                           304.186   296296.251  4614442.565                                36.8283
```

```
# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ---------------------------
 EJE       7        0.000000          2 RAMAL 07
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
```

```
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  296099.725700 4614313.479000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296205.643300 4614467.021800
 ALI FLOTANTE          8       0.000000       0.000000      4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296205.643300 4614467.021800      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296278.772700 4614415.798700
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296278.772700 4614415.798700      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         296296.251400 4614442.564500
#---
 FIN
```

```
  Istram 22.11.11.30 26/01/23 18:05:11   200446
pagina   1
  PROYECTO   :
  GRUPO      :    0 : Grupo 0
  EJE        :    8 : RAMAL 08 ()
```

```
                          ==========================================
                          * * *  LISTADO  DE  LAS  ALINEACIONES  * * *
                          ==========================================

 DATO TIPO  LONGITUD    P.K.       X TANGENCIA  Y TANGENCIA    RADIO        PARAMETRO    AZIMUT     Cos/Xc/Xinf  Sen/Yc/Yinf
Latitud (N)      Longitud (E)
 ---- ----- -------- ------------ ------------ ------------ ------------ ------------ ------------ ------------ ------------
---------------- ----------------
    1 RECTA    99.942        0.000   295031.443  4615739.236                              100.6334    0.9999505   -0.0099497
    2 CIRC.    13.821       99.942   295131.379  4615738.241     -200.000                 100.6334   295133.369  4615938.231
    3 RECTA    70.344      113.762   295145.193  4615738.581                               96.2342    0.9982510    0.0591188
    4 CIRC.    24.817      184.107   295215.414  4615742.740       20.000                  96.2342   295216.597  4615722.775
    5 RECTA    25.260      208.923   295235.102  4615730.362                              175.2278    0.3793749   -0.9252430
    6 CIRC.     2.176      234.184   295244.685  4615706.991       -4.000                 175.2278   295248.386  4615708.508
    7 RECTA    15.585      236.360   295246.004  4615705.294                              140.5958    0.8034807   -0.5953308
                           251.944   295258.526  4615696.016                              140.5958
```

```
# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ---------------------------
 EJE       8        0.000000          2 RAMAL 08
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
```

```
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295031.442507 4615739.235678      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295138.292000 4615738.172500
 ALI FLOTANTE          8       0.000000       0.000000   -200.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295138.292000 4615738.172500      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295229.680139 4615743.584719
 ALI FLOTANTE          8       0.000000       0.000000     20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295229.680139 4615743.584719      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295245.108000 4615705.958300
 ALI FLOTANTE          8       0.000000       0.000000     -4.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295245.108000 4615705.958300      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295258.526500 4615696.016000
#---
 FIN
```

↑

```
  Istram 22.11.11.30 26/01/23 18:05:11   200446
pagina   1
  PROYECTO   :
  GRUPO      :    0 : Grupo 0
  EJE        :    9 : RAMAL 09 ()
```

```
                              ==============================================
                              * * *  LISTADO  DE  LAS  ALINEACIONES  * * *
                              ==============================================

 DATO TIPO  LONGITUD    P.K.       X TANGENCIA  Y TANGENCIA    RADIO        PARAMETRO    AZIMUT     Cos/Xc/Xinf  Sen/Yc/Yinf
Latitud (N)      Longitud (E)
 ---- ----- --------- ------------ ------------ ------------ ------------ ------------ ------------ ------------ ------------
---------------- ----------------
    1 RECTA    56.932        0.000   296184.591  4613912.495                               238.0222   -0.5623722   -0.8268842
    2 CIRC.     7.686       56.932   296152.573  4613865.418        6.000                  238.0222   296147.612  4613868.792
    3 RECTA     7.739       64.619   296145.796  4613863.074                               319.5781   -0.9530836    0.3027071
    4 CIRC.     7.416       72.357   296138.420  4613865.417       -6.000                  319.5781   296136.604  4613859.698
    5 RECTA   146.950       79.773   296131.800  4613863.293                               240.8953   -0.5991036   -0.8006715
                           226.723   296043.762  4613745.634                               240.8953
```

```
↑
# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE       9        0.000000          2 RAMAL 09
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  296184.590571 4613912.494736      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296150.058300 4613861.720200
 ALI FLOTANTE          8       0.000000       0.000000      6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296150.058300 4613861.720200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296134.355300 4613866.707600
 ALI FLOTANTE          8       0.000000       0.000000     -6.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  296134.355300 4613866.707600      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                          296043.761800 4613745.634000
#---
 FIN
↑
  Istram 22.11.11.30 26/01/23 18:05:11   200446
pagina   1
  PROYECTO   :
  GRUPO      :    0 : Grupo 0
  EJE        :   10 : RAMAL 10 ()


                              ==============================================
                              * * *  LISTADO  DE  LAS  ALINEACIONES  * * *
                              ==============================================

 DATO TIPO  LONGITUD    P.K.       X TANGENCIA  Y TANGENCIA    RADIO        PARAMETRO    AZIMUT     Cos/Xc/Xinf  Sen/Yc/Yinf
Latitud (N)      Longitud (E)
```

```
 ---- ----- --------- ------------ ------------ ------------ ------------ ------------ ------------ ------------ ------------
---------------- ----------------
    1 RECTA   204.601        0.000   296933.708  4612604.259                              152.1770    0.6825182   -0.7308686
                           204.601   297073.352  4612454.723                              152.1770
↑
# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE      10        0.000000          2 RAMAL 10
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------ ------------ ------------ ------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  296933.707793 4612604.259028      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         297073.351700 4612454.722600
#---
 FIN
↑
  Istram 22.11.11.30 26/01/23 18:05:11   200446
pagina   1
  PROYECTO   :
  GRUPO      :    0 : Grupo 0
  EJE        :   11 : RAMAL 11 ()


                              ==============================================
                              * * *  LISTADO  DE  LAS  ALINEACIONES  * * *
                              ==============================================

 DATO TIPO  LONGITUD    P.K.       X TANGENCIA  Y TANGENCIA    RADIO        PARAMETRO    AZIMUT     Cos/Xc/Xinf  Sen/Yc/Yinf
Latitud (N)      Longitud (E)
 ---- ----- --------- ------------ ------------ ------------ ------------ ------------ ------------ ------------ ------------
---------------- ----------------
    1 RECTA     7.289        0.000   295305.460  4614095.864                              253.3114   -0.7429138   -0.6693871
    2 CIRC.    11.820        7.289   295300.045  4614090.985      100.000                 253.3114   295233.106  4614165.276
    3 RECTA    35.803       19.109   295290.817  4614083.610                              260.8360   -0.8166658   -0.5771109
    4 CIRC.     4.021       54.912   295261.578  4614062.947      -20.000                 260.8360   295273.120  4614046.614
```

```
    5 RECTA     3.859       58.933   295258.549  4614060.313                                248.0376   -0.6849772   -0.7285645
    6 CIRC.    13.682       62.792   295255.905  4614057.502      -60.000                   248.0376   295299.619  4614016.403
    7 RECTA     8.397       76.474   295247.746  4614046.556                                233.5204   -0.5025427   -0.8645524
    8 CIRC.     6.733       84.871   295243.527  4614039.297      -60.000                   233.5204   295295.400  4614009.144
    9 RECTA    20.005       91.604   295240.476  4614033.298                                226.3764   -0.4025671   -0.9153905
   10 CIRC.    15.081      111.609   295232.423  4614014.985       60.000                   226.3764   295177.499  4614039.139
   11 RECTA     2.684      126.691   295224.689  4614002.084                                242.3781   -0.6175886   -0.7865013
   12 CIRC.     9.500      129.375   295223.032  4613999.973       40.000                   242.3781   295191.572  4614024.676
   13 RECTA    38.690      138.875   295216.336  4613993.264                                257.4986   -0.7853029   -0.6191117
                           177.565   295185.953  4613969.311                                257.4986
```

```
# EJES EN PLANTA
#-----------------------------------------------------------------
#    Num Eje  P.K. inicial  N.Palabras Titulo del Eje
#--- -------  ------------- ---------- ----------------------------
 EJE      11        0.000000          2 RAMAL 11
 REV  2210
 ALIAS4 0
 GRUPO 0
 TIPOL 401
 CM    2
 CAR   1
 VD    0.000
 MD    0
 RV    22.11 200446 (2022/11/30)
 VU    0  80.000
 MRA   CODOS.ali
#-----------------------------------------------------------------
#Anchos  derecha   derecha  izquierda izquierda
#------ --------- --------- --------- ----------
 ANCHOS     0.000     0.000     0.000     0.000
#-----------------------------------------------------------------------------------------------------------------------
#    Tipo          clave     X (L ant)    Y (dL ant)         R             A1           A2          A             L
D          Az         Etiq  Peralte
#--- ----------  ------- -------------- -------------- ------------- ------------- ------------- ------------- -------------
----------- ------------- ------ -------
 ALI FIJA-2P+R         0  295305.460137 4614095.864342      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295295.649200 4614087.024400
 ALI FLOTANTE          8       0.000000       0.000000    100.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295295.649200 4614087.024400      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295259.930400 4614061.783100
 ALI FLOTANTE          8       0.000000       0.000000    -20.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295259.930400 4614061.783100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295251.199100 4614052.496200
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295251.199100 4614052.496200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295241.832900 4614036.383000
 ALI FLOTANTE          8       0.000000       0.000000    -60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
```

```
 ALI FIJA-2P+R         0  295241.832900 4614036.383000      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295229.371000 4614008.046100
 ALI FLOTANTE          8       0.000000       0.000000     60.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295229.371000 4614008.046100      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295220.084100 4613996.219200
 ALI FLOTANTE          8       0.000000       0.000000     40.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
 ALI FIJA-2P+R         0  295220.084100 4613996.219200      0.000000     0.000000     0.000000     0.000000     0.000000
0.000000     0.0000000      0   0.000 0 0   0.000   0.000 0
                         295185.952800 4613969.311000
#---
 FIN
```