GOBERNACION DE ANTIOQUIA
SECRETARIA DE INFRAESTRUCTURA FISICA-SIF
MUNICIPIO DE HISPANIA

ESTUDIO TOPOGRAFICO DEL PROYECTO
TRAMO #1 EL GUASQUIAN
TRAMO #2 LA CLARA
TRAMO #3 VILLA DEL LAGO

"PAVIMENTACIÓN MEDIANTE EL SISTEMA CONSTRUCTIVO PLACA HUELLA VÍA TERCIARIA SAN JOAQUIN VEREDA LA PALMIRA DEL MUNICIPIO DE HISPANIA ANTIOQUIA

AGOSTO DEL 2025

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1. OBJETIVO DEL INFORME

El objeto de este informe es presentar los resultados de la georreferenciación y levantamiento topográfico para el ESTUDIO Y DISEÑOS DE MEJORAMIENTO DE VIAS RURALES EN EL MUNICIPIO DE HISPANIA
DEPARTAMENTO DE ANTIOQUIA, el cual fue realizado el día 16 de febrero del 2024, usando como puntos de referencia instalados por ANFE SOLUIONES EN LA INGENIERIA S.A.S, referenciado al sistema de la RED MAGNA ECO en coordenadas reales I.G.A.C.
En el presente documento se lleva el control de las actividades ejecutadas en el período especificado anteriormente, enfatizando la calidad, estudios técnicos y especificaciones de la ejecución de actividades.

2. LOCALIZACION DEL PROYECTO

Hispania es un municipio de Colombia, localizado en la subregión Suroeste del departamento de Antioquia. Limita por el norte con los municipios de Bolívar y Pueblorrico, por el este con el municipio de Pueblorrico, por el sur con los municipios de Andes y Betania y por el oeste con los municipios de Betania y Bolívar. Su cabecera dista 98 kilómetros de la ciudad de Medellín, capital del departamento de Antioquia. El municipio posee una extensión de 58 kilómetros cuadrados.



Ilustración 1 Localización del proyecto – Fuente: PBOT Municipio de Hispania

3. RELIEVE Y ATMOSFERA

El municipio cuenta con una orografía: montañas, valles y depresiones. La Cuchilla Murrán, con una altura de 1500 a 1750mts Morro Ñato, con una altura de 1750 a 1800mts Alto Monte Redondo, con una altura de 1200 a 1500mts Alto Mansalva, con una altura de 1550 a 1750mts La temperatura promedio anual en el municipio es de 24º C. Posee dos tipos de climas como son el cálido y el medio. No se cuenta con áreas de páramo. La estación de Cachipay registra una precipitación promedia anual de 2018.8 m.m, siendo éste el único dato climatológico que presenta registros históricos; los demás, son datos puntuales tomados de anuarios estadísticos, en los cuales se registran tres regímenes: Régimen seco: meses de noviembre, diciembre, enero, febrero y marzo. Régimen intermedio: meses de julio, agosto, septiembre y octubre. Régimen lluvioso: meses de abril, mayo, junio.

4. DESCRIPCIÓN DE LOS TRABAJOS EN CAMPO

Partiendo de los puntos, GPS debidamente instalados en cada uno de los tramos a levantar por parte de ANFE SOLUIONES EN LA INGENIERIA en lugares estratégicos, se realizaron los trabajos de levantamiento topográfico, con un equipo de tipo GNSS RTK (Real Time Kinematic) con el fin de obtener los datos precisos y reales de las condiciones actuales de los diferentes corredores viales. Gracias al sistema de referencia MAGNA-SIRGAS el cual proporciona, primariamente, coordenadas tridimensionales geocéntricas [X, Y, Z], las cuales pueden expresarse en coordenadas geográficas, latitud (Φ) y longitud (λ) y alturas (h) sobre el elipsoide de referencia. La obtención de alturas clásicas (referidas al nivel medio del mar) requiere la determinación, a partir del análisis del campo de gravedad terrestre, de una superficie vertical de referencia (geoide o cuasi geoide) y su relación con dicho elipsoide. Para el levantamiento topográfico tomamos como referencia y estaciones de amarre de la red ACTIVA provenientes de la base de datos del INSTITUTO GEOGRAFICO AGUSTIN CODAZZI, donde se encuentra registrada la red geodésica nacional de datos abiertos.

5. EQUIPOS UTILIZADOS

Los equipos utilizados durante el levantamiento topografico son los siguientes.

EQUIPO	DESCRIPCIÓN
	EQUIPO GPS (SISTEMA RTK) • EFIX F4, Base • EFIX F7, Rover • Controlador FC1 • Trípode • Bípode • Bastón
	HERRAMIENTA MENOR Estacas, Machete, Maseta, Pintura, Puntillas, cinta métrica, radios de comunicación).

5.1 CERTIFICACIÓN DE ÓPTIMO FUNCIONAMIENTO GNSS; EQUIPO EFIX CON NÚMERO DE SERIE F4-3451696 Y SERIE F7-3503052

CASA DEL TOPÓGRAFO

Bogotá D.C.
10 de Marzo de 2023

No 0222

CERTIFICADO DE ÓPTIMO FUNCIONAMIENTO GNSS

Por medio de la presente, CASA DEL TOPÓGRAFO COLOMBIA S.A.S., NIT: 900.681833-4, en calidad de distribuidor exclusivo para la República de Colombia de los equipos de la línea de productos GNSS de la marca EFIX, CERTIFICA que el sistema GNSS marca **EFIX** referencia **F4 Y F7** cuyas antenas tienen número de serie **F4-3451696; F7-3503052**cumple con los parámetros del fabricante y se encuentra en el rango de precisión, referente a las características técnicas para este modelo de equipo y en óptimas condiciones de funcionamiento.

PARÁMETROS TÉCNICOS

Constelaciones de rastreo simultáneo	GPS, GLONASS, GALILEO, BDS, SBAS, QZSS
Precisión en medición estática	Hz 2.5mm+0.5ppm Vt 5mm+0.5ppm
Precisión en medición cinemática PPK	Hz 3mm+1ppm RMS Vt 5mm+1ppm RMS
Precisión en medición RTK	Hz 8mm+1ppm Vt 15mm+1ppm
Precisión GNSS de código diferencial	Hz 40cm+1ppm Vt 80cm+1ppm
Alcance de red RTK (Via CORS)	20 - 50Km.
Frecuencia UHF radio interna	430 - 470MHz con 116 canales
Temperatura de trabajo	40°C - +65°C

Se realizan los procesos de pruebas y ajuste de acuerdo con los parámetros técnicos del fabricante en nuestros laboratorios por personal debidamente acreditado y autorizado, por lo cual se expide el presente certificado a solicitud del interesado, por una duración de un (1) años, tiempo normal óptimo, en donde al final del periodo se recomienda realizar un nuevo control de hardware y software del equipo.

Atentamente

CASA DEL TOPÓGRAFO NIT 900681833-4 SERVICIO TECNICO

Delvyth Alejandro Burgos
Soporte Técnico
Casa Del Topógrafo Colombia S.A.S.

(1) 4572128
contactenoscolombia@casadeltopografo.com

www.casadeltopografo.com
Carrera 29 No. 39B-52
Bogotá, D.C., Cundinamarca

5.2 ESPECIFICACIONES TECNICAS DEL EQUIPO

5.2.1 GNSS EFIX F7



Rendimiento GNSS [1]	
Canáles	824 Canáles
GPS	L1, L2, L5
GLONASS	L1, L2
Galileo	E1, E5a, E5b
BeiDou	B1, B2, B3
SBAS	L1
QZSS	L1, L2, L5

Precisión GNSS [2]	
Tiempo real Cinemático (RTK)	Horizontal: 8 mm+1 ppm RMS Vertical: 15 mm+1 ppm RMS Tiempo de Inicialización: < 10 s Fiabilidad de inicialización: > 99.9%
Post-proceso Cinemático (PPK)	Horizontal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
Post-proceso Estático	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
Código Diferencial	Horizontal: 0.4 m RMS Vertical: 0.8 m RMS
Autónomo	Horizontal: 1.5 m RMS Vertical: 3.0 m RMS
Tasa de Actualización	1 Hz, 5 Hz, 10 Hz.
Timpo Primer fijo [3]	Inicio en Frio: < 45 s Inicio en Caliente: < 10 s Re-adquisición de señal: < 1 s
RTK - Medición Inclinación	IMU - inclinación del bastón tipicamente menor de 10 mm + 0.7 mm/° inclinado.

Características físicas	
Tamaño (L x W x H)	119 mm x 119 mm x 85 mm (4.7 in x 4.7 in x 3.3 in)
Peso	0.77 kg (1.60 lb)
Ambiente	Operación: -40°C a +65 °C (-40°F to +149°F) Almacenamiento: -40°C a +85°C(-40°F to +185°F)
Humedad	100% Condensado
Protección Agua/Polvo	IP67 protegido por ingreso de polvo y agua, soporta inmersión temporal de 1 metro.
Impacto	Sobrevive a caída libre de 2 metros.
Sensor de Inclinación	IMU libre de calibración, para compensación de bastón, sin afectación por magnetismo.
Panel Frontal	4 luces LED

Comunicación y almacenamiento de datos	
Wi-Fi	802.11 b/g/n, modo punto de acceso.
Bluetooth ®	V4.1
Puertos	1 x Puerto USB tipo C (Descarga de datos, carga de actualización de firmware). 1 x Puerto TNC hembra para conexión de antena UHF.
Radio UHF	Interno estandar, Rx: 430-470 MHz Protocolo: CHC, Transparent, TT450. Velocidad de transmisión: 9600/19200 bps.
Formatos de datos	CMR: Entrada y salida RTCM 2.x, RTCM 3.x: Entrada y salida NMEA 0183: Salida HCN, HRC, y RINEX para estático. Ntrip Cliente (red en controlador).
Memoria	8 GB Memoria de alta velocidad

Energía	
Consumo de energía	4 W (Depende de configuración de usuario)
Capacidad de batería	Batería interna no removible Li-on 6800 mAh.
Tiempo de operación con batería interna	Rover RTK: 12 Horas Estático: Hasta 15 horas
Alimentación externa	5 V / 2 A

* Todas las especificaciones sujetas a cambio sin previo aviso.

[1] Cuando, para sujeto a disponibilidad de la definición de servicio comercial BDS (C) y Galileo, BDS B1y Galileo E6 se proporcionarán mediante una futura actualización de firmware.
[2] La precisión y la fiabilidad se determinan a cielo abierto, sin impedir múltiples, geometría GNSS óptima y condiciones atmosféricas óptimas. Las mediciones aumentan con mínimo de 7 satélites, siguiendo las pautas generales de GNSS recomendadas.
[3] Valores típicos o esperados.
[4] La duración de la batería está sujeta a la temperatura de funcionamiento.

5.2.2 GNSS EFIX F7



GNSS Characteris [1]	
Channels	824 [2]
GPS	L1, L2, L5
GLONASS	L1, L2
Galileo	E1, E5a, E5b
BeiDou	B1, B2, B3
SBAS	L1
QZSS	L1, L2, L5
GNSS Accuracies [3]	
Real time kinematics (RTK)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialization time: < 10 s Initialization reliability: > 99.9%
Post-processing kinematics (PPK)	Horizontal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
Post-processing static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
Code differential	Horizontal: 0.4 m RMS Vertical: 0.8 m RMS
Autonomous	Horizontal: 1.5 m RMS Vertical: 3.0 m RMS
Positioning rate	Up to 10 Hz
Time to first fix [3]	Cold start: < 45 s Hot start: < 10 s Signal re-acquisition: < 1 s
Hardware	
Size (L x W x H)	160 mm x 158 mm x 96 mm (6.3 in x 6.2 in x 3.8 in)
Weight	1.48 kg (3.26 lb)
Environment	Operating: -40 °C to +65 °C (-40 °F to +149 °F) Storage: -40 °C to +75 °C (-40 °F to +167 °F)
Humidity	95%
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion to depth 1 m
Shock	Survive a 2-meter pole drop
Tilt sensor	EBubble leveling
Front panel	4 status LED 2 Buttons

Communication and Data Recording	
Network modem	Integrated 2G/3G/4G modem
Wi-Fi	802.11 b/g/n, access point mode
Bluetooth ®	V4.1
Others	NFC
Ports	1 x 7-pin LEMO port (external power, RS-232) 1 x UHF antenna port (TNC female)
UHF radio	Standard Internal Tx & Rx: 410 - 470 MHz Transmit Power: 0.5 W to 2 W Protocol: CHC, Transparent, TT450 Range: Typical 3 km to 5 km
Data formats	CMR input and output RTCM 2.x, RTCM 3.x input and output NMEA 0183 output HCN, HRC and RINEX static formats NTRIP Client, NTRIP Caster
Data storage	8 GB high-speed memory
Electrical	
Power consumption	3.8 W (depending on user settings)
Li-ion battery capacity	Built-in non-removable battery 9600 mAh
Operating time on internal battery [4]	UHF receive/transmit (0.5 W): Up to 7 h Cellular receive only: Up to 12 h Static: Up to 12 h
External power	9 V DC to 28 V DC

*All specifications are subject to change without notice.

(1) Compliant, but subject to availability of BDS-3 CD and Galileo commercial service definition. BDS-B3 and Galileo E5 will be provided through future firmware upgrade.
(2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices.
(3) Typical observed values.
(4) Battery life is subject to operating temperature. Battery life may vary depending on operating temperature.

6. METODOLOGIA IMPLEMENTADA

6.1 MATERIALIZACION DE PUNTOS

La georreferenciación del proyecto se apoya en la materialización de los puntos GPS denominados GPS1 y GPS-2 en cada sector a intervenir, la cual contara siempre con una distancia entre puntos de 70.388metros y donde la ubicación de los dichos puntos fue establecida en lo posible, teniendo en cuenta que no fueran afectados y que garanticen una zona de despeje de mínimo 40º.

6.2 GEOREFERENCIACION DE LOS PUNTOS IMPLANTADOS

El sistema de posicionamiento satelital GPS ha sido diseñado, en principio, para satisfacer las necesidades de navegación y medición de tiempo en forma precisa, continua y bajo todo clima. La constelación GPS está constituida por 24 satélites colocados en órbitas estacionarias, de manera que completan una vuelta alrededor de la Tierra cada doce horas. Con buenas condiciones de visibilidad es posible tener contacto con al menos cuatro satélites sobre cualquier parte del mundo a cualquier hora. Para ofrecer un cubrimiento óptimo, existen seis planos orbitales inclinados 55°, cada uno con cuatro satélites, a 20200 km de altura aproximadamente. Las señales de los satélites son transmitidas a baja potencia y son secuencias de código de ruido Pseudo aleatorio repetidas cada milisegundo.

COMO OPERA EL RECEPTOR

El receptor 'busca' en el firmamento dentro de su horizonte disponible. Cuando encuentra una señal de un satélite, lo asegura en el código C/A y comienza a leer el mensaje de navegación. El equipo determina su latitud, longitud, altura y tiempo. El receptor, a partir de su reloj, conoce la hora en que recibe la señal del satélite. Calcula la pseudo distancia al satélite, basado en la diferencia de tiempo de envío y de recepción de la señal multiplicada por la velocidad de la luz.

Utilizando la información del mensaje de navegación, el receptor evalúa todos los satélites visibles, determina los cuatro que ofrecen la mejor distribución geométrica y los utiliza para calcular cuatro incógnitas:

X = Latitud / Norte Y= Longitud / Este
Z = Altitud / Elevación T = Tiempo

La georreferenciación con equipo GNSS nos permite altos márgenes de precisión, que redundan en la fiabilidad y disponibilidad de los datos georreferenciado.

Para realizar la georreferenciación del proyecto a levantar, se realiza el con las coordenadas instaladas a lo largo del territorio colombiano en la red magna eco del IGAC.

6.3 LEVANTAMIENTO TOPOGRAFICO

Consistió en la obtención de coordenadas en tiempo real con precisión centimétrica (1 ó 2 cm +1ppm), la cual se aplica este método a posicionamientos cinemáticos siendo un método diferencial o relativo y funciona de la siguiente manera, el receptor fijo o referencia estará en modo estático en un punto de coordenadas aproximadas, mientras el receptor móvil o "Rover", es el receptor en movimiento del cual se determinarán las coordenadas en tiempo real (teniendo la opción de hacerlo en el sistema de referencia local). Este método es preciso ya que la se trasmite por sistemas de telecomunicaciones (vía radio-modem, GSM, GPRS, por satélite u otros) entre REFERENCIA y ROVER. Una vez realizado el levantamiento con las coordenadas aproximadas de la base, se deberán cambiar estas coordenadas a las obtenidas del postproceso de las placas de amarre (GPS-1, GPS-2), para así ajustar todo el levantamiento realizado por el método RTK a las coordenadas reales obtenidas de los puntos materializados en campo.

7. TRAMOS LEVANTADOS

7.1 TRAMO 1 VERADA LA PALMIRA-SECTOR EL GUASQUIAN

7.1.1 LOCALIZACION TRAMO 1

LATITUD	**5°48'1.07"N**
LONGITUD	**75°54'53.05"O**

Coordenadas elipsoidales medias del proyecto

7.2 TRAMO 2 VERADA LA PALMIRA-SECTOR LA CLARA

7.1.2 LOCALIZACION TRAMO 2

LATITUD	**5°47'59.07"N**
LONGITUD	**75°55'20.18"O**

Coordenadas elipsoidales medias del proyecto

7.3 TRAMO 3 VERADA LA PALMIRA-SECTOR VILLA DEL LAGO

7.1.3 LOCALIZACION TRAMO 3

LATITUD	**5° 48.196'N**
LONGITUD	**75° 55.982'O**

Coordenadas elipsoidales medias del proyecto

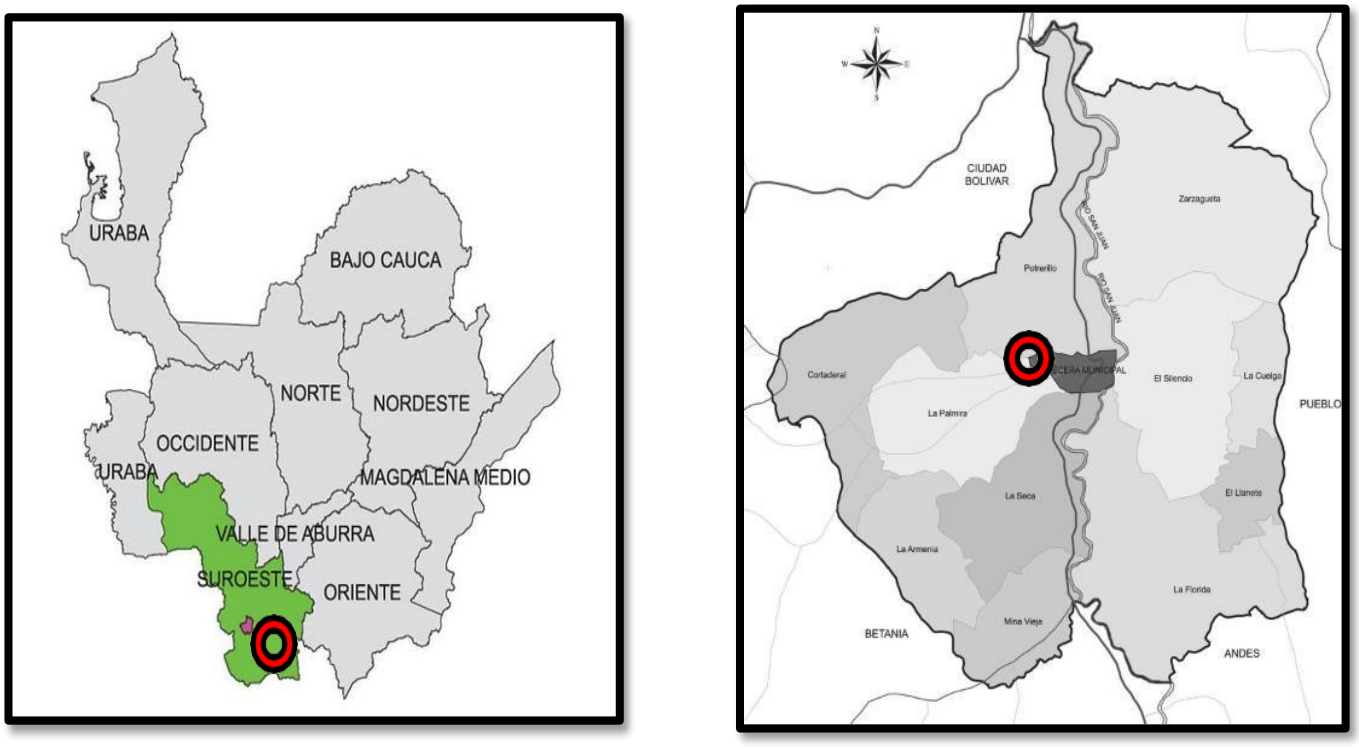


Ilustración 2 Localización vereda La Palmira tramo 2; Fuente: Gobernación de Antioquia.

7.1.2 DESCRIPCION DEL PROCESO

Después de hacer el reconocimiento del área de trabajo se procedió a realizar el estudio topográfico de la vía con la ayuda de un equipo GNSS-RTK, donde se realizó el posicionamiento de dos deltas de apoyo georreferenciados con nombres GPS1 y GPS2 para posteriormente realizar el respectivo pos-procesados con las bases instaladas y activas por el IGAC y el SGC.

Por tal motivo se realizó la georreferenciación de las estaciones permanentes SNSN administrada por el Servicio Geológico Colombiano (SGC) y VCRG administrada por el Instituto Geográfico Agustín Codazzi (IGAC), una vez descargas las semanas sirgas de las estaciones en funcionamiento se procedió a realizar el cálculo de las coordenadas finales de los puntos materializados en sitio (GPS-1 Y GPS-2) con el fin de realizar el respectivo ajuste de las coordenadas levantadas en campo por el método RTK; el cual se fue tomando cada 10 tanto longitudinalmente como transversalmente la vía existente, tomando códigos de los diferentes elementos que se encontraban a lo largo de la vía como lo eran puntos de nivel, estructuras, borde vía, medidores, postes, pozos, alcantarillas y demás estructuras para ser georreferenciadas y tenidas en cuenta dentro del diseño y generación de curvas de nivel

7.1.3 LONGITUD ESTUDIADA DE LOS TRAMOS 1, 2 Y 3

La longitud levantada a lo largo del tramo 1 es de 340.367 metros lineales.



Ilustración 3 Longitud estudiada tramo 1

La longitud levantada a lo largo del tramo 2 es de 378.59 metros lineales.

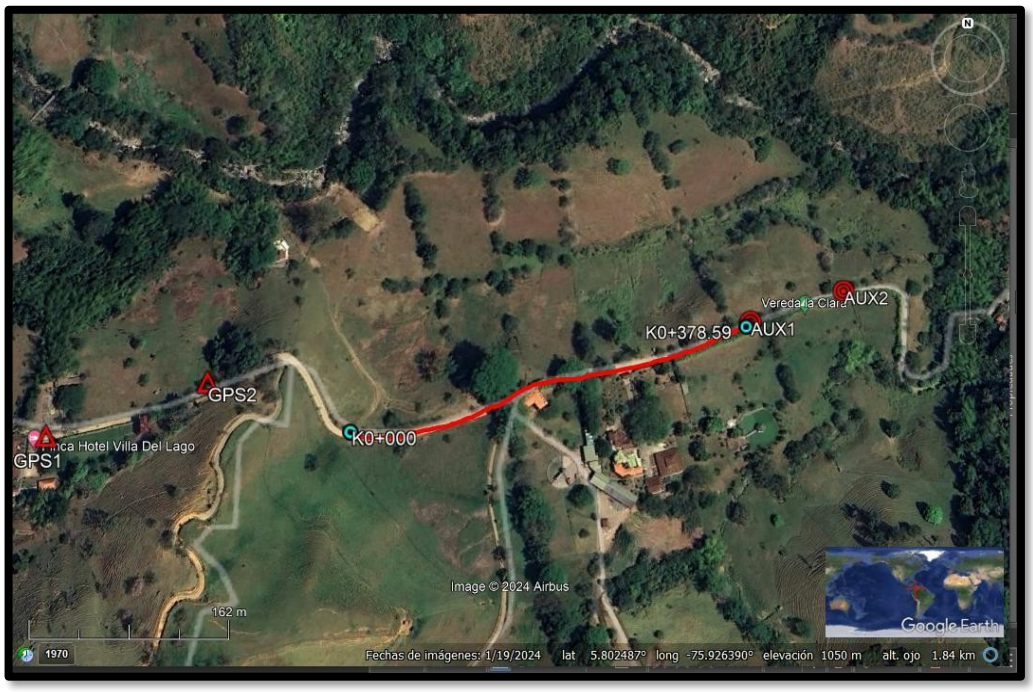


Ilustración 4 Longitud estudiada tramo 2

La longitud levantada a lo largo del tramo 3 es de 2.230 metros lineales.

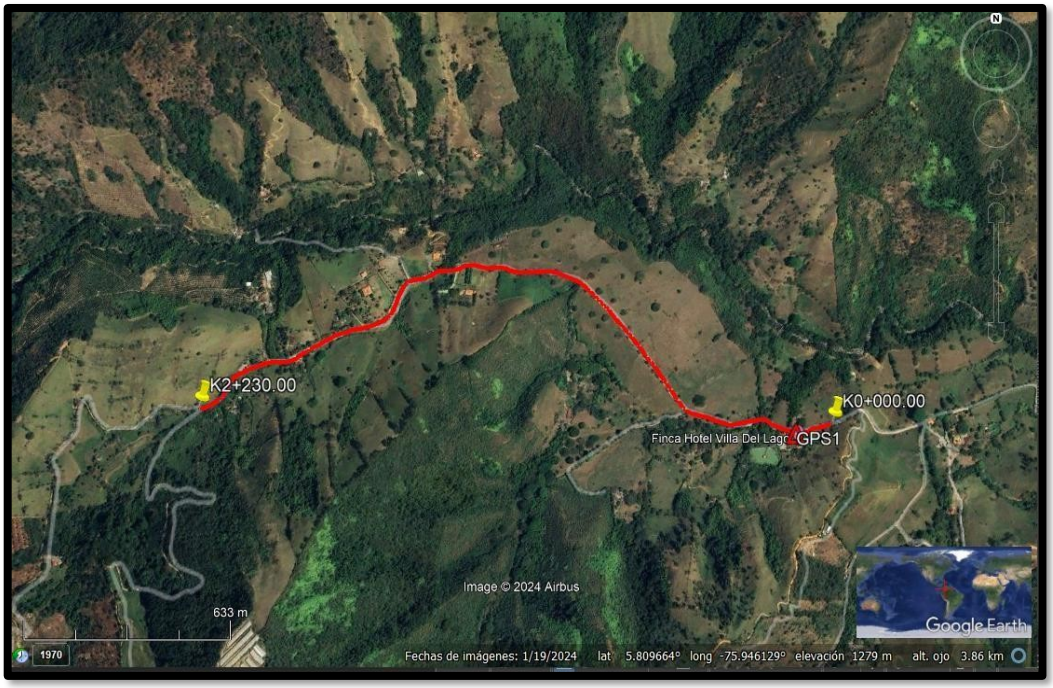


Ilustración 5 Longitud estudiada tramo 3

7.1.4 GEOREFERENCIACION

Detalles de puntos ocupados:

- Estaciones red sirgas Magna Eco.

SNSN - Sonsón del Instituto Geográfico Agustín Codazzi (IGAC)
VCRG - La Unión del Servicio Geológico Colombiano (SGC)

- Puntos posicionados
  GPS-1- Hispania, Antioquia
  GPS-2- Hispania, Antioquia

Producto entregado: Coordenadas CTM12 Origen Nacional.

7.1.5 PROCESOS PUNTOS INSTALADOS

7.1.5.1 REPORTE DE VERTICES

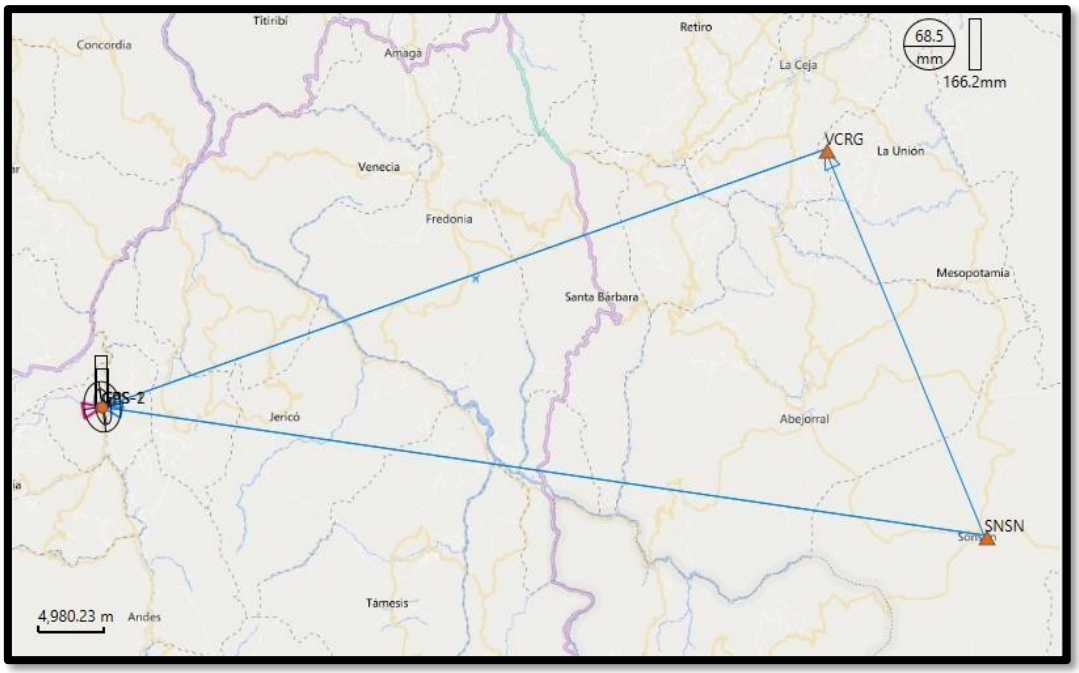


Ilustración 6 Localización geográfica de los puntos georreferenciado Estación Red SIRGAS Magna Eco-TRAMO 1

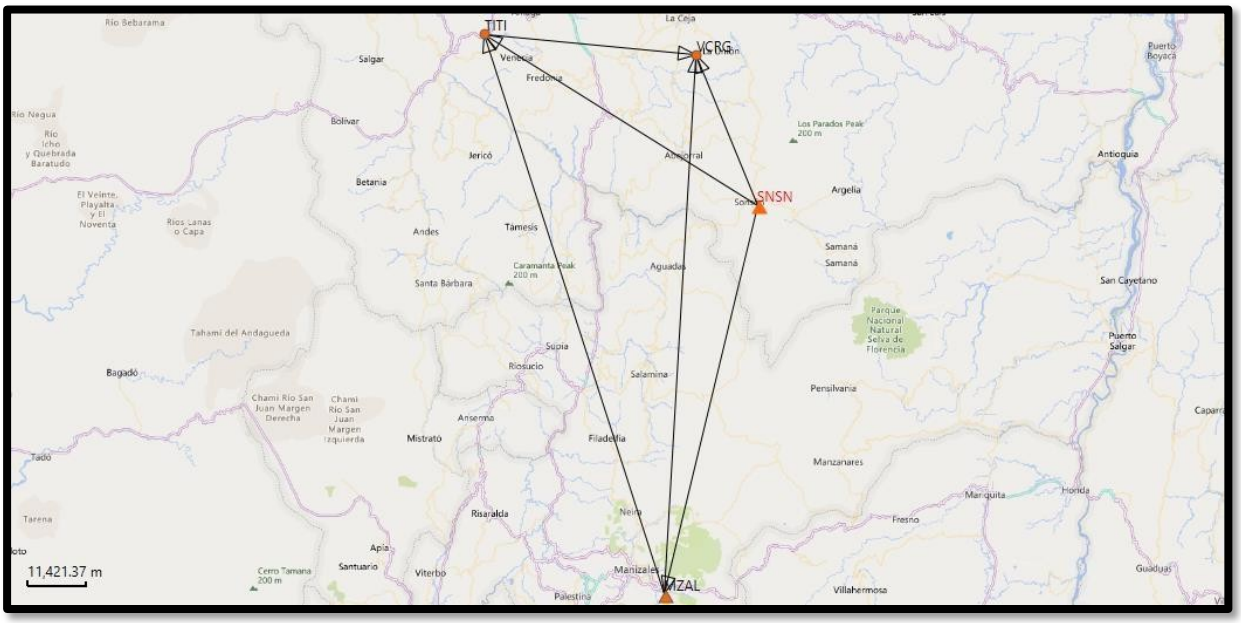


Ilustración 7 Localización geográfica de los puntos georreferenciado Estación Red SIRGAS Magna Eco TRAMO 2

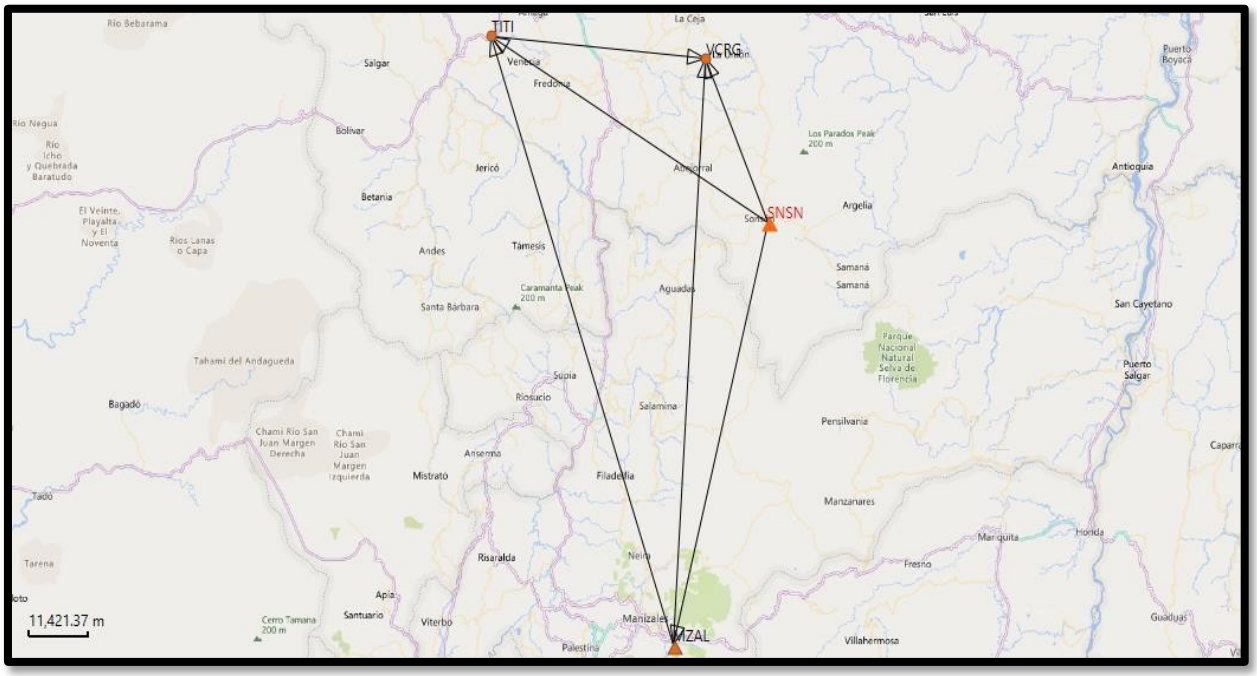


Ilustración 8 Localización geográfica de los puntos georreferenciado Estación Red SIRGAS Magna Eco TRAMO 3

7.1.5.2 TIEMPO DE OCUPACION

7.1.5.2.1 TRAMO 1

Index	File Name	File Type	Station	Start Time	End Time	Duration
1	GPS-1047J.HCN	Static	GPS-1	2024-02-16 04:21:05	2024-02-16 08:33:42	04:12:38.000
2	GPS-2047J.HCN	Static	GPS-2	2024-02-16 04:33:05	2024-02-16 06:52:11	02:19:07.000
3	snsn0470.24o	Static	SNSN	2024-02-15 18:59:42	2024-02-16 18:59:27	24:00:00.000
4	vcrg0470.24o	Static	VCRG	2024-02-15 18:59:42	2024-02-16 18:59:27	24:00:00.000

Ilustración 9 Tiempos de ocupación TRAMO 1

7.1.5.3 COORDENADAS SEMANALES SIRGAS TRAMO 1

Para la semana en que se realizó el posicionamiento se trabajó con la información extraída de la página principal de SIRGAS.ORG y el Centro de procesamiento IGA - IGAC, donde se extraen las semanas más cercanas para disponibles para estas dos estaciones.

79	VBUV	1765775.33876	-6101256.44585	611191.66757
80	VCRG	1597715.56212	-6141882.42199	660403.70397
81	VCTG	1571267.42629	-6078033.28384	1122973.22589

Ilustración 10 Coordenadas geocéntricas de la estación VCRG extraída de la semana IGA2248

132	SMDM 47001M001	2694564.57841	-4450017.39925	-3677879.20363	A
136	SNSN 41952M001	1610262.23926	-6141593.86273	631167.46873	A
138	SOCB 44473M001	1887339.91828	-6059001.62055	662175.55890	A

Ilustración 11 Coordenadas geocéntricas de la estación SNSN - Semana sirgas 2248

7.1.2.4 POSTPROCESO

Basic Information

Name	Value
Username	DESKTOP-KUT25HR
Project Datum	ORIGEN NACIONAL
Project Name	POSPROCESO TRAMO 6 16-02-24
Distance Units	Meter
Height Units	Meter

Información de ajuste

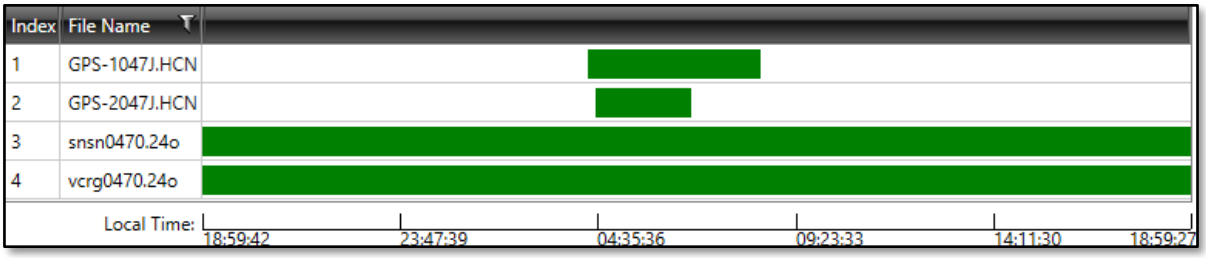
Basic Parameters

Name	Value
Ellipsoid Name	GRS80
Major Axis(m)	6378137.0000
Flattening Reciprocal(1/f)	298.257222101206

Projection Parameters

Name	Value
Projection Method	Transverse Mercator Projection
Scale Factor	0.9992
Projection Height	0.0000
Original Latitude	04°00'00.00000"N
Central Meridian(L0)	073°00'00.00000"W
North Additive Constant(m)	2000000.0000
East Additive Constant(m)	5000000.0000

Observaciones



Entrada de línea base

Observation ID	Baseline ID	DX(m)	Std.DX(mm)	DY(m)	Std.DY(mm)	DZ(m)	Std.DZ(mm)
B01	GPS-1->GPS-2	66.5964	2.5	17.7095	5.1	14.2403	1.7
B02	SNSN->GPS-1	-65620.1918	2.0	-14289.7898	2.9	9253.0062	2.0
B03	SNSN->GPS-2	-65553.4651	1.8	-14272.4218	2.9	9267.3392	1.1
B04	VCRG->GPS-1	-53073.4368	2.8	-14001.5437	5.4	-19983.2731	1.6
B05	VCRG->GPS-2	-53006.4791	1.2	-13984.1692	2.3	-19968.9126	0.6
B06	SNSN->VCRG	-12546.6747	1.2	-288.5679	2.0	29236.2347	1.3

Coordenadas geodésicas ajustadas en WGS84

Point ID	Latitude	Latitude Err.(s)	Longitude	Longitude Err.(s)	Ellipsoid Height(m)	H. Err.(m)
GPS-1	05°48'01.92271"N	0.001648	075°54'50.71630"W	0.002214	1026.4608	0.1662
GPS-2	05°48'02.38896"N	0.000785	075°54'48.47212"W	0.001590	1027.2528	0.1248
SNSN	05°42'54.25838"N	0.000000	075°18'30.00131"W	0.000000	2550.7208	0.0000
VCRG	05°58'50.25643"N	0.000000	075°25'06.83503"W	0.000000	2653.3775	0.0000

Coordenadas ECEF ajustadas en WGS84

Point ID	X(m)	X Err.(m)	Y(m)	Y Err.(m)	Z(m)	Z Err.(m)	3D Err.(m)
GPS-1	1544642.1268	0.0904	-6155883.7839	0.1562	640420.4254	0.0585	0.1897
GPS-2	1544708.9428	0.0655	-6155866.3376	0.1177	640434.7568	0.0328	0.1386
SNSN	1610262.2450	0.0000	-6141593.8608	0.0000	631167.4833	0.0000	0.0000
VCRG	1597715.5621	0.0000	-6141882.4220	0.0000	660403.7040	0.0000	0.0000

Coordenadas de cuadrícula ajustadas y altura en el Origen Nacional

Point ID	North(m)	North Err.(m)	East(m)	East Err.(m)	Elev.(m)	Elev. Err.(m)
GPS-1	2199777.9408	0.0506	4677376.1634	0.0682	1026.4608	0.1662
GPS-2	2199791.9146	0.0241	4677445.3118	0.0490	1027.2528	0.1248
SNSN	2190017.7404	0.0000	4744442.5636	0.0000	2550.7208	0.0000
VCRG	2219436.8409	0.0000	4732358.1323	0.0000	2653.3775	0.0000

7.1.6 COORDENADAS FINALES TRAMO 1

Punto	Norte	Este	Cota
GPS-1	2199777.9408	4677376.1634	1026.4608
GPS-2	2199791.9146	4677445.3118	1027.2528

Tabla 1 Coordenadas origen nacional finales tramo 1

7.1.7.1 TRAMO 2

Index	File Name	File Type	Station	Start Time	End Time	Duration
1	snsn0460.24o	Static	SNSN	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
2	mzal0460.24o	Static	MZAL	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
3	titi0460.24o	Static	TITI	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
4	vcrg0460.24o	Static	VCRG	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000

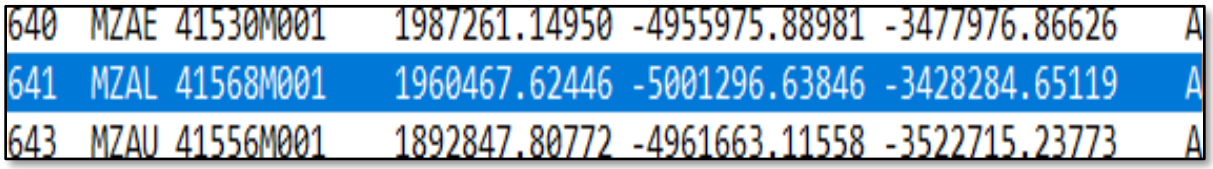
Ilustración 12 Tiempos de ocupación

7.1.5.3 COORDENADAS SEMANALES SIRGAS

Para la semana en que se realizó el posicionamiento se trabajó con la información extraída de la página principal de SIRGAS.ORG, donde la semana la semana más cercana disponible es la 24P 2300.

```
919   SMDM 47001M001    2694564.57950 -4450017.40709 -3677879.19212    A
923   SNSN 41952M001    1610262.24499 -6141593.86083   631167.48329    A
929   SONE 44474M001    1571501.51086 -6087475.15830  1070626.57987    A
```

Ilustración 6 Coordenadas geocéntricas de la estación VCRG extraída de la semana IGA2248



640	MZAE	41530M001	1987261.14950	-4955975.88981	-3477976.86626 A
641	MZAL	41568M001	1960467.62446	-5001296.63846	-3428284.65119 A
643	MZAU	41556M001	1892847.80772	-4961663.11558	-3522715.23773 A

Ilustración 13 Coordenadas geocéntricas de la estación SNSN - Semana sirgas 2248

7.1.2.4 POSTPROCESO

Información de basica

Basic Information

Name	Value
Username	DESKTOP-KUT25HR
Project Datum	ORIGEN NACIONAL
Project Name	POSTPROCESO SGC 15-02-24
Distance Units	Meter
Height Units	Meter

Información de ajuste

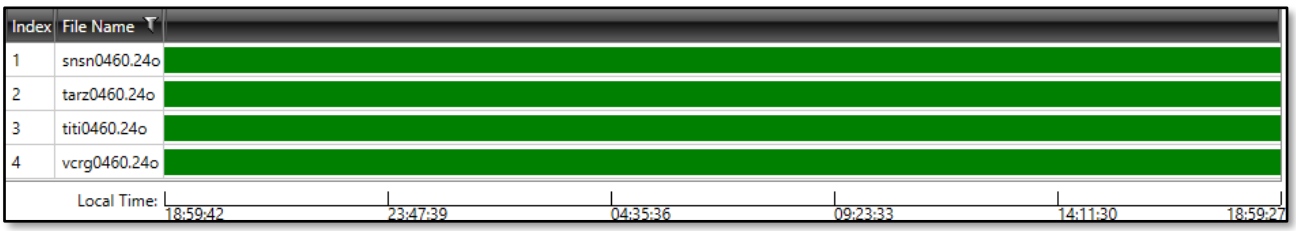
Basic Parameters

Name	Value
Ellipsoid Name	GRS80
Major Axis(m)	6378137.0000
Flattening Reciprocal(1/f)	298.257222101206

Projection Parameters

Name	Value
Projection Method	Transverse Mercator Projection
Scale Factor	0.9992
Projection Height	0.0000
Original Latitude	04°00'00.00000"N
Central Meridian(L0)	073°00'00.00000"W
North Additive Constant(m)	2000000.0000
East Additive Constant(m)	5000000.0000

Observaciones



Entrada de línea base

Observation ID	Baseline ID	DX(m)	Std.DX(mm)	DY(m)	Std.DY(mm)	DZ(m)	Std.DZ(mm)
B01	SNSN->TARZ	-17180.0411	3.0	22482.9409	9.8	203717.0780	4.0
B02	SNSN->TITI	-53019.0567	1.3	-9040.8463	1.8	32846.0316	1.1
B03	TARZ->TITI	-35839.5406	4.3	-31523.7186	14.6	-170871.2004	3.9
B04	SNSN->VCRG	-12546.7164	1.7	-288.5652	2.1	29236.2407	1.4
B05	TARZ->VCRG	4633.1010	2.6	-22771.7271	7.3	-174480.8665	3.0
B06	VCRG->TITI	-40472.5315	1.8	-8752.3317	4.5	3609.7451	1.6

Coordenadas geodésicas ajustadas en WGS84

Point ID	Latitude	Latitude Err.(s)	Longitude	Longitude Err.(s)	Ellipsoid Height(m)	H. Err.(m)
SNSN	05°42'54.25838"N	0.000000	075°18'30.00131"W	0.000000	2550.7208	0.0000
TARZ	07°34'18.43082"N	0.000000	075°24'26.09377"W	0.000000	198.7294	0.0000
TITI	06°00'52.47078"N	0.002701	075°47'31.84902"W	0.002717	1455.3640	0.1960
VCRG	05°58'50.25427"N	0.002580	075°25'06.83556"W	0.002609	2653.5069	0.2093

Coordenadas ECEF ajustadas en WGS84

Point ID	X(m)	X Err.(m)	Y(m)	Y Err.(m)	Z(m)	Z Err.(m)	3D Err.(m)
SNSN	1610262.2450	0.0000	-6141593.8608	0.0000	631167.4833	0.0000	0.0000
TARZ	1593082.5411	0.0000	-6119111.4412	0.0000	834884.6416	0.0000	0.0000
TITI	1557243.0782	0.1008	-6150634.7677	0.1888	664013.4229	0.0913	0.2327
VCRG	1597715.5803	0.1033	-6141882.5573	0.2001	660403.6513	0.0920	0.2433

Coordenadas de cuadrícula ajustadas y altura en el Origen Nacional

Point ID	North(m)	North Err.(m)	East(m)	East Err.(m)	Elev.(m)	Elev. Err.(m)
SNSN	2190017.7404	0.0000	4744442.5636	0.0000	2523.8596	0.0000
TARZ	2395408.5596	0.0000	4734484.0940	0.0000	187.8294	0.0000
TITI	2223388.6306	0.0831	4691002.4052	0.0836	1428.9911	0.1960
VCRG	2219436.7745	0.0795	4732358.1155	0.0802	2626.4311	0.2093

7.1.7 COORDENADAS GEOCENTRICAS

Tabla 2 Coordenadas TITI – SGC Coordenadas geocéntricas

Coordenadas TITI Coordenadas geocéntricas		
X	Y	Z
1557243.0782	-6150634.7677	664013.4229

Tabla 3 Coordenadas VCRG - SGC Coordenadas geocéntricas

Coordenadas VCRG Coordenadas geocéntricas		
X	Y	Z
1597715.5803	-6141882.5573	660403.6513

7.1.8 POSTPROCESO ESTACIONES SGC Y PUNTO INSTALADO GPS1-T2

7.1.7.1 REPORTE DE VERTICES

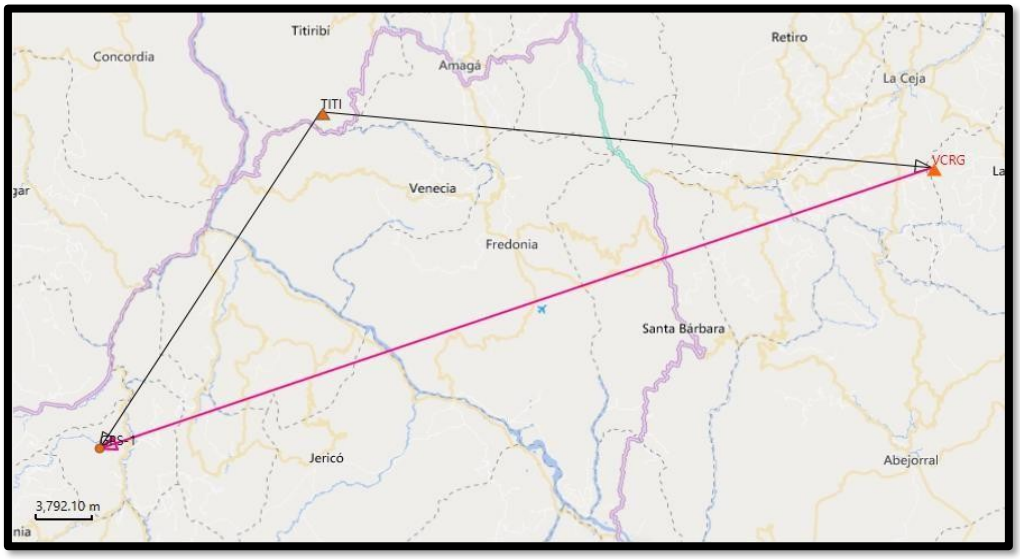


Ilustración 14 Localización geográfica de los puntos georreferenciado Estación Red SIRGAS Magna SGC y GPS1- T2

7.1.7.2 TIEMPO DE OCUPACION

Index	File Name	File Type	Station	Start Time	End Time	Duration
1	titi0460.24o	Static	TITI	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
2	vcrg0460.24o	Static	VCRG	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
3	GPS-1A046L.HCN	Static	GPS-1	2024-02-15 06:40:01	2024-02-15 11:03:22	04:23:22.000

Ilustración 15 Tiempos de ocupación

7.1.7.3 COORDENADAS SEMANALES SIRGAS

Una vez realizado el postproceso donde se establecen las coordenadas geocéntricas finales de las estaciones TITI y VCRG administradas por el SGC (servicio geológico colombiano) se procede a realizar el respectivo postproceso de los puntos instalados en el TRAMO 2

Tabla 4 Coordenadas geocéntricas de las bases activas del SGC

COORDENADAS GEOCÉNTRICAS			
ESTACIÓN	**X**	**Y**	**Z**
TITI	1557243.0782	-6150634.7677	664013.4229
VCRG	1597715.5803	-6141882.5573	660403.6513

7.1.7.4 POSTPROCESO

Información básica

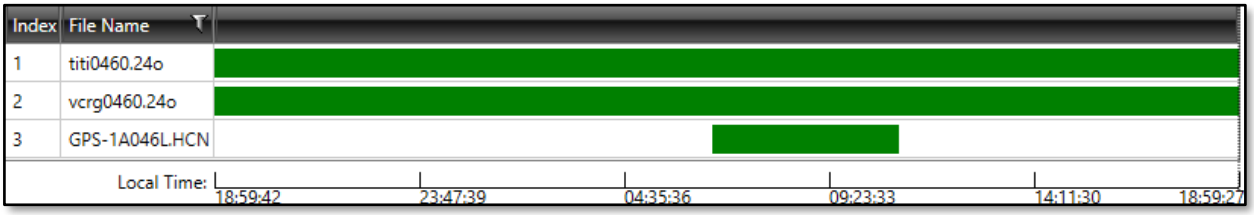
Basic Information	
Name	**Value**
Username	DESKTOP-KUT25HR
Project Datum	ORIGEN NACIONAL
Project Name	POSTPROCESO GPS1-T1
Distance Units	Meter
Height Units	Meter

Configuración de ajuste

Basic Parameters	
Name	**Value**
Ellipsoid Name	GRS80
Major Axis(m)	6378137.0000
Flattening Reciprocal(1/f)	298.257222101206

Projection Parameters	
Name	**Value**
Projection Method	Transverse Mercator Projection
Scale Factor	0.9992
Projection Height	0.0000
Original Latitude	04°00'00.00000"N
Central Meridian(L0)	073°00'00.00000"W
North Additive Constant(m)	2000000.0000
East Additive Constant(m)	5000000.0000

Observaciones



Entrada de líneas base

Observation ID	Baseline ID	DX(m)	Std.DX(mm)	DY(m)	Std.DY(mm)	DZ(m)	Std.DZ(mm)
B01	TITI->VCRG	40472.4975	1.9	8752.4153	3.9	-3609.7673	2.2
B02	TITI->GPS-1	-13852.5976	2.0	-5653.0906	5.6	-23762.1833	1.8
B03	VCRG->GPS-1	-54325.3153	1.7	-14405.3024	5.0	-20152.4643	0.9

Coordenadas geodésicas ajustadas en WGS84

Point ID	Latitude	Latitude Err.(s)	Longitude	Longitude Err.(s)	Ellipsoid Height(m)	H. Err.(m)
TITI	06°00'52.47078"N	0.000000	075°47'31.84902"W	0.000000	1455.3640	0.0000
VCRG	05°58'50.25427"N	0.000000	075°25'06.83556"W	0.000000	2653.5068	0.0000
GPS-1	05°47'56.15558"N	0.001272	075°55'33.37031"W	0.002807	1096.3128	0.1736

Coordenadas ECEF ajustadas en WGS84

Point ID	X(m)	X Err.(m)	Y(m)	Y Err.(m)	Z(m)	Z Err.(m)	3D Err.(m)
TITI	1557243.0782	0.0000	-6150634.7677	0.0000	664013.4229	0.0000	0.0000
VCRG	1597715.5803	0.0000	-6141882.5573	0.0000	660403.6513	0.0000	0.0000
GPS-1	1543390.3569	0.0718	-6156287.8484	0.1809	640251.2053	0.0476	0.2004

Coordenadas de cuadrícula ajustadas y altura en el Origen Nacional

Point ID	North(m)	North Err.(m)	East(m)	East Err.(m)	Elev.(m)	Elev. Err.(m)
TITI	2223388.6306	0.0000	4691002.4052	0.0000	1428.9912	0.0000
VCRG	2219436.7745	0.0000	4732358.1155	0.0000	2626.4310	0.0000
GPS-1	2199607.4668	0.0393	4676062.3746	0.0864	1068.8182	0.1736

7.1.7.5 COORDENADAS ORIGEN NACIONAL

COORDENADAS ORIGEN NACIONAL GPS1-T2		
NORTE	**ESTE**	**ALTURA**
2199607.4668	4676062.3746	1068.8182

7.8 POSTPROCESO ESTACIONES SGC Y PUNTO INSTALADO GPS2-T2

7.8.1 REPORTE DE VERTICES

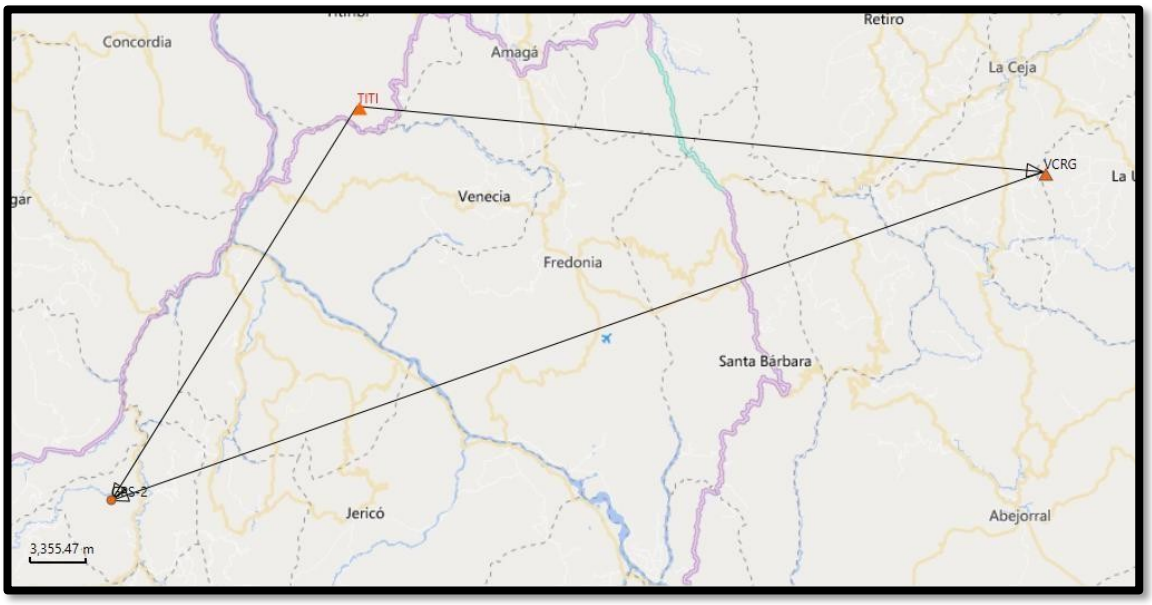


Ilustración 17 Localización geográfica de los puntos georreferenciado Estación Red SIRGAS Magna SGC y GPS2- T2

7.8.2 TIEMPO DE OCUPACION

Index	File Name	File Type	Station	Start Time	End Time	Duration
1	titi0460.24o	Static	TITI	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
2	vcrg0460.24o	Static	VCRG	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
3	GPS-2A046Q1.HCN	Static	GPS-2	2024-02-15 11:12:22	2024-02-15 15:20:00	04:07:39.000

Ilustración 16 Tiempos de ocupación

7.8.3 COORDENADAS SEMANALES SIRGAS

Una vez realizado el postproceso donde se establecen las coordenadas geocéntricas finales de las estaciones TITI y VCRG administradas por el SGC (servicio geológico colombiano) se procede a realizar el respectivo postproceso de los puntos instalados en el TRAMO 2

Tabla 6 Coordenadas geocéntricas de las bases activas del SGC

COORDENADAS GEOCÉNTRICAS			
ESTACIÓN	**X**	**Y**	**Z**
TITI	1557243.0782	-6150634.7677	664013.4229
VCRG	1597715.5803	-6141882.5573	660403.6513

7.8.3.1 POSTPROCESO

Información básica

Basic Information

Name	Value
Username	DESKTOP-KUT25HR
Project Datum	ORIGEN NACIONAL
Project Name	POSTPROCESO GPS2-T1
Distance Units	Meter
Height Units	Meter

Configuración de ajuste

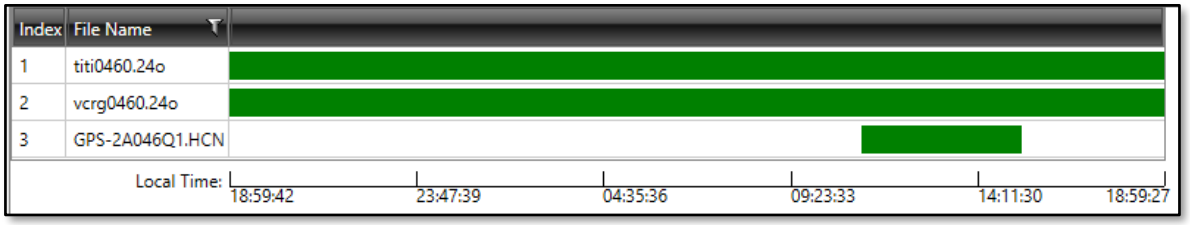
Basic Parameters

Name	Value
Ellipsoid Name	GRS80
Major Axis(m)	6378137.0000
Flattening Reciprocal(1/f)	298.257222101206

Projection Parameters

Name	Value
Projection Method	Transverse Mercator Projection
Scale Factor	0.9992
Projection Height	0.0000
Original Latitude	04°00'00.00000"N
Central Meridian(L0)	073°00'00.00000"W
North Additive Constant(m)	2000000.0000
East Additive Constant(m)	5000000.0000

Observaciones



Entrada de líneas base

Observation ID	Baseline ID	DX(m)	Std.DX(mm)	DY(m)	Std.DY(mm)	DZ(m)	Std.DZ(mm)
B01	TITI->VCRG	40472.5381	2.2	8752.3694	5.0	-3609.7479	1.9
B02	TITI->GPS-2	-13718.6355	2.8	-5618.7095	6.1	-23715.4911	5.2
B03	VCRG->GPS-2	-54190.8084	0.8	-14370.5925	4.1	-20105.8007	1.2

Coordenadas geodésicas ajustadas en WGS84

Point ID	Latitude	Latitude Err.(s)	Longitude	Longitude Err.(s)	Ellipsoid Height(m)	H. Err.(m)
TITI	06°00'52.47078"N	0.000000	075°47'31.84902"W	0.000000	1455.3640	0.0000
VCRG	05°58'50.25427"N	0.000000	075°25'06.83556"W	0.000000	2653.5068	0.0000
GPS-2	05°47'57.66950"N	0.003186	075°55'28.86174"W	0.001986	1100.4240	0.2200

Coordenadas ECEF ajustadas en WGS84

Point ID	X(m)	X Err.(m)	Y(m)	Y Err.(m)	Z(m)	Z Err.(m)	3D Err.(m)
TITI	1557243.0782	0.0000	-6150634.7677	0.0000	664013.4229	0.0000	0.0000
VCRG	1597715.5803	0.0000	-6141882.5573	0.0000	660403.6513	0.0000	0.0000
GPS-2	1543524.7732	0.0630	-6156253.5200	0.2206	640297.8958	0.0992	0.2499

Coordenadas de cuadrícula ajustadas y altura en el Origen Nacional

Point ID	North(m)	North Err.(m)	East(m)	East Err.(m)	Elev.(m)	Elev. Err.(m)
TITI	2223388.6306	0.0000	4691002.4052	0.0000	1428.9912	0.0000
VCRG	2219436.7745	0.0000	4732358.1155	0.0000	2626.4310	0.0000
GPS-2	2199653.2778	0.0981	4676201.3875	0.0609	1072.9420	0.2200

7.8.3.2 COORDENADAS ORIGEN NACIONAL

Tabla 5 Coordenadas Origen Nacional GPS2-T2

COORDENADAS ORIGEN NACIONAL GPS2-TRAMO 2		
NORTE	**ESTE**	**ALTURA**
2199653.2778	4676201.3875	1072.9420

7.9 COORDENADAS FINALES TRAMO 2

Punto	Norte	Este	Cota
GPS-1	2199607.4668	4676062.3746	1068.8182
GPS-2	2199653.2778	4676201.3875	1072.9420
AUX-1	2199708.162	4676694.760	1036.996
AUX-2	2199737.967	4676787.086	1030.530

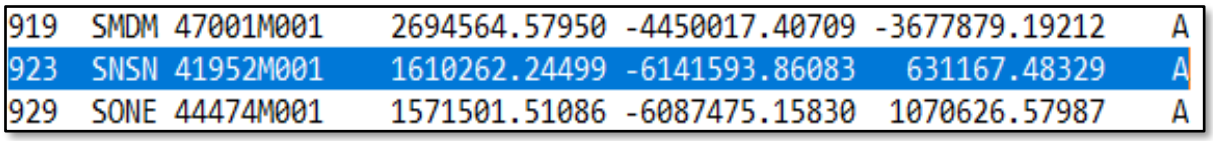
7.1.8.1 TRAMO 3

Index	File Name	File Type	Station	Start Time	End Time	Duration
1	snsn0460.24o	Static	SNSN	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
2	mzal0460.24o	Static	MZAL	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
3	titi0460.24o	Static	TITI	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
4	vcrg0460.24o	Static	VCRG	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000

Ilustración 18 Tiempos de ocupación

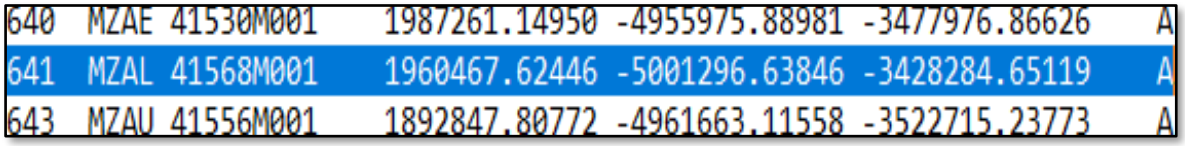
7.1.8.2 COORDENADAS SEMANALES SIRGAS

Para la semana en que se realizó el posicionamiento se trabajó con la información extraída de la página principal de SIRGAS.ORG y el Centro de procesamiento IGA - IGAC, donde se extraen las semanas más cercanas para disponibles para estas dos estaciones.



919	SMDM	47001M001	2694564.57950	-4450017.40709	-3677879.19212	A
923	SNSN	41952M001	1610262.24499	-6141593.86083	631167.48329	A
929	SONE	44474M001	1571501.51086	-6087475.15830	1070626.57987	A

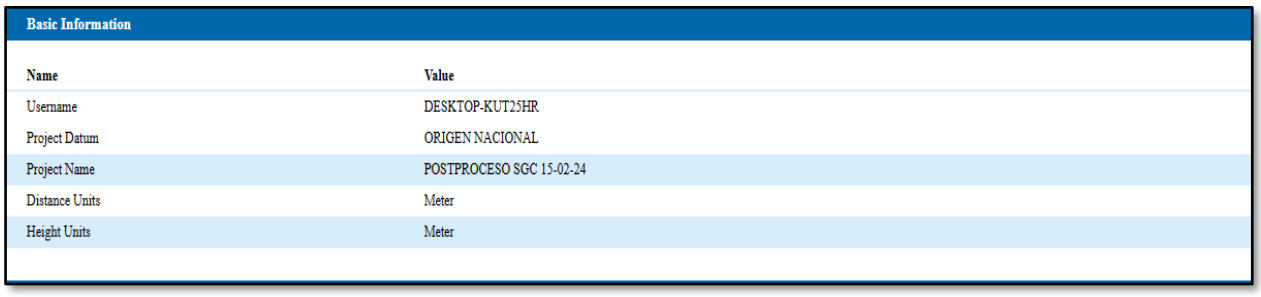
Ilustración 19 Coordenadas geocéntricas de la estación VCRG extraída de la semana IGA2248



640	MZAE	41530M001	1987261.14950	-4955975.88981	-3477976.86626	A
641	MZAL	41568M001	1960467.62446	-5001296.63846	-3428284.65119	A
643	MZAU	41556M001	1892847.80772	-4961663.11558	-3522715.23773	A

Ilustración 20 Coordenadas geocéntricas de la estación SNSN - Semana sirgas 2248

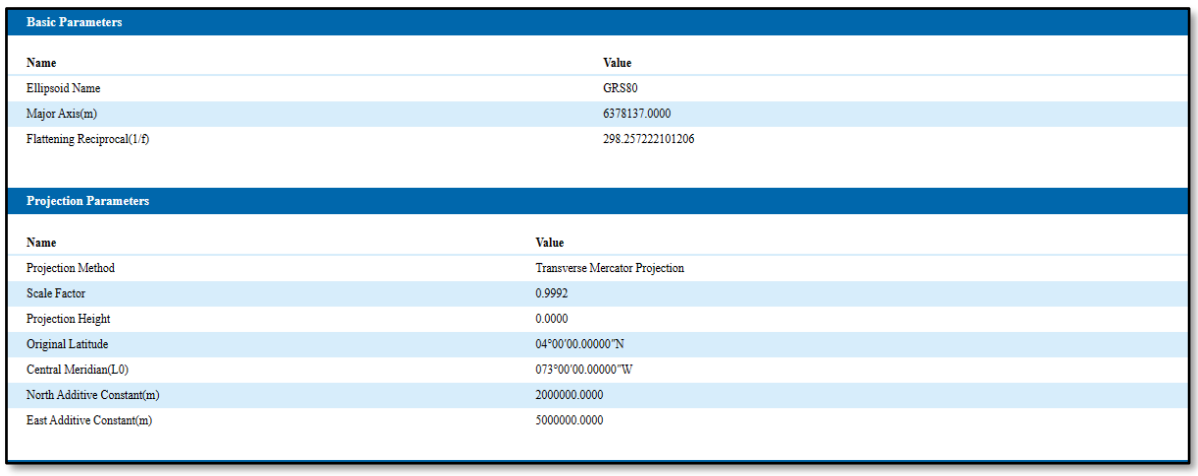
7.1.8.2 POSTPROCESO



Basic Information

Name	Value
Username	DESKTOP-KUT25HR
Project Datum	ORIGEN NACIONAL
Project Name	POSTPROCESO SGC 15-02-24
Distance Units	Meter
Height Units	Meter

Información de ajuste



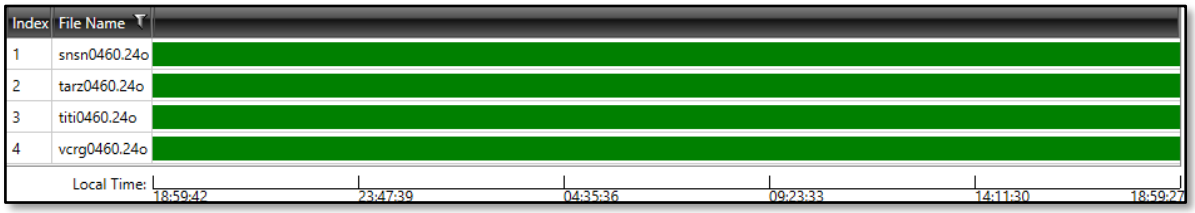
Basic Parameters

Name	Value
Ellipsoid Name	GRS80
Major Axis(m)	6378137.0000
Flattening Reciprocal(1/f)	298.257222101206

Projection Parameters

Name	Value
Projection Method	Transverse Mercator Projection
Scale Factor	0.9992
Projection Height	0.0000
Original Latitude	04°00'00.00000"N
Central Meridian(L0)	073°00'00.00000"W
North Additive Constant(m)	2000000.0000
East Additive Constant(m)	5000000.0000

Observaciones



Entrada de línea base

Observation ID	Baseline ID	DX(m)	Std.DX(mm)	DY(m)	Std.DY(mm)	DZ(m)	Std.DZ(mm)
B01	SNSN->TARZ	-17180.0411	3.0	22482.9409	9.8	203717.0780	4.0
B02	SNSN->TITI	-53019.0567	1.3	-9040.8463	1.8	32846.0316	1.1
B03	TARZ->TITI	-35839.5406	4.3	-31523.7186	14.6	-170871.2004	3.9
B04	SNSN->VCRG	-12546.7164	1.7	-288.5652	2.1	29236.2407	1.4
B05	TARZ->VCRG	4633.1010	2.6	-22771.7271	7.3	-174480.8665	3.0
B06	VCRG->TITI	-40472.5315	1.8	-8752.3317	4.5	3609.7451	1.6

Coordenadas geodésicas ajustadas en WGS84

Point ID	Latitude	Latitude Err.(s)	Longitude	Longitude Err.(s)	Ellipsoid Height(m)	H. Err.(m)
SNSN	05°42'54.25838"N	0.000000	075°18'30.00131"W	0.000000	2550.7208	0.0000
TARZ	07°34'18.43082"N	0.000000	075°24'26.09377"W	0.000000	198.7294	0.0000
TITI	06°00'52.47078"N	0.002701	075°47'31.84902"W	0.002717	1455.3640	0.1960
VCRG	05°58'50.25427"N	0.002580	075°25'06.83556"W	0.002609	2653.5069	0.2093

Coordenadas ECEF ajustadas en WGS84

Point ID	X(m)	X Err.(m)	Y(m)	Y Err.(m)	Z(m)	Z Err.(m)	3D Err.(m)
SNSN	1610262.2450	0.0000	-6141593.8608	0.0000	631167.4833	0.0000	0.0000
TARZ	1593082.5411	0.0000	-6119111.4412	0.0000	834884.6416	0.0000	0.0000
TITI	1557243.0782	0.1008	-6150634.7677	0.1888	664013.4229	0.0913	0.2327
VCRG	1597715.5803	0.1033	-6141882.5573	0.2001	660403.6513	0.0920	0.2433

Point ID	North(m)	North Err.(m)	East(m)	East Err.(m)	Elev.(m)	Elev. Err.(m)
SNSN	2190017.7404	0.0000	4744442.5636	0.0000	2523.8596	0.0000
TARZ	2395408.5596	0.0000	4734484.0940	0.0000	187.8294	0.0000
TITI	2223388.6306	0.0831	4691002.4052	0.0836	1428.9911	0.1960
VCRG	2219436.7745	0.0795	4732358.1155	0.0802	2626.4311	0.2093

Coordenadas de cuadrícula ajustadas y altura en el Origen Nacional

7.1.9.1 COORDENADAS GEOCENTRICAS

Coordenadas TITI Coordenadas geocéntricas		
X	Y	Z
1557243.0782	-6150634.7677	664013.4229

Tabla 6 Coordenadas TITI – SGC Coordenadas geocéntricas

Coordenadas VCRG Coordenadas geocéntricas		
X	Y	Z
1597715.5803	-6141882.5573	660403.6513

Tabla 7 Coordenadas VCRG - SGC Coordenadas geocéntricas

7.1.9.2 POSTPROCESO ESTACIONES SGC Y PUNTO INSTALADO GPS1-T1

7.1.9.2.1 REPORTE DE VERTICES

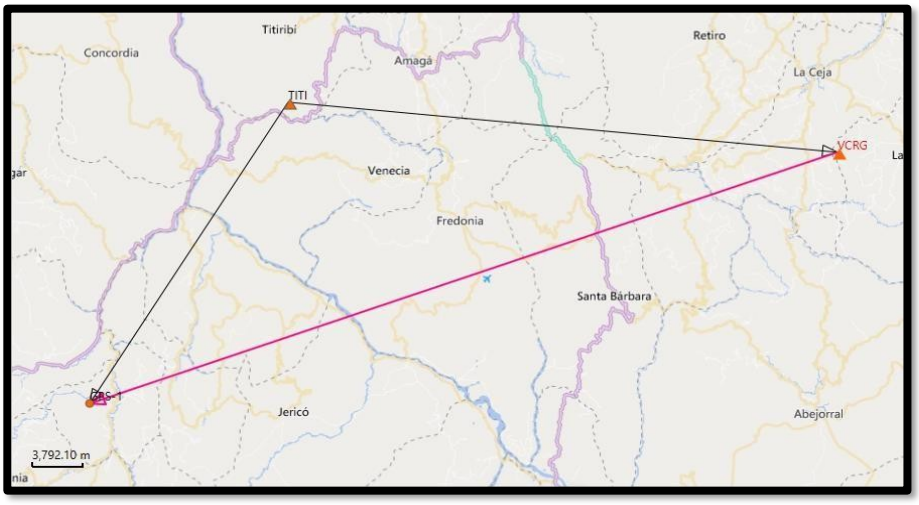


Ilustración 21 Localización geográfica de los puntos georreferenciado Estación Red SIRGAS Magna SGC y GPS1-

7.1.9.2.2 TIEMPO DE OCUPACION

Index	File Name	File Type	Station	Start Time	End Time	Duration
1	titi0460.24o	Static	TITI	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
2	vcrg0460.24o	Static	VCRG	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
3	GPS-1A046L.HCN	Static	GPS-1	2024-02-15 06:40:01	2024-02-15 11:03:22	04:23:22.000

Ilustración 22 Tiempos de ocupación

7.1.9.3 COORDENADAS SEMANALES SIRGAS

Una vez realizado el postproceso donde se establecen las coordenadas geocéntricas finales de las estaciones TITI y VCRG administradas por el SGC (servicio geológico colombiano) se procede a realizar el respectivo postproceso de los puntos instalados en el TRAMO 3

COORDENADAS GEOCÉNTRICAS			
ESTACIÓN	X	Y	Z
TITI	1557243.0782	-6150634.7677	664013.4229
VCRG	1597715.5803	-6141882.5573	660403.6513

Tabla 8 Coordenadas geocéntricas de las bases activas del SGC

7.1.2.8 POSTPROCESO

Información básica

Basic Information

Name	Value
Username	DESKTOP-KUT25HR
Project Datum	ORIGEN NACIONAL
Project Name	POSTPROCESO GPS1-T1
Distance Units	Meter
Height Units	Meter

Configuración de ajuste

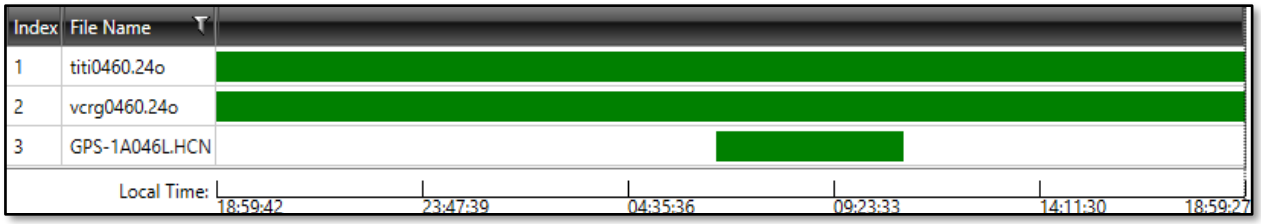
Basic Parameters

Name	Value
Ellipsoid Name	GRS80
Major Axis(m)	6378137.0000
Flattening Reciprocal(1/f)	298.257222101206

Projection Parameters

Name	Value
Projection Method	Transverse Mercator Projection
Scale Factor	0.9992
Projection Height	0.0000
Original Latitude	04°00'00.00000"N
Central Meridian(L0)	073°00'00.00000"W
North Additive Constant(m)	2000000.0000
East Additive Constant(m)	5000000.0000

Observaciones



Entrada línea base

Observation ID	Baseline ID	DX(m)	Std.DX(mm)	DY(m)	Std.DY(mm)	DZ(m)	Std.DZ(mm)
B01	TITI->VCRG	40472.4975	1.9	8752.4153	3.9	-3609.7673	2.2
B02	TITI->GPS-1	-13852.5976	2.0	-5653.0906	5.6	-23762.1833	1.8
B03	VCRG->GPS-1	-54325.3153	1.7	-14405.3024	5.0	-20152.4643	0.9

Coordenadas geodésicas ajustadas en WGS84

Point ID	Latitude	Latitude Err.(s)	Longitude	Longitude Err.(s)	Ellipsoid Height(m)	H. Err.(m)
TITI	06°00'52.47078"N	0.000000	075°47'31.84902"W	0.000000	1455.3640	0.0000
VCRG	05°58'50.25427"N	0.000000	075°25'06.83556"W	0.000000	2653.5068	0.0000
GPS-1	05°47'56.15558"N	0.001272	075°55'33.37031"W	0.002807	1096.3128	0.1736

Coordenadas ECEF ajustadas en WGS84

Point ID	X(m)	X Err.(m)	Y(m)	Y Err.(m)	Z(m)	Z Err.(m)	3D Err.(m)
TITI	1557243.0782	0.0000	-6150634.7677	0.0000	664013.4229	0.0000	0.0000
VCRG	1597715.5803	0.0000	-6141882.5573	0.0000	660403.6513	0.0000	0.0000
GPS-1	1543390.3569	0.0718	-6156287.8484	0.1809	640251.2053	0.0476	0.2004

Coordenadas de cuadrícula ajustadas y altura en el Origen Nacional

Point ID	North(m)	North Err.(m)	East(m)	East Err.(m)	Elev.(m)	Elev. Err.(m)
TITI	2223388.6306	0.0000	4691002.4052	0.0000	1428.9912	0.0000
VCRG	2219436.7745	0.0000	4732358.1155	0.0000	2626.4310	0.0000
GPS-1	2199607.4668	0.0393	4676062.3746	0.0864	1068.8182	0.1736

7.1.9.3 COORDENADAS ORIGEN NACIONAL

Tabla 9 Coordenadas Origen Nacional GPS1-T1

COORDENADAS ORIGEN NACIONAL GPS1-T1		
NORTE	**ESTE**	**ALTURA**
2199607.4668	4676062.3746	1068.8182

7.1.9.4 POSTPROCESO ESTACIONES SGC Y PUNTO INSTALADO GPS2-T1

7.1.9.5 REPORTE DE VERTICES

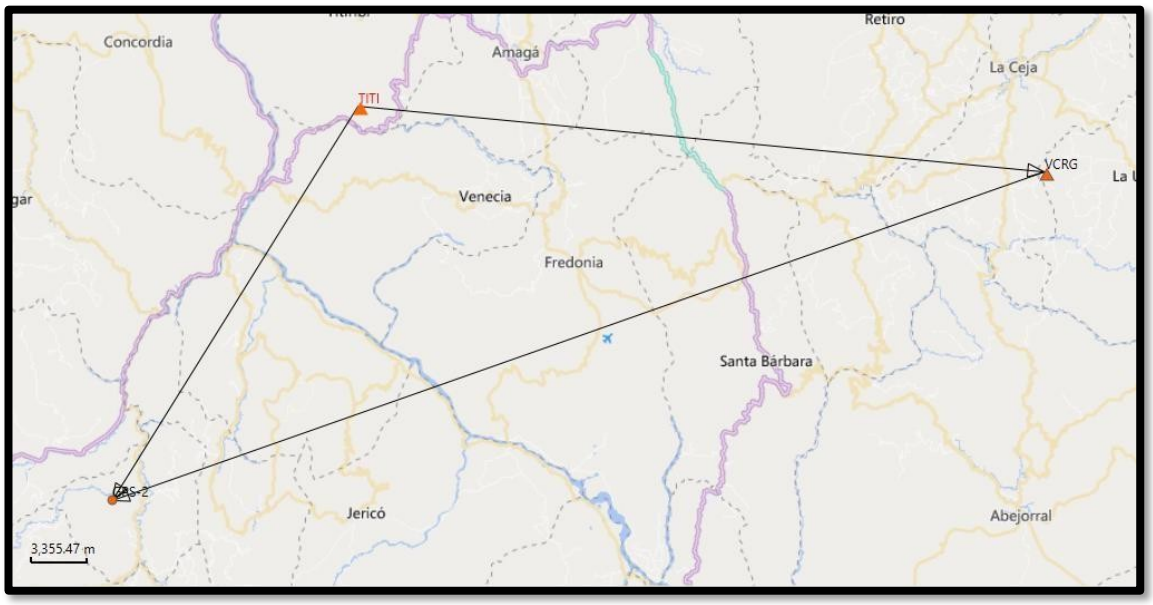


Ilustración 23 Localización geográfica de los puntos georreferenciado Estación Red SIRGAS Magna SGC y GPS2- T1

7.1.9.6 TIEMPO DE OCUPACION

Index	File Name	File Type	Station	Start Time	End Time	Duration
1	titi0460.24o	Static	TITI	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
2	vcrg0460.24o	Static	VCRG	2024-02-14 18:59:42	2024-02-15 18:59:27	24:00:00.000
3	GPS-2A046Q1.HCN	Static	GPS-2	2024-02-15 11:12:22	2024-02-15 15:20:00	04:07:39.000

Ilustración 24 Tiempos de ocupación

7.1.9.7 COORDENADAS SEMANALES SIRGAS

Una vez realizado el postproceso donde se establecen las coordenadas geocéntricas finales de las estaciones TITI y VCRG administradas por el SGC (servicio geológico colombiano) se procede a realizar el respectivo postproceso de los puntos instalados en el TRAMO 3

COORDENADAS GEOCÉNTRICAS			
ESTACIÓN	**X**	**Y**	**Z**
TITI	1557243.0782	-6150634.7677	664013.4229
VCRG	1597715.5803	-6141882.5573	660403.6513

Tabla 10 Coordenadas geocéntricas de las bases activas del SGC

7.1.9.8 POSTPROCESO

Información básica

Basic Information

Name	Value
Username	DESKTOP-KUT25HR
Project Datum	ORIGEN NACIONAL
Project Name	POSTPROCESO GPS2-T1
Distance Units	Meter
Height Units	Meter

Configuración de ajuste

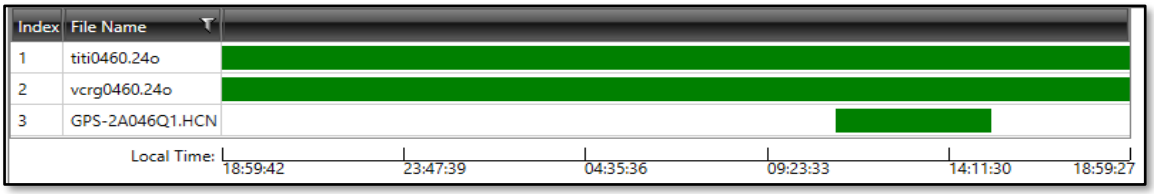
Basic Parameters

Name	Value
Ellipsoid Name	GRS80
Major Axis(m)	6378137.0000
Flattening Reciprocal(1/f)	298.257222101206

Projection Parameters

Name	Value
Projection Method	Transverse Mercator Projection
Scale Factor	0.9992
Projection Height	0.0000
Original Latitude	04°00'00.00000"N
Central Meridian(L0)	073°00'00.00000"W
North Additive Constant(m)	2000000.0000
East Additive Constant(m)	5000000.0000

Observaciones



Entrada base

Observation ID	Baseline ID	DX(m)	Std.DX(mm)	DY(m)	Std.DY(mm)	DZ(m)	Std.DZ(mm)
B01	TITI->VCRG	40472.5381	2.2	8752.3694	5.0	-3609.7479	1.9
B02	TITI->GPS-2	-13718.6355	2.8	-5618.7095	6.1	-23715.4911	5.2
B03	VCRG->GPS-2	-54190.8084	0.8	-14370.5925	4.1	-20105.8007	1.2

Coordenadas geodésicas ajustadas en WGS84

Point ID	Latitude	Latitude Err.(s)	Longitude	Longitude Err.(s)	Ellipsoid Height(m)	H. Err.(m)
TITI	06°00'52.47078"N	0.000000	075°47'31.84902"W	0.000000	1455.3640	0.0000
VCRG	05°58'50.25427"N	0.000000	075°25'06.83556"W	0.000000	2653.5068	0.0000
GPS-2	05°47'57.66950"N	0.003186	075°55'28.86174"W	0.001986	1100.4240	0.2200

Coordenadas ECEF ajustadas en WGS84

Point ID	X(m)	X Err.(m)	Y(m)	Y Err.(m)	Z(m)	Z Err.(m)	3D Err.(m)
TITI	1557243.0782	0.0000	-6150634.7677	0.0000	664013.4229	0.0000	0.0000
VCRG	1597715.5803	0.0000	-6141882.5573	0.0000	660403.6513	0.0000	0.0000
GPS-2	1543524.7732	0.0630	-6156253.5200	0.2206	640297.8958	0.0992	0.2499

Coordenadas de cuadrícula ajustadas y altura en el Origen Nacional

Point ID	North(m)	North Err.(m)	East(m)	East Err.(m)	Elev.(m)	Elev. Err.(m)
TITI	2223388.6306	0.0000	4691002.4052	0.0000	1428.9912	0.0000
VCRG	2219436.7745	0.0000	4732358.1155	0.0000	2626.4310	0.0000
GPS-2	2199653.2778	0.0981	4676201.3875	0.0609	1072.9420	0.2200

7.1.9.9 COORDENADAS ORIGEN NACIONAL

COORDENADAS ORIGEN NACIONAL GPS2-TRAMO 1		
NORTE	**ESTE**	**ALTURA**
2199653.2778	4676201.3875	1072.9420

Punto	Norte	Este	Cota
GPS-1	2199607.4668	4676062.3746	1068.8182
GPS-2	2199653.2778	4676201.3875	1072.9420

Tabla 11 Coordenadas origen nacional finales tramo 3

8 REGISTRO PUNTOS INSTALADOS

8.1 REGISTRO PUNTOS INSTALADOS TRAMOS 1

GPS1 TRAMO 1





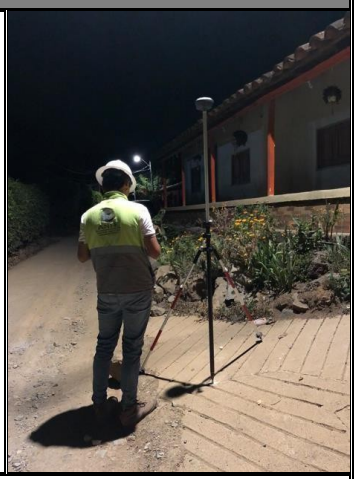
Coordenadas Magna Sirgas Origen Nacional
Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
GPS-1	2199777.9408	4677376.1634	1026.4608

Tabla 12 Registro de punto GPS1 instalado

GPS2 TRAMO 1





Coordenadas Magna Sirgas Origen Nacional
Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
GPS-2	2199791.9146	4677445.3118	1027.2528

Tabla 13 Registro de punto GPS2 instalado

8.2 REGISTRO PUNTOS INSTALADOS TRAMOS 2

GPS1 TRAMO 2



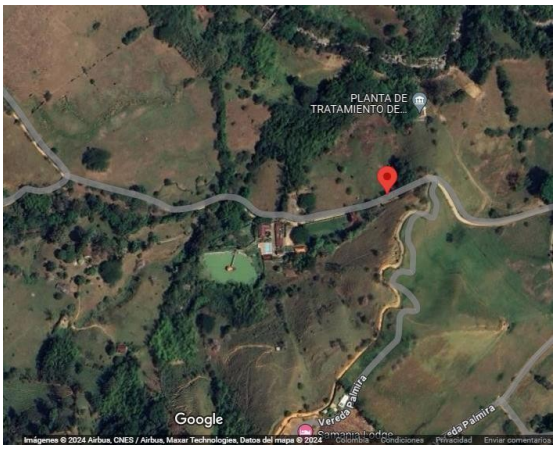


Coordenadas Magna Sirgas Origen Nacional Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
GPS-1	2199607.4668	4676062.3746	1068.8182

Tabla 14 Registro de punto GPS1 instalado

GPS2 TRAMO 2





Coordenadas Magna Sirgas Origen Nacional
Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
GPS-2	2199653.2778	4676201.3875	1072.9420

Tabla 15 Registro de punto GPS2 instalado

AUX-1 TRAMO 2



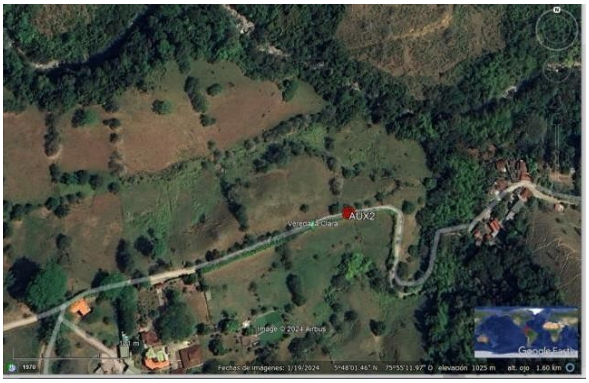


Coordenadas Magna Sirgas Origen Nacional
Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
AUX-1	2199708.162	4676694.760	1036.996

Tabla 16 Registro de punto AUX-2 instalado

AUX-2 TRAMO 2





Coordenadas Magna Sirgas Origen Nacional
Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
AUX-2	2199737.967	4676787.086	1030.530

Tabla 17 Registro de punto AUX 1 instalado

8.3 REGISTRO PUNTOS INSTALADOS TRAMOS 3

GPS1 TRAMO 3



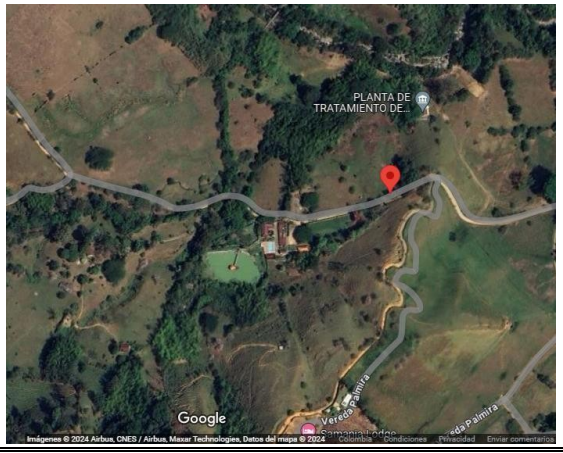


Coordenadas Magna Sirgas Origen Nacional
Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
GPS-1	2199607.4668	4676062.3746	1068.8182

TABLA 17 Registro de punto GPS1-T1 instalado

GPS2 TRAMO 3





Coordenadas Magna Sirgas Origen Nacional
Ubicada en el municipio de Hispania, Antioquia

PUNTO	NORTE	ESTE	COTA
GPS-2	2199653.2778	4676201.3875	1072.9420

TABLA 18 Registro de punto GPS2-T1 instalado

9. CARTERA TOPOGRAFICA

9.1 TRAMO 1- SECTOR EL GUASQUIAN

ANFE
SOLUCIONES EN LA INGENIERIA
INGENIERÍA - ARQUITECTURA - TOPOGRAFÍA - AMBIENTE

PROYECTO:	TRAMO 6 VEREDA LA PALMIRA SECTOR VILLA DEL LAGO
ACTIVIDAD:	LEVANTAMIENTO TOPOGRAFICO
ELABORÓ:	JAVIER SANCHEZ

PARAMETROS INICIALES					
PUNTO	NORTE	ESTE	ELEVACION	CODIGO	OBSERVACION
1	2199777.9308m	4677376.1634m	1028.379m	BASE	
11	2199777.9408m	4677376.1634m	1026.461m	GPS-1	
12	2199791.8840m	4677445.1604m	1026.955m	GPS-2	
101	2199804.8467m	4677499.7492m	1021.508m	VIA EXI	
102	2199810.4091m	4677499.4069m	1021.463m	VIA EXI	
103	2199807.6462m	4677499.3526m	1021.503m	VIA EXI	
104	2199808.5653m	4677501.7627m	1021.369m	PZ	
105	2199807.4860m	4677514.3064m	1020.542m	VIA EXI	
106	2199810.1159m	4677514.4186m	1020.628m	VIA EXI	
107	2199812.9174m	4677514.8410m	1020.625m	VIA EXI	
108	2199806.3322m	4677514.2010m	1020.801m	AND	
109	2199806.9552m	4677514.9827m	1020.766m	ACOMETIDA	
110	2199806.9540m	4677511.8967m	1020.854m	GAS	
111	2199806.8907m	4677511.2907m	1020.877m	GAS	
112	2199807.0053m	4677512.4308m	1020.842m	GAS	
113	2199810.3880m	4677497.0279m	1022.034m	GAS	
114	2199810.6023m	4677497.6192m	1022.058m	GAS	
115	2199810.2499m	4677496.3077m	1022.078m	GAS	
116	2199811.4967m	4677497.2602m	1023.202m	TALUD	
117	2199803.6397m	4677499.7907m	1021.727m	AND	
118	2199803.6973m	4677500.0748m	1021.528m	GAS	
119	2199803.4551m	4677499.3815m	1021.732m	GAS	
120	2199803.9204m	4677499.2020m	1021.749m	GAS	
121	2199804.1279m	4677502.0463m	1021.569m	ALC	
122	2199802.5459m	4677501.2584m	1021.344m	ALC	
123	2199802.5529m	4677501.2464m	1020.993m	ALC	
124	2199802.6499m	4677501.2625m	1020.591m	ALC	
125	2199803.2916m	4677501.4883m	1020.462m	ALC	
126	2199803.4356m	4677501.5035m	1020.111m	ALC	
127	2199804.3130m	4677500.3095m	1020.460m	ALC	
128	2199803.9287m	4677499.7141m	1020.716m	ALC	
129	2199803.8529m	4677499.5520m	1021.090m	ALC	
130	2199803.3043m	4677499.2953m	1021.440m	ALC	
131	2199802.9993m	4677498.4689m	1021.815m	LIND	
132	2199803.5014m	4677499.1385m	1021.744m	AND	
133	2199804.3388m	4677498.0026m	1021.807m	AND	
134	2199804.0429m	4677502.8592m	1021.553m	POT	
135	2199799.9117m	4677488.2022m	1022.708m	LIND	
136	2199800.4039m	4677488.0738m	1022.729m	NVL	
137	2199800.5410m	4677487.9789m	1022.452m	BV	
138	2199802.7952m	4677486.9977m	1022.469m	BV	
139	2199805.0573m	4677486.1264m	1022.940m	BV	
140	2199807.0868m	4677485.6559m	1024.257m	NVL	
141	2199795.7546m	4677475.1641m	1024.218m	LIND	
142	2199796.0816m	4677475.1025m	1023.904m	BV	
143	2199797.6246m	4677474.2814m	1023.952m	BV	
144	2199798.8317m	4677473.4248m	1024.170m	BV	
145	2199800.6358m	4677472.5050m	1025.390m	NVL	
146	2199800.9997m	4677470.1495m	1026.762m	LIND	
147	2199799.2830m	4677468.2574m	1026.130m	LIND	
148	2199798.4230m	4677466.6003m	1025.488m	NVL	
149	2199797.3109m	4677465.8150m	1025.159m	NVL	
150	2199797.7641m	4677464.8095m	1025.307m	NVL	
151	2199800.1367m	4677466.8224m	1026.080m	NVL	
152	2199801.3631m	4677468.1559m	1026.629m	NVL	
153	2199801.5807m	4677467.6452m	1027.418m	LIND	
154	2199799.1047m	4677462.7232m	1026.933m	LIND	
155	2199797.5392m	4677463.1153m	1026.388m	NVL	
156	2199796.3150m	4677463.2868m	1025.215m	BV	

157	2199794.0573m	4677463.8170m	1025.156m	BV	
158	2199792.6769m	4677464.1434m	1025.215m	BV	
159	2199792.2250m	4677464.1368m	1025.766m	LIND	
160	2199789.9917m	4677455.2801m	1026.403m	LIND	
161	2199790.4408m	4677455.1766m	1026.064m	BV	
162	2199791.9483m	4677454.7575m	1026.083m	BV	
163	2199793.4199m	4677454.3173m	1026.180m	BV	
164	2199794.7270m	4677454.2598m	1026.651m	NVL	
165	2199797.3985m	4677455.4491m	1027.183m	LIND	
166	2199797.1442m	4677454.8658m	1027.236m	PRM	
167	2199799.8690m	4677454.2531m	1027.810m	PRM	
168	2199794.8357m	4677447.9180m	1027.385m	PRM	
169	2199797.1576m	4677447.1718m	1027.915m	PRM	
170	2199796.2413m	4677444.1037m	1027.960m	PRM	
171	2199794.3395m	4677444.7644m	1027.464m	PRM	
172	2199794.0875m	4677444.7241m	1027.492m	ACCESO	
173	2199792.4556m	4677443.8291m	1027.131m	ACCESO	
174	2199791.0038m	4677442.8633m	1026.945m	ACCESO	
175	2199792.6512m	4677449.9693m	1026.634m	ACCESO	
176	2199793.5113m	4677449.0264m	1027.041m	ACCESO	
177	2199794.6376m	4677448.0037m	1027.279m	ACCESO	
178	2199792.7777m	4677447.0625m	1026.955m	CJNG	
179	2199792.2747m	4677447.0839m	1026.838m	CJNG	
180	2199792.2001m	4677446.6918m	1026.909m	CJNG	
181	2199792.7043m	4677446.5384m	1027.017m	CJNG	
182	2199793.3892m	4677444.1892m	1027.288m	POT	
183	2199787.8032m	4677446.6674m	1026.636m	POT	
184	2199787.3826m	4677442.2149m	1027.003m	LIND	
185	2199787.7757m	4677442.1164m	1026.897m	BV	
186	2199789.4048m	4677441.2024m	1026.975m	BV	
187	2199790.6441m	4677440.9459m	1027.086m	BV	
188	2199791.7634m	4677440.6932m	1027.296m	NVL	
189	2199792.4196m	4677440.5870m	1027.409m	NVL	
190	2199792.6438m	4677440.4173m	1027.919m	NVL	
191	2199792.8879m	4677440.3246m	1027.943m	PRM	
192	2199790.3844m	4677432.5056m	1027.915m	PRM	
193	2199790.1881m	4677432.7083m	1027.547m	NVL	
194	2199789.3959m	4677432.8714m	1027.458m	BV	
195	2199787.9197m	4677433.0956m	1027.323m	BV	
196	2199785.9703m	4677433.3772m	1027.370m	BV	
197	2199785.4453m	4677433.4146m	1027.412m	LIND	
198	2199794.9388m	4677431.3521m	1028.282m	PRM	
199	2199790.0911m	4677431.9152m	1027.510m	ACCESO	
200	2199789.8272m	4677427.7259m	1027.501m	ACCESO	
201	2199783.5729m	4677425.4553m	1027.488m	ACCESO	
202	2199784.0805m	4677428.2579m	1027.431m	ACCESO	
203	2199784.2361m	4677428.5791m	1027.402m	LIND	
204	2199783.6975m	4677424.9714m	1027.581m	LIND	
205	2199788.8501m	4677418.7677m	1027.781m	LIND	
206	2199787.4207m	4677419.0469m	1027.330m	BV	
207	2199785.6296m	4677419.1558m	1027.261m	BV	
208	2199784.0393m	4677419.3628m	1027.440m	BV	
209	2199783.0451m	4677419.5626m	1027.343m	LIND	
210	2199781.6322m	4677408.7539m	1027.695m	LIND	
211	2199782.2373m	4677408.6686m	1027.777m	NVL	
212	2199782.6414m	4677408.6271m	1027.601m	BV	
213	2199784.0588m	4677408.2409m	1027.502m	BV	
214	2199785.4980m	4677408.1086m	1027.570m	BV	
215	2199788.1139m	4677407.4058m	1028.082m	PRM	
216	2199790.0325m	4677411.8181m	1028.007m	PRM	
217	2199790.4375m	4677411.7796m	1028.002m	PRM	
218	2199787.5266m	4677413.3611m	1027.719m	LIND	
219	2199790.1368m	4677412.4052m	1028.087m	LIND	
220	2199781.0474m	4677405.2812m	1027.880m	LIND	
221	2199780.0611m	4677404.7150m	1027.945m	LIND	
222	2199779.5951m	4677400.6194m	1028.064m	LIND	
223	2199781.2923m	4677400.4465m	1027.864m	NVL	

224	2199781.4445m	4677400.3277m	1027.440m	BV	
225	2199782.7999m	4677399.9503m	1027.314m	BV	
226	2199784.3782m	4677399.7412m	1027.290m	BV	
227	2199784.6522m	4677399.7336m	1027.543m	NVL	
228	2199786.6929m	4677399.1480m	1027.661m	PRM	
229	2199788.1331m	4677403.1048m	1027.841m	PRM	
230	2199786.6352m	4677403.8180m	1027.876m	PRM	
231	2199786.9235m	4677402.7533m	1028.089m	POT	
232	2199785.8740m	4677395.7741m	1027.222m	PRM	
233	2199787.1935m	4677395.3277m	1027.696m	PRM	
234	2199783.2875m	4677385.4969m	1026.755m	PRM	
235	2199783.3605m	4677384.6550m	1026.730m	ACOMETIDA	
236	2199783.4301m	4677384.9741m	1026.745m	ACOMETIDA	
237	2199782.9853m	4677383.9995m	1026.803m	POT	
238	2199784.7993m	4677384.7817m	1026.790m	PRM	
239	2199784.6838m	4677383.5766m	1026.852m	PRM	
240	2199782.8585m	4677383.7914m	1026.757m	PRM	
241	2199782.6953m	4677383.1902m	1026.874m	ACCESO	
242	2199781.4770m	4677379.2987m	1026.711m	ACCESO	
243	2199781.4325m	4677378.8796m	1026.631m	PRM	
244	2199781.1364m	4677378.9743m	1026.634m	POT	
245	2199782.5638m	4677378.6340m	1026.707m	PRM	
246	2199781.4070m	4677378.4756m	1026.488m	ACCESO	
247	2199780.1303m	4677374.0991m	1026.360m	ACCESO	
248	2199779.9808m	4677373.6909m	1026.434m	PRM	
249	2199781.2945m	4677373.1605m	1026.403m	PRM	
250	2199779.6606m	4677373.8425m	1026.384m	PRM	
251	2199779.0804m	4677374.8438m	1026.371m	ACCESO	
252	2199777.8415m	4677373.9273m	1026.402m	ACCESO	
253	2199778.5125m	4677373.1111m	1026.443m	PRM	
254	2199777.7266m	4677373.8771m	1026.394m	PRM	
255	2199769.8463m	4677369.9646m	1026.318m	PRM	
256	2199769.7314m	4677369.9044m	1026.324m	ACCESO	
257	2199770.3167m	4677368.8431m	1026.149m	PRM	
258	2199767.2380m	4677367.7764m	1026.155m	ACCESO	
259	2199767.1038m	4677367.9392m	1026.162m	PRM	
260	2199766.6858m	4677367.9047m	1026.286m	PRM	
261	2199766.9548m	4677367.1190m	1026.112m	PRM	
262	2199766.4822m	4677367.6035m	1026.173m	LIND	
263	2199770.2139m	4677369.4800m	1026.340m	ACOMETIDA	
264	2199782.9271m	4677384.1745m	1026.733m	ACCESO	
265	2199783.2357m	4677385.2878m	1026.654m	ACCESO	
266	2199778.2037m	4677392.6987m	1027.945m	LIND	
267	2199779.1001m	4677392.3548m	1027.533m	NVL	
268	2199779.9185m	4677392.0368m	1026.938m	BV	
269	2199781.7700m	4677391.6751m	1026.998m	BV	
270	2199783.6924m	4677391.2894m	1027.048m	BV	
271	2199774.3414m	4677382.2500m	1027.414m	LIND	
272	2199775.0187m	4677382.0449m	1026.818m	NVL	
273	2199775.9203m	4677381.5219m	1026.636m	BV	
274	2199778.0444m	4677380.5865m	1026.440m	BV	
275	2199780.4370m	4677379.3274m	1026.595m	BV	
276	2199774.1388m	4677372.0628m	1026.363m	PRM	
277	2199773.7102m	4677372.5103m	1026.359m	BV	
278	2199772.4060m	4677374.3107m	1026.309m	BV	
279	2199770.8117m	4677376.2617m	1026.278m	BV	
280	2199770.5854m	4677376.5075m	1026.629m	NVL	
281	2199769.6513m	4677377.3883m	1027.348m	LIND	
282	2199763.5463m	4677374.0639m	1027.331m	LIND	
283	2199763.7261m	4677373.4681m	1027.118m	NVL	
284	2199764.3358m	4677372.0519m	1026.144m	BV	
285	2199765.0032m	4677370.0747m	1026.163m	BV	
286	2199765.5383m	4677368.3613m	1026.191m	BV	
287	2199765.8165m	4677367.3647m	1026.297m	LIND	
288	2199756.0727m	4677372.0768m	1027.577m	NVL	
289	2199756.1949m	4677371.0940m	1026.239m	BV	
290	2199756.6313m	4677368.2905m	1025.975m	BV	

291	2199757.0941m	4677366.0171m	1025.933m	BV	
292	2199757.2819m	4677365.3353m	1026.150m	LIND	
293	2199746.6363m	4677371.6304m	1027.353m	NVL	
294	2199747.0978m	4677370.3529m	1025.891m	NVL	
295	2199747.2382m	4677370.0301m	1025.579m	NVL	
296	2199747.5433m	4677369.1465m	1025.845m	BV	
297	2199748.2392m	4677366.7373m	1025.792m	BV	
298	2199749.2407m	4677364.6805m	1025.727m	BV	
299	2199749.5803m	4677364.1809m	1025.906m	LIND	
300	2199742.2079m	4677370.3360m	1026.880m	LIND	
301	2199742.9387m	4677368.8529m	1025.517m	NVL	
302	2199743.0149m	4677367.8520m	1025.912m	NVL	
303	2199743.7179m	4677366.9638m	1025.835m	BV	
304	2199739.6965m	4677368.1499m	1026.149m	LIND	
305	2199740.5054m	4677367.4339m	1025.301m	NVL	
306	2199740.8561m	4677366.8483m	1025.485m	NVL	
307	2199741.3200m	4677366.1189m	1025.912m	NVL	
308	2199742.0639m	4677365.3298m	1026.046m	BV	
309	2199741.1029m	4677363.6836m	1026.027m	BV	
310	2199740.1230m	4677364.4375m	1026.003m	NVL	
311	2199739.3314m	4677364.9775m	1025.194m	NVL	
312	2199738.9200m	4677365.3090m	1025.121m	NVL	
313	2199737.8092m	4677365.9326m	1025.973m	LIND	
314	2199737.9401m	4677365.2188m	1025.756m	AND	
315	2199738.2672m	4677365.1152m	1025.244m	AND	
316	2199738.8295m	4677364.8689m	1024.952m	AND	
317	2199739.3798m	4677364.6536m	1025.449m	AND	
318	2199738.7573m	4677363.3478m	1025.537m	ALC	
319	2199737.6640m	4677363.6605m	1025.727m	ALC	
320	2199738.3601m	4677363.5833m	1025.018m	ALC	
321	2199738.1747m	4677363.8471m	1025.383m	LOMO TUBO12	
322	2199738.3336m	4677363.1043m	1025.440m	LOMO TUBO12	
323	2199737.9803m	4677364.1949m	1025.274m	LOMO TUBO16	
324	2199738.9216m	4677363.9670m	1024.803m	LOMO TUBO24	
325	2199738.8040m	4677363.6349m	1024.029m	ALC	
326	2199739.3728m	4677363.0035m	1025.993m	NVL	
327	2199738.6486m	4677362.3117m	1025.945m	NVL	
328	2199737.4901m	4677362.7053m	1025.847m	LIND	
329	2199737.6584m	4677364.1455m	1025.769m	LIND	
330	2199737.1121m	4677360.2528m	1026.585m	LIND	
331	2199736.9856m	4677359.8496m	1026.612m	ACCESO	
332	2199737.7254m	4677354.2195m	1026.688m	ACCESO	
333	2199737.7439m	4677353.7996m	1027.039m	LIND	
334	2199737.9244m	4677353.3938m	1027.630m	LIND	
335	2199738.7513m	4677353.5238m	1027.564m	NVL	
336	2199738.6294m	4677354.2076m	1026.688m	NVL	
337	2199740.3655m	4677353.3527m	1026.442m	NVL	
338	2199741.6822m	4677353.5893m	1026.228m	BV	
339	2199740.4950m	4677357.0229m	1026.157m	BV	
340	2199739.9655m	4677359.9023m	1026.228m	BV	
341	2199741.4286m	4677352.4060m	1026.070m	LOMOTUBO8	
342	2199741.3169m	4677352.2099m	1025.842m	CUNET	
343	2199741.4253m	4677351.8790m	1025.911m	CUNET	
344	2199742.3435m	4677350.8801m	1026.200m	CUNET	
345	2199742.5619m	4677351.3484m	1026.089m	CUNET	
346	2199741.9809m	4677352.2207m	1025.898m	CUNET	
347	2199741.6125m	4677352.4873m	1025.910m	CUNET	
348	2199741.2140m	4677352.1238m	1026.610m	NVL	
349	2199742.1145m	4677350.8459m	1026.657m	NVL	
350	2199741.2503m	4677350.2058m	1027.521m	NVL	
351	2199740.1211m	4677352.0214m	1027.698m	NVL	
352	2199742.0773m	4677352.6588m	1026.260m	BV	
353	2199744.2482m	4677353.5765m	1026.056m	BV	
354	2199747.1918m	4677354.7000m	1026.122m	BV	
355	2199748.0813m	4677355.1361m	1026.564m	LIND	
356	2199742.8086m	4677357.3307m	1025.960m	BV	
357	2199745.9449m	4677357.9665m	1025.855m	BV	

358	2199747.3205m	4677358.2452m	1026.230m	LIND	
359	2199746.6179m	4677362.1053m	1025.557m	BV	
360	2199750.1671m	4677351.1906m	1027.116m	LIND	
361	2199749.2518m	4677350.6015m	1026.587m	BV	
362	2199747.3824m	4677349.3273m	1026.353m	BV	
363	2199745.5717m	4677348.2191m	1026.470m	BV	
364	2199745.4448m	4677348.1399m	1026.505m	CUNET	
365	2199745.1991m	4677347.8946m	1026.538m	CUNET	
366	2199746.8784m	4677345.9766m	1026.762m	CUNET	
367	2199744.3250m	4677347.1395m	1027.956m	NVL	
368	2199745.1612m	4677347.0126m	1027.287m	GAS	
369	2199745.7349m	4677346.4563m	1027.246m	GAS	
370	2199746.2177m	4677345.7848m	1027.706m	GAS	
371	2199750.9189m	4677349.6896m	1026.865m	GAS	
372	2199751.4443m	4677350.1762m	1027.080m	GAS	
373	2199751.7816m	4677350.7596m	1027.255m	GAS	
374	2199755.9453m	4677347.7797m	1027.302m	LIND	
375	2199756.0817m	4677347.4398m	1027.247m	ACCESO	
376	2199755.6639m	4677344.8043m	1027.351m	ACCESO	
377	2199755.3871m	4677342.1870m	1027.405m	ACCESO	
378	2199755.4334m	4677341.9120m	1027.594m	LIND	
379	2199755.1905m	4677341.8497m	1027.705m	BV	
380	2199752.0019m	4677346.4029m	1027.121m	BV	
381	2199750.2101m	4677345.4727m	1026.932m	BV	
382	2199748.2758m	4677344.0193m	1027.066m	BV	
383	2199747.0587m	4677343.3279m	1028.224m	NVL	
384	2199749.6588m	4677339.1260m	1028.861m	NVL	
385	2199750.5753m	4677339.5361m	1027.851m	BV	
386	2199752.6937m	4677340.8647m	1027.735m	BV	
387	2199757.3482m	4677339.6344m	1028.661m	LIND	
388	2199758.4672m	4677336.3417m	1028.373m	LIND	
389	2199756.9955m	4677336.0619m	1028.488m	PH EXIT	
390	2199754.6862m	4677335.5091m	1028.441m	PH EXIT	
391	2199753.0047m	4677335.0781m	1028.453m	PH EXIT	
392	2199751.8933m	4677334.5367m	1028.739m	NVL	
393	2199750.9615m	4677334.3706m	1030.271m	NVL	
394	2199752.8198m	4677325.1078m	1031.248m	NVL	
395	2199753.4657m	4677325.2206m	1030.226m	NVL	
396	2199754.8077m	4677325.1993m	1029.763m	PH EXIT	
397	2199756.8234m	4677325.4647m	1029.763m	PH EXIT	
398	2199759.0665m	4677325.3334m	1029.846m	PH EXIT	
399	2199760.1243m	4677325.4997m	1029.936m	LIND	
400	2199760.6947m	4677316.1044m	1031.478m	LIND	
401	2199759.6639m	4677316.0012m	1031.158m	PH EXIT	
402	2199757.4530m	4677315.8775m	1031.174m	PH EXIT	
403	2199755.4419m	4677315.9440m	1031.350m	PH EXIT	
404	2199754.3000m	4677315.9156m	1031.501m	NVL	
405	2199753.6897m	4677316.1439m	1032.638m	NVL	
406	2199760.8115m	4677310.5505m	1032.873m	LIND	
407	2199759.6826m	4677310.4502m	1032.264m	LIND	
408	2199759.5131m	4677305.0880m	1033.444m	LIND	
409	2199759.5454m	4677304.8770m	1033.577m	ACCESO	
410	2199759.5634m	4677303.2360m	1033.638m	ACCESO	
411	2199759.3368m	4677302.8657m	1033.894m	LIND	
412	2199759.3605m	4677305.6008m	1033.308m	PH EXIT	
413	2199759.1835m	4677305.5966m	1033.240m	PH EXIT	
414	2199758.6935m	4677305.6290m	1033.319m	PH EXIT	
415	2199757.7065m	4677305.5628m	1033.338m	PH EXIT	
416	2199756.7036m	4677305.5506m	1033.311m	PH EXIT	
417	2199755.6296m	4677305.5462m	1033.371m	PH EXIT	
418	2199755.0921m	4677305.0806m	1033.494m	PH EXIT	
419	2199754.0391m	4677305.0603m	1034.801m	NVL	
420	2199759.3380m	4677296.1447m	1035.373m	LIND	
421	2199759.1869m	4677296.1846m	1035.447m	PH EXIT	
422	2199759.0189m	4677296.2024m	1035.314m	PH EXIT	
423	2199758.4569m	4677296.2237m	1035.353m	PH EXIT	
424	2199757.4829m	4677296.1985m	1035.341m	PH EXIT	

425	2199756.5130m	4677296.1503m	1035.398m	PH EXIT	
426	2199755.4880m	4677296.1211m	1035.510m	PH EXIT	
427	2199754.9660m	4677296.1224m	1035.855m	NVL	
428	2199754.0870m	4677296.1214m	1036.390m	NVL	
429	2199753.4037m	4677295.5415m	1037.323m	NVL	
430	2199759.1087m	4677287.3585m	1037.344m	LIND	
431	2199758.9956m	4677287.4423m	1037.393m	PH EXIT	
432	2199758.8166m	4677287.4151m	1037.315m	PH EXIT	
433	2199758.4016m	4677287.3726m	1037.260m	PH EXIT	
434	2199757.3906m	4677287.4144m	1037.296m	PH EXIT	
435	2199756.4186m	4677287.4172m	1037.173m	PH EXIT	
436	2199755.1397m	4677287.2876m	1037.320m	NVL	
437	2199755.1417m	4677287.2856m	1037.320m	PH EXIT	
438	2199754.7188m	4677287.2771m	1037.832m	NVL	
439	2199753.8589m	4677287.1181m	1038.676m	NVL	
440	2199758.8758m	4677287.1982m	1037.337m	ACCESO	
441	2199759.0367m	4677277.4714m	1039.111m	ACCESO	
442	2199760.8852m	4677283.5896m	1038.233m	LIND	
443	2199762.4157m	4677279.9165m	1038.645m	LIND	
444	2199763.2889m	4677275.6115m	1038.583m	LIND	
445	2199760.2712m	4677274.5339m	1038.648m	LIND	
446	2199759.6164m	4677276.8861m	1038.869m	LIND	
447	2199759.0168m	4677277.3263m	1039.213m	LIND	
448	2199758.5539m	4677277.2998m	1039.285m	PH EXIT	
449	2199758.5494m	4677281.7788m	1038.661m	PH EXIT	
450	2199755.4812m	4677281.9680m	1038.376m	PH EXIT	
451	2199755.5382m	4677280.3481m	1038.818m	PH EXIT	
452	2199755.2061m	4677280.4177m	1039.274m	NVL	
453	2199754.0213m	4677281.0313m	1039.737m	NVL	
454	2199754.5508m	4677271.6179m	1041.675m	NVL	
455	2199755.5007m	4677271.7121m	1040.380m	PH EXIT	
456	2199757.1708m	4677271.5911m	1040.334m	PH EXIT	
457	2199759.1459m	4677271.5155m	1040.298m	PH EXIT	
458	2199759.5590m	4677271.4670m	1040.412m	LIND	
459	2199759.9293m	4677267.0644m	1041.255m	LIND	
460	2199759.2983m	4677267.1007m	1041.063m	PH EXIT	
461	2199757.2032m	4677267.1311m	1041.058m	PH EXIT	
462	2199755.5582m	4677267.1701m	1041.114m	PH EXIT	
463	2199754.3012m	4677267.1356m	1042.050m	NVL	
464	2199753.3372m	4677267.1514m	1042.825m	NVL	
465	2199760.0994m	4677262.9106m	1041.670m	PH EXIT	
466	2199760.2565m	4677262.7638m	1041.648m	LIND	
467	2199757.3019m	4677262.4462m	1041.863m	PH EXIT	
468	2199755.3250m	4677262.3468m	1042.002m	PH EXIT	
469	2199753.8343m	4677262.1250m	1043.206m	NVL	
470	2199755.8972m	4677258.9095m	1042.560m	PH EXIT	
471	2199755.4914m	4677258.7240m	1042.991m	NVL	
472	2199753.8538m	4677258.3871m	1043.052m	NVL	
473	2199757.6584m	4677258.7517m	1042.510m	PH EXIT	
474	2199760.0975m	4677258.6326m	1042.571m	PH EXIT	
475	2199760.2106m	4677258.5728m	1042.502m	LIND	
476	2199760.0568m	4677255.1496m	1043.272m	LIND	
477	2199759.9487m	4677255.1915m	1043.309m	PH EXIT	
478	2199758.0858m	4677255.1042m	1043.208m	PH EXIT	
479	2199756.5230m	4677254.9713m	1043.196m	PH EXIT	
480	2199756.2610m	4677254.9750m	1043.487m	NVL	
481	2199754.5714m	4677254.6729m	1043.832m	NVL	
482	2199754.2154m	4677254.6585m	1044.793m	NVL	
483	2199760.8578m	4677249.3416m	1044.412m	LIND	
484	2199760.7638m	4677249.3464m	1044.437m	PH EXIT	
485	2199758.6271m	4677249.1228m	1044.338m	PH EXIT	
486	2199757.2404m	4677248.8852m	1044.345m	PH EXIT	
487	2199756.8833m	4677248.9877m	1044.998m	NVL	
488	2199756.1805m	4677248.7749m	1045.891m	NVL	
489	2199761.8936m	4677247.0288m	1045.372m	LIND	
490	2199761.4836m	4677247.0593m	1044.911m	PH EXIT	
491	2199760.7930m	4677246.7575m	1044.910m	PH EXIT	

492	2199758.6424m	4677246.4079m	1044.890m	PH EXIT	
493	2199757.3608m	4677246.0383m	1044.920m	PH EXIT	
494	2199756.9528m	4677246.0638m	1045.291m	NVL	
495	2199755.8601m	4677245.7905m	1046.167m	NVL	
496	2199756.3459m	4677236.9381m	1048.114m	NVL	
497	2199756.9792m	4677236.7268m	1047.026m	PH EXIT	
498	2199759.1473m	4677236.5745m	1046.994m	PH EXIT	
499	2199760.8866m	4677236.3326m	1046.942m	PH EXIT	
500	2199762.0506m	4677236.3460m	1047.124m	LIND	
501	2199761.1679m	4677227.9079m	1048.654m	LIND	
502	2199760.2180m	4677227.7888m	1048.846m	PH EXIT	
503	2199758.4667m	4677228.0426m	1048.951m	PH EXIT	
504	2199756.1901m	4677228.4989m	1048.963m	PH EXIT	
505	2199755.5921m	4677228.5211m	1049.234m	NVL	
506	2199755.3300m	4677228.6168m	1050.317m	NVL	
507	2199757.6059m	4677217.9796m	1050.947m	LIND	
508	2199756.8487m	4677218.1417m	1050.937m	PH EXIT	
509	2199755.2419m	4677218.8057m	1051.095m	PH EXIT	
510	2199753.1451m	4677219.5062m	1051.218m	PH EXIT	
511	2199752.4058m	4677219.7323m	1051.688m	NVL	
512	2199752.2564m	4677220.0181m	1052.614m	NVL	
513	2199751.9092m	4677208.7217m	1052.843m	LIND	
514	2199751.6550m	4677208.8783m	1052.851m	PH EXIT	
515	2199749.9764m	4677210.1863m	1052.812m	PH EXIT	
516	2199748.2490m	4677211.3252m	1053.015m	PH EXIT	
517	2199747.5633m	4677211.9304m	1053.640m	NVL	
518	2199742.2822m	4677205.3870m	1055.910m	NVL	
519	2199743.1511m	4677204.6870m	1054.043m	PH EXIT	
520	2199742.3904m	4677205.2591m	1054.813m	NVL	
521	2199744.8876m	4677203.4621m	1053.945m	PH EXIT	
522	2199746.4299m	4677202.3710m	1053.876m	PH EXIT	
523	2199746.5890m	4677202.3072m	1053.820m	LIND	
524	2199743.0907m	4677194.2849m	1055.090m	LIND	
525	2199742.9298m	4677194.2207m	1055.094m	PH EXIT	
526	2199742.7768m	4677194.1656m	1054.996m	PH EXIT	
527	2199742.3138m	4677194.2220m	1055.139m	PH EXIT	
528	2199741.0255m	4677194.4244m	1055.194m	PH EXIT	
529	2199740.0705m	4677194.4623m	1055.317m	PH EXIT	
530	2199738.7674m	4677194.5157m	1055.425m	PH EXIT	
531	2199738.3715m	4677194.4692m	1055.468m	PH EXIT	
532	2199738.1314m	4677194.5079m	1055.549m	PH EXIT	
533	2199737.3383m	4677194.6279m	1055.898m	NVL	
534	2199736.0971m	4677194.7344m	1056.734m	NVL	
535	2199733.1947m	4677182.7099m	1055.066m	LOMO TUBO24	
536	2199735.1825m	4677184.5603m	1056.639m	NVL	
537	2199736.4209m	4677182.5508m	1056.749m	NVL	
538	2199745.2115m	4677183.7205m	1057.187m	PH FIN	
539	2199743.3139m	4677182.5752m	1057.058m	PH FIN	
540	2199740.8835m	4677181.2332m	1057.197m	PH FIN	
541	2199742.4336m	4677179.5261m	1057.616m	PH FIN	
542	2199742.6264m	4677179.6694m	1057.496m	PH FIN	
543	2199744.3926m	4677174.6055m	1058.320m	PH FIN	
544	2199744.5246m	4677174.5667m	1058.150m	PH FIN	
545	2199746.7521m	4677175.0484m	1058.352m	PH FIN	
546	2199749.5476m	4677175.4508m	1058.506m	PH FIN	
547	2199749.0139m	4677177.6491m	1058.290m	PH FIN	
548	2199748.8310m	4677177.5779m	1058.217m	PH FIN	
549	2199746.3272m	4677182.3189m	1057.449m	PH FIN	
550	2199746.3713m	4677182.2909m	1057.620m	PH FIN	
551	2199746.6852m	4677182.3733m	1057.620m	PH FIN	
552	2199746.6512m	4677182.3813m	1057.531m	PH FIN	
553	2199746.6434m	4677182.1572m	1057.642m	PH FIN	
554	2199746.2881m	4677182.4288m	1057.506m	ACCESO	
555	2199747.2009m	4677182.6169m	1057.444m	ACCESO	
556	2199746.3898m	4677185.9369m	1057.335m	ACCESO	
557	2199743.6457m	4677187.7186m	1056.545m	PRM	
558	2199745.0627m	4677186.8973m	1056.972m	PRM	

559	2199746.6545m	4677186.2453m	1057.394m	PRM	
560	2199743.5636m	4677187.8015m	1056.412m	ACCESO	
561	2199738.8718m	4677185.1618m	1056.644m	BV	
562	2199738.2039m	4677188.3210m	1056.267m	BV	
563	2199736.4359m	4677188.3658m	1056.502m	NVL	
564	2199734.6774m	4677187.9287m	1056.822m	NVL	
565	2199738.4012m	4677180.6932m	1057.314m	NVL	
566	2199740.4216m	4677180.3847m	1057.827m	NVL	
567	2199741.5527m	4677179.4791m	1058.600m	NVL	
568	2199743.0648m	4677176.9299m	1059.117m	NVL	
569	2199742.5402m	4677179.8673m	1057.438m	GAS	
570	2199742.1034m	4677179.7227m	1057.633m	GAS	
571	2199741.2248m	4677179.3907m	1058.538m	GAS	
572	2199747.2313m	4677182.2730m	1057.638m	GAS	
573	2199746.4468m	4677181.8890m	1057.578m	GAS	
574	2199746.8379m	4677360.4086m	1025.194m	ALC	
575	2199746.7481m	4677361.9035m	1025.267m	ALC	
576	2199747.8938m	4677362.9869m	1025.265m	ALC	
577	2199746.8852m	4677361.8467m	1023.886m	ALC	
578	2199746.7607m	4677360.5605m	1023.936m	ALC	
579	2199747.1178m	4677362.1279m	1023.959m	LOMO TUBO24	

9.2 TRAMO 2- SECTOR LA CLARA

ANFE
SOLUCIONES EN LA INGENIERIA
INGENIERÍA - ARQUITECTURA - TOPOGRAFÍA - AMBIENTE

PROYECTO:	TRAMO 2 VEREDA LA PALMIRA SECTOR VILLA DEL LAGO
ACTIVIDAD:	LEVANTAMIENTO TOPOGRAFICO
ELABORÓ:	JAVIER SANCHEZ

PARAMETROS INICIALES					
PUNTO	**NORTE**	**ESTE**	**ELEVACION**	**CODIGO**	**OBSERVACION**
11	2199607.4668m	4676062.3746m	1068.818m	GPS1	
12	2199653.3391m	4676201.5734m	1072.785m	GPS2	
1666	2199612.3544m	4676317.2036m	1063.051m	PH	
1667	2199616.9359m	4676319.3186m	1063.217m	PH	
1668	2199618.3237m	4676320.1729m	1063.385m	LIND	
1669	2199610.9496m	4676316.2073m	1064.779m	LIND	
1670	2199606.1274m	4676326.4563m	1063.065m	LIND	
1671	2199606.8351m	4676327.7065m	1062.073m	NVL	
1672	2199608.1470m	4676328.1778m	1061.722m	PH	
1673	2199613.0007m	4676329.4328m	1061.738m	PH	
1674	2199610.5469m	4676328.7663m	1061.626m	PH	
1675	2199614.4297m	4676329.6461m	1061.830m	LIND	
1676	2199613.5200m	4676332.7279m	1061.159m	LIND	
1677	2199613.4379m	4676333.3769m	1061.111m	ACCESO	
1678	2199613.2757m	4676338.9248m	1060.881m	ACCESO	
1679	2199613.1276m	4676339.5748m	1060.853m	LIND	
1680	2199612.4485m	4676339.8177m	1060.681m	BV	
1681	2199609.5016m	4676339.5470m	1060.692m	BV	
1682	2199607.1546m	4676339.3615m	1060.557m	BV	
1683	2199605.8016m	4676339.3573m	1060.918m	LIND	
1684	2199605.6052m	4676350.7122m	1060.432m	LIND	
1685	2199605.9852m	4676350.7373m	1060.357m	NVL	
1686	2199606.2302m	4676350.7643m	1060.059m	BV	
1687	2199608.8562m	4676350.7599m	1060.395m	BV	
1688	2199611.4212m	4676350.7275m	1060.325m	BV	
1689	2199611.6372m	4676350.7835m	1060.184m	LIND	
1690	2199612.1321m	4676351.0156m	1060.227m	LIND	
1691	2199612.7111m	4676351.1507m	1059.642m	TAL	
1692	2199612.4819m	4676361.4947m	1059.385m	TAL	
1693	2199611.6529m	4676361.5875m	1060.078m	LIND	
1694	2199611.2469m	4676361.6324m	1059.982m	BV	
1695	2199608.8258m	4676361.9459m	1060.098m	BV	
1696	2199606.2398m	4676362.1563m	1059.948m	BV	
1697	2199606.0187m	4676362.2003m	1060.221m	NVL	
1698	2199605.3637m	4676362.1952m	1060.122m	LIND	
1699	2199605.1921m	4676370.0631m	1059.578m	LIND	
1700	2199606.1131m	4676370.0833m	1059.993m	NVL	
1701	2199606.7011m	4676370.0394m	1059.983m	BV	
1702	2199609.3812m	4676369.6180m	1059.947m	BV	
1703	2199611.5442m	4676369.3995m	1059.819m	BV	
1704	2199612.0932m	4676369.3516m	1060.013m	NVL	
1705	2199612.5532m	4676369.3707m	1059.980m	LIND	
1706	2199613.4113m	4676369.1619m	1059.369m	TAL	
1707	2199612.6374m	4676373.1177m	1059.264m	ALC	
1708	2199612.4567m	4676371.8607m	1059.322m	ALC	
1709	2199612.5746m	4676372.4837m	1058.262m	LOMO TUBO	
1710	2199612.6239m	4676370.8677m	1059.691m	NVL	
1711	2199612.8439m	4676370.7938m	1058.861m	NVL	
1712	2199613.8808m	4676371.0870m	1059.133m	NVL	
1713	2199613.6757m	4676371.5789m	1058.634m	NVL	
1714	2199613.5296m	4676372.2279m	1058.118m	NVL	
1715	2199614.2265m	4676372.7631m	1058.104m	NVL	
1716	2199613.9134m	4676373.2860m	1059.175m	NVL	
1717	2199612.7644m	4676373.0137m	1058.280m	NVL	
1718	2199612.7367m	4676371.8497m	1058.191m	NVL	
1719	2199613.1243m	4676373.6218m	1058.647m	NVL	
1720	2199612.6783m	4676373.5627m	1059.008m	NVL	
1721	2199613.2273m	4676373.8768m	1059.263m	NVL	
1722	2199613.1511m	4676374.3628m	1059.909m	NVL	
1723	2199612.1772m	4676374.2516m	1059.822m	BV	
1724	2199613.5531m	4676374.7739m	1059.837m	LIND	
1725	2199614.3791m	4676374.6681m	1059.290m	TAL	

1726	2199612.5641m	4676374.7337m	1059.788m	BV	
1727	2199610.3539m	4676375.2972m	1059.962m	BV	
1728	2199608.1668m	4676375.8118m	1059.935m	BV	
1729	2199606.9008m	4676376.0115m	1059.791m	NVL	
1730	2199606.2928m	4676376.2014m	1059.807m	NVL	
1731	2199605.4698m	4676376.1912m	1059.210m	LIND	
1732	2199606.5181m	4676374.3684m	1059.545m	NVL	
1733	2199606.7922m	4676374.2635m	1059.736m	NVL	
1734	2199606.5124m	4676373.1424m	1059.700m	NVL	
1735	2199606.3735m	4676372.5364m	1059.716m	NVL	
1736	2199606.3717m	4676371.6974m	1059.644m	NVL	
1737	2199605.7551m	4676374.4772m	1059.000m	NVL	
1738	2199605.2172m	4676373.9271m	1059.059m	LIND	
1739	2199605.3873m	4676373.7982m	1058.908m	ALC	
1740	2199605.2695m	4676372.7991m	1058.916m	ALC	
1741	2199606.2715m	4676372.7184m	1058.398m	ALC	
1742	2199606.3023m	4676373.7074m	1058.445m	ALC	
1743	2199606.4874m	4676373.2544m	1058.523m	LOMO TUBO	
1744	2199608.8094m	4676387.3139m	1059.672m	LIND	
1745	2199609.6414m	4676387.2261m	1059.807m	NVL	
1746	2199611.0985m	4676386.6794m	1059.871m	BV	
1747	2199613.0036m	4676386.0908m	1060.087m	BV	
1748	2199615.2198m	4676385.3843m	1059.793m	BV	
1749	2199615.9978m	4676385.1454m	1059.896m	LIND	
1750	2199616.9449m	4676384.6636m	1059.169m	TAL	
1751	2199620.5624m	4676396.6514m	1059.669m	TAL	
1752	2199619.4603m	4676396.9202m	1059.929m	LIND	
1753	2199618.8233m	4676397.1960m	1059.831m	BV	
1754	2199616.4961m	4676398.1635m	1059.966m	BV	
1755	2199614.5689m	4676398.8641m	1059.875m	BV	
1756	2199613.4798m	4676399.4009m	1059.989m	NVL	
1757	2199612.7868m	4676399.6127m	1060.183m	LIND	
1758	2199620.1016m	4676400.1113m	1060.042m	GAS	
1759	2199620.4305m	4676400.9124m	1060.083m	GAS	
1760	2199620.8483m	4676401.7025m	1060.154m	GAS	
1761	2199624.4730m	4676412.3232m	1060.861m	LIND	
1762	2199623.9890m	4676412.5551m	1060.309m	BV	
1763	2199621.4248m	4676413.3836m	1060.356m	BV	
1764	2199619.4466m	4676414.1802m	1060.473m	BV	
1765	2199617.9455m	4676414.6678m	1061.292m	LIND	
1766	2199621.3553m	4676425.1216m	1061.846m	LIND	
1767	2199622.0644m	4676424.8097m	1061.450m	NVL	
1768	2199622.6494m	4676424.7569m	1061.034m	BV	
1769	2199625.1665m	4676424.0634m	1061.186m	BV	
1770	2199627.4577m	4676423.4779m	1061.104m	BV	
1771	2199628.1047m	4676423.3270m	1061.887m	LIND	
1772	2199630.7247m	4676432.4086m	1062.117m	LIND	
1773	2199630.1227m	4676432.6774m	1061.775m	BV	
1774	2199627.3735m	4676433.3389m	1061.761m	BV	
1775	2199625.0804m	4676434.0734m	1061.670m	BV	
1776	2199624.2902m	4676434.8282m	1062.043m	LIND	
1777	2199627.8407m	4676446.6500m	1062.024m	LIND	
1778	2199628.5707m	4676446.6491m	1061.856m	BV	
1779	2199630.4359m	4676445.8575m	1061.929m	BV	
1780	2199632.6810m	4676445.0500m	1061.963m	BV	
1781	2199633.4691m	4676444.8622m	1062.384m	NVL	
1782	2199634.0641m	4676444.8333m	1062.731m	LIND	
1783	2199637.2253m	4676453.2100m	1062.804m	LIND	
1784	2199636.3442m	4676453.6578m	1061.578m	BV	
1785	2199633.9260m	4676454.8663m	1061.521m	BV	
1786	2199631.7577m	4676455.8628m	1061.542m	BV	
1787	2199631.0297m	4676456.1116m	1061.755m	LIND	
1788	2199633.3413m	4676462.5531m	1061.362m	LIND	
1789	2199624.8586m	4676461.2183m	1061.098m	LIND	
1790	2199624.1168m	4676464.7892m	1060.640m	LIND	
1791	2199624.2529m	4676464.5342m	1060.505m	BV	
1792	2199624.8574m	4676461.9153m	1060.484m	BV	
1793	2199632.7321m	4676463.4620m	1060.884m	BV	
1794	2199634.0532m	4676462.8993m	1060.988m	BV	
1795	2199634.5055m	4676461.8394m	1061.161m	BV	
1796	2199633.8418m	4676460.0402m	1061.349m	BV	

1797	2199634.9644m	4676466.9455m	1060.773m	BV	
1798	2199624.2719m	4676464.3482m	1060.531m	BV	
1799	2199634.3441m	4676468.1424m	1060.909m	LIND	
1800	2199634.3501m	4676468.1414m	1060.909m	ACCESO	
1801	2199634.7849m	4676473.8824m	1060.786m	ACCESO	
1802	2199635.0748m	4676474.3005m	1060.629m	LIND	
1803	2199636.4940m	4676473.1348m	1060.874m	LIND	
1804	2199639.5898m	4676474.3015m	1060.943m	LIND	
1805	2199642.4612m	4676477.2821m	1060.861m	LIND	
1806	2199643.0692m	4676476.9672m	1060.495m	BV	
1807	2199642.7282m	4676477.0051m	1060.875m	NVL	
1808	2199641.2607m	4676474.9778m	1060.906m	NVL	
1809	2199639.5550m	4676473.1715m	1060.673m	BV	
1810	2199637.4391m	4676468.3170m	1060.779m	BV	
1811	2199636.4685m	4676466.5638m	1060.840m	BV	
1812	2199643.9612m	4676472.2534m	1060.627m	BV	
1813	2199646.1037m	4676470.1889m	1060.571m	BV	
1814	2199647.1748m	4676469.8211m	1061.649m	LIND	
1815	2199640.1413m	4676467.2876m	1060.930m	BV	
1816	2199643.0437m	4676465.4812m	1060.984m	BV	
1817	2199644.1718m	4676464.7175m	1061.721m	LIND	
1818	2199643.1768m	4676465.1392m	1061.299m	NVL	
1819	2199637.5026m	4676461.1860m	1061.151m	BV	
1820	2199639.5739m	4676459.8455m	1061.239m	BV	
1821	2199640.0759m	4676459.6146m	1062.036m	NVL	
1822	2199640.6011m	4676459.0657m	1062.505m	LIND	
1823	2199645.5442m	4676481.8487m	1060.533m	LIND	
1824	2199646.2662m	4676481.6999m	1060.264m	NVL	
1825	2199646.6983m	4676481.3260m	1059.829m	BV	
1826	2199649.1147m	4676479.6345m	1059.794m	BV	
1827	2199651.2589m	4676478.4230m	1059.729m	BV	
1828	2199652.2180m	4676477.9742m	1060.721m	LIND	
1829	2199657.1120m	4676487.1862m	1059.668m	LIND	
1830	2199656.6600m	4676487.3981m	1059.279m	NVL	
1831	2199656.1040m	4676487.6140m	1058.818m	BV	
1832	2199654.1028m	4676488.5716m	1058.684m	BV	
1833	2199651.5636m	4676489.3260m	1058.660m	BV	
1834	2199650.4205m	4676489.9098m	1059.796m	LIND	
1835	2199652.6274m	4676499.4173m	1058.487m	LIND	
1836	2199653.4084m	4676499.4974m	1057.672m	NVL	
1837	2199654.0704m	4676499.4686m	1057.358m	BV	
1838	2199656.3525m	4676498.8881m	1057.395m	BV	
1839	2199658.8586m	4676498.4146m	1057.385m	BV	
1840	2199659.4867m	4676498.3087m	1058.385m	NVL	
1841	2199660.0497m	4676498.1308m	1058.867m	LIND	
1842	2199662.1672m	4676509.7373m	1057.304m	LIND	
1843	2199661.4472m	4676509.7161m	1056.877m	NVL	
1844	2199660.7072m	4676509.7190m	1056.132m	BV	
1845	2199658.5181m	4676510.2105m	1056.195m	BV	
1846	2199656.0640m	4676510.6870m	1056.176m	BV	
1847	2199655.1020m	4676510.8108m	1056.837m	NVL	
1848	2199654.4890m	4676511.0427m	1057.181m	LIND	
1849	2199656.8486m	4676521.9432m	1056.129m	NVL	
1850	2199656.3596m	4676522.1501m	1056.233m	LIND	
1851	2199658.2406m	4676521.8515m	1054.869m	BV	
1852	2199660.6287m	4676521.5340m	1054.859m	BV	
1853	2199662.2998m	4676521.0313m	1054.930m	BV	
1854	2199663.1929m	4676520.8145m	1055.145m	NVL	
1855	2199663.8879m	4676520.7817m	1055.112m	LIND	
1856	2199665.7436m	4676531.4901m	1053.657m	LIND	
1857	2199665.1166m	4676531.6059m	1053.587m	NVL	
1858	2199664.6255m	4676531.6518m	1053.447m	BV	
1859	2199662.5234m	4676532.1664m	1053.644m	BV	
1860	2199660.5464m	4676532.5610m	1053.630m	BV	
1861	2199659.3803m	4676533.0137m	1054.202m	NVL	
1862	2199658.2962m	4676533.2645m	1054.633m	LIND	
1863	2199658.6689m	4676534.4585m	1054.358m	LIND	
1864	2199660.2759m	4676534.6189m	1053.449m	LIND	
1865	2199660.6699m	4676534.8080m	1053.218m	BV	
1866	2199663.1560m	4676534.2565m	1053.412m	BV	
1867	2199665.0071m	4676533.8849m	1053.456m	BV	

1868	2199666.2791m	4676533.7332m	1053.524m	LIND	
1869	2199668.3138m	4676544.4936m	1052.339m	LIND	
1870	2199667.4878m	4676544.7164m	1052.047m	BV	
1871	2199665.0036m	4676545.3529m	1052.186m	BV	
1872	2199662.5465m	4676545.7064m	1052.145m	BV	
1873	2199662.0595m	4676545.8883m	1052.149m	LIND	
1874	2199663.9171m	4676556.9217m	1051.133m	LIND	
1875	2199664.3052m	4676556.8188m	1051.053m	BV	
1876	2199665.6172m	4676556.6710m	1051.179m	BV	
1877	2199667.0033m	4676556.3673m	1051.235m	BV	
1878	2199669.1373m	4676556.1048m	1051.159m	BV	
1879	2199669.9094m	4676555.8170m	1050.999m	NVL	
1880	2199670.5634m	4676555.7031m	1051.082m	LIND	
1881	2199672.3024m	4676565.0055m	1050.513m	LIND	
1882	2199671.8664m	4676565.0334m	1050.455m	NVL	
1883	2199671.3644m	4676565.0443m	1050.299m	BV	
1884	2199668.6683m	4676565.3547m	1050.485m	BV	
1885	2199666.1822m	4676565.8952m	1050.418m	BV	
1886	2199665.5152m	4676566.0660m	1050.172m	LIND	
1887	2199661.6550m	4676567.0802m	1050.261m	LIND	
1888	2199661.8628m	4676567.8792m	1050.207m	ACCESO	
1889	2199663.9751m	4676575.6637m	1050.042m	ACCESO	
1890	2199665.8305m	4676583.3131m	1050.176m	ACCESO	
1891	2199667.0326m	4676582.6843m	1049.567m	ACCESO	
1892	2199664.6256m	4676578.2508m	1050.070m	ACCESO	
1893	2199665.6450m	4676567.0680m	1050.153m	CAJA	
1894	2199666.1130m	4676566.8971m	1050.225m	CAJA	
1895	2199665.9872m	4676566.2411m	1050.281m	CAJA	
1896	2199665.5611m	4676566.3320m	1050.216m	CAJA	
1897	2199669.0168m	4676577.1038m	1049.724m	BV	
1898	2199671.3200m	4676576.2823m	1049.572m	BV	
1899	2199673.3981m	4676576.0377m	1049.500m	BV	
1900	2199674.5421m	4676575.8429m	1049.576m	LIND	
1901	2199676.4431m	4676585.3753m	1048.810m	LIND	
1902	2199675.7090m	4676585.6862m	1048.461m	BV	
1903	2199672.5349m	4676586.2795m	1048.408m	BV	
1904	2199671.0218m	4676586.5432m	1048.521m	BV	
1905	2199670.1188m	4676586.6880m	1048.603m	LIND	
1906	2199671.3542m	4676589.6433m	1048.313m	ALC	
1907	2199671.5189m	4676590.9123m	1048.174m	ALC	
1908	2199670.9399m	4676591.0682m	1048.081m	ALC	
1909	2199670.5899m	4676591.0391m	1048.286m	ALC	
1910	2199670.4231m	4676589.8931m	1048.383m	ALC	
1911	2199670.6671m	4676589.7401m	1048.216m	ALC	
1912	2199671.3000m	4676590.3312m	1047.581m	LOMO TUBO	
1913	2199676.0793m	4676589.1823m	1048.507m	ALC	
1914	2199676.3150m	4676590.4073m	1048.463m	ALC	
1915	2199676.4201m	4676589.7503m	1047.185m	LOMO TUBO	
1916	2199676.6019m	4676590.6504m	1048.182m	NVL	
1917	2199677.1019m	4676590.6875m	1048.247m	NVL	
1918	2199676.2653m	4676589.0473m	1048.002m	NVL	
1919	2199676.6094m	4676588.4084m	1048.096m	NVL	
1920	2199676.8523m	4676589.0194m	1048.098m	NVL	
1921	2199676.9612m	4676589.2755m	1047.387m	NVL	
1922	2199677.0052m	4676589.4845m	1047.340m	NVL	
1923	2199677.1531m	4676589.7595m	1047.333m	NVL	
1924	2199677.2960m	4676590.4725m	1048.128m	NVL	
1925	2199677.5914m	4676588.4176m	1048.459m	NVL	
1926	2199677.8513m	4676589.0416m	1047.901m	NVL	
1927	2199677.9191m	4676590.1347m	1047.881m	NVL	
1928	2199678.0299m	4676591.0347m	1048.462m	NVL	
1929	2199677.4367m	4676591.7246m	1048.381m	LIND	
1930	2199678.5147m	4676596.5208m	1047.676m	LIND	
1931	2199678.1336m	4676596.7517m	1047.609m	NVL	
1932	2199677.4416m	4676596.9396m	1047.262m	BV	
1933	2199674.5995m	4676597.4300m	1047.268m	BV	
1934	2199672.5654m	4676597.6845m	1047.285m	BV	
1935	2199671.7914m	4676597.7424m	1047.439m	LIND	
1936	2199673.9541m	4676608.8328m	1046.302m	LIND	
1937	2199674.4970m	4676608.9769m	1046.048m	BV	
1938	2199676.4991m	4676608.5364m	1046.226m	BV	

1939	2199678.7403m	4676607.6768m	1046.229m	BV	
1940	2199679.3994m	4676607.4630m	1046.393m	NVL	
1941	2199680.6644m	4676607.3292m	1046.891m	LIND	
1942	2199683.2890m	4676618.5468m	1045.935m	LIND	
1943	2199682.5569m	4676618.7467m	1045.436m	NVL	
1944	2199681.3148m	4676619.2014m	1044.858m	BV	
1945	2199679.4987m	4676619.8680m	1044.943m	BV	
1946	2199677.2336m	4676620.4015m	1044.935m	BV	
1947	2199676.4097m	4676619.9953m	1045.015m	LIND	
1948	2199675.8085m	4676620.6422m	1045.463m	LIND	
1949	2199684.8402m	4676626.7831m	1044.432m	GAS	
1950	2199685.0251m	4676627.5572m	1044.368m	GAS	
1951	2199685.3579m	4676628.3673m	1044.345m	GAS	
1952	2199679.3892m	4676631.6950m	1044.665m	LIND	
1953	2199680.4593m	4676631.1862m	1043.531m	BV	
1954	2199682.5824m	4676630.4807m	1043.682m	BV	
1955	2199684.8936m	4676629.5092m	1043.644m	BV	
1956	2199686.8137m	4676629.0136m	1044.727m	LIND	
1957	2199685.9417m	4676629.1334m	1044.220m	NVL	
1958	2199683.3919m	4676642.2568m	1043.410m	LIND	
1959	2199684.0250m	4676642.0450m	1042.833m	NVL	
1960	2199684.6580m	4676641.8511m	1042.266m	BV	
1961	2199686.5141m	4676641.2485m	1042.478m	BV	
1962	2199688.3103m	4676640.5679m	1042.471m	BV	
1963	2199689.7734m	4676640.1732m	1043.193m	NVL	
1964	2199690.6815m	4676639.6124m	1044.051m	LIND	
1965	2199695.1290m	4676651.4503m	1042.726m	LIND	
1966	2199694.4149m	4676651.5772m	1042.149m	NVL	
1967	2199693.4309m	4676651.8700m	1041.317m	BV	
1968	2199691.0606m	4676653.2685m	1041.234m	BV	
1969	2199688.8985m	4676653.6370m	1041.271m	BV	
1970	2199688.1775m	4676653.7199m	1041.724m	NVL	
1971	2199687.7374m	4676653.8248m	1042.140m	LIND	
1972	2199691.8600m	4676665.2906m	1040.654m	LIND	
1973	2199692.3891m	4676664.8818m	1040.215m	NVL	
1974	2199693.0112m	4676664.5379m	1039.838m	BV	
1975	2199695.7654m	4676663.3245m	1040.325m	BV	
1983	2199697.8876m	4676662.5829m	1040.457m	BV	
1984	2199698.5166m	4676662.4961m	1041.182m	NVL	
1985	2199699.1126m	4676662.2772m	1041.547m	LIND	
1986	2199702.9204m	4676672.8930m	1040.290m	LIND	
1987	2199702.2514m	4676672.9879m	1039.910m	NVL	
1988	2199701.3223m	4676673.3657m	1039.090m	BV	
1989	2199699.0581m	4676674.2162m	1039.227m	BV	
1990	2199696.4840m	4676674.8556m	1038.814m	BV	
1991	2199695.6559m	4676675.0755m	1039.544m	LIND	
1992	2199699.1159m	4676684.4262m	1038.624m	LIND	
1993	2199699.8850m	4676684.1764m	1037.893m	BV	
1994	2199702.4972m	4676683.0039m	1038.165m	BV	
1995	2199704.3923m	4676682.3983m	1038.146m	BV	
1996	2199705.4764m	4676682.1846m	1038.684m	NVL	
1997	2199706.3264m	4676681.9407m	1039.224m	LIND	
1998	2199707.2977m	4676690.3259m	1037.415m	PH	
1999	2199708.0667m	4676689.9821m	1037.709m	NVL	
2000	2199709.1318m	4676689.6683m	1038.610m	LIND	
2001	2199704.8535m	4676691.1544m	1037.383m	PH	
2002	2199702.5483m	4676692.0979m	1037.460m	PH	
2003	2199702.0322m	4676692.3068m	1037.876m	LIND	
2004	2199705.5933m	4676701.3566m	1036.911m	LIND	
2005	2199706.1214m	4676700.9787m	1036.703m	PH	
2006	2199708.4336m	4676699.7242m	1036.684m	PH	
2007	2199710.6499m	4676698.6647m	1036.775m	PH	
2008	2199711.5620m	4676698.2709m	1036.979m	NVL	
2009	2199712.2940m	4676697.9560m	1037.680m	LIND	
2010	2199708.1617m	4676694.7601m	1036.996m	AUX1	
2011	2199737.9670m	4676787.0865m	1030.530m	AUX2	
439	2199665.0472m	4675704.3957m	1076.866m	NVL	
440	2199667.9267m	4675702.4415m	1076.310m	BV	
441	2199669.1751m	4675701.2629m	1077.389m	NVL	
442	2199682.0799m	4675712.5305m	1075.719m	BV	
443	2199684.0255m	4675713.8581m	1075.738m	BV	

444	2199685.9672m	4675715.2306m	1075.826m	BV	
445	2199687.4748m	4675716.6220m	1075.899m	NVL	
446	2199694.8389m	4675709.0191m	1077.374m	NVL	
447	2199694.3152m	4675707.7919m	1077.254m	NVL	
448	2199693.6436m	4675706.5908m	1076.880m	BV	
449	2199692.5879m	4675705.5975m	1077.048m	BV	
450	2199691.5192m	4675704.5352m	1077.009m	BV	
451	2199690.6745m	4675703.4629m	1077.348m	NVL	
452	2199689.9560m	4675701.6727m	1079.460m	LIND	
453	2199696.2735m	4675696.0845m	1081.495m	LIND	
454	2199701.8961m	4675690.6391m	1082.467m	LIND	
455	2199702.4998m	4675691.5582m	1080.980m	NVL	
456	2199703.9123m	4675693.2546m	1078.965m	BV	
457	2199704.7551m	4675694.0439m	1079.039m	BV	
458	2199706.2317m	4675695.6173m	1079.185m	BV	
459	2199707.3913m	4675696.7446m	1079.688m	LIND	
460	2199715.4306m	4675688.7799m	1080.997m	LIND	
461	2199714.4669m	4675687.6086m	1080.547m	BV	
462	2199713.3583m	4675686.0313m	1080.775m	BV	
463	2199712.3927m	4675684.6320m	1080.924m	BV	
464	2199711.3850m	4675683.8597m	1082.653m	NVL	
465	2199710.9113m	4675682.5516m	1083.461m	LIND	
466	2199719.4467m	4675674.0060m	1084.650m	LIND	
467	2199719.9455m	4675674.8151m	1083.607m	NVL	
468	2199720.9213m	4675675.5634m	1082.461m	BV	
469	2199722.5578m	4675677.1949m	1082.285m	BV	
470	2199723.5335m	4675678.3841m	1082.376m	BV	
471	2199725.4861m	4675679.9027m	1082.247m	LIND	
472	2199733.5489m	4675673.2529m	1083.766m	LIND	
473	2199732.1655m	4675671.2006m	1083.500m	BV	
474	2199731.4228m	4675670.1263m	1083.674m	BV	
475	2199729.8405m	4675667.5359m	1083.612m	BV	
476	2199727.7478m	4675666.4253m	1085.806m	LIND	
477	2199728.4692m	4675668.7525m	1083.945m	ALC	
478	2199727.3869m	4675669.6162m	1083.881m	ALC	
479	2199726.5742m	4675668.6100m	1083.429m	ALC	
480	2199727.5085m	4675667.7972m	1083.406m	ALC	
481	2199727.6771m	4675669.0363m	1082.435m	BATEA TUBO	
482	2199726.5331m	4675669.0530m	1084.312m	NVL	
483	2199726.8074m	4675667.9351m	1084.631m	NVL	
484	2199728.1385m	4675667.6734m	1084.270m	NVL	
485	2199727.6376m	4675667.3533m	1085.042m	NVL	
486	2199730.4779m	4675673.3011m	1083.273m	ALC	
487	2199731.3720m	4675672.8423m	1083.342m	ALC	
488	2199731.1380m	4675673.0503m	1082.032m	BATEA TUBO	
489	2199731.7968m	4675673.6365m	1083.024m	NVL	
490	2199730.2046m	4675674.4690m	1083.407m	NVL	
491	2199731.4416m	4675674.2794m	1082.081m	NVL	
492	2199730.9297m	4675673.9982m	1082.256m	NVL	
493	2199730.6553m	4675675.6121m	1083.116m	LIND	
494	2199741.9047m	4675666.8243m	1084.663m	LIND	
495	2199741.1800m	4675665.7811m	1084.976m	NVL	
496	2199740.6842m	4675665.0599m	1084.528m	BV	
497	2199739.7387m	4675663.3767m	1084.838m	BV	
498	2199738.3992m	4675661.5073m	1084.561m	BV	
499	2199737.0355m	4675660.6579m	1086.079m	NVL	
500	2199736.1107m	4675659.8917m	1086.946m	LIND	
501	2199750.9237m	4675659.7168m	1086.181m	LIND	
502	2199750.5829m	4675659.0307m	1086.415m	NVL	
503	2199749.9911m	4675658.3016m	1085.764m	BV	
504	2199749.3294m	4675657.1624m	1086.170m	BV	
505	2199748.3219m	4675655.3911m	1086.198m	BV	
506	2199747.1515m	4675653.2428m	1087.649m	NVL	
507	2199746.5479m	4675651.7806m	1088.703m	LIND	
508	2199762.4671m	4675651.1161m	1088.115m	LIND	
509	2199762.1093m	4675650.7020m	1088.141m	NVL	
510	2199761.9215m	4675649.7389m	1087.424m	BV	
511	2199761.9165m	4675649.7389m	1087.420m	BV	
512	2199761.1450m	4675648.1587m	1087.633m	BV	
513	2199760.0575m	4675646.1554m	1087.689m	BV	
514	2199758.9060m	4675644.4891m	1089.148m	NVL	

515	2199757.9253m	4675643.4288m	1090.178m	LIND	
516	2199773.4834m	4675642.8781m	1089.470m	LIND	
517	2199772.7299m	4675641.4119m	1089.121m	NVL	
518	2199773.0248m	4675641.7540m	1089.618m	NVL	
519	2199771.9583m	4675639.9867m	1089.269m	BV	
520	2199770.8518m	4675638.2154m	1089.422m	BV	
521	2199768.3944m	4675635.8737m	1091.403m	LIND	
522	2199783.7237m	4675635.0030m	1091.354m	LIND	
523	2199783.2808m	4675634.4389m	1091.297m	NVL	
524	2199782.8801m	4675633.4098m	1090.694m	BV	
525	2199782.2035m	4675631.9966m	1090.954m	BV	
526	2199780.4830m	4675630.3351m	1091.020m	BV	
527	2199778.2184m	4675628.7685m	1092.488m	LIND	
528	2199782.4836m	4675628.1397m	1091.318m	GAS	
529	2199783.2007m	4675627.6229m	1091.360m	GAS	
530	2199784.0869m	4675626.9511m	1091.544m	GAS	
531	2199796.8864m	4675625.2427m	1092.767m	LIND	
532	2199796.4237m	4675624.2416m	1092.768m	NVL	
533	2199795.8449m	4675623.4674m	1092.429m	BV	
534	2199794.9673m	4675622.1242m	1092.547m	BV	
535	2199793.9578m	4675620.2099m	1092.721m	BV	
536	2199792.3723m	4675618.3694m	1093.771m	LIND	
537	2199803.2547m	4675609.9805m	1095.103m	LIND	
538	2199803.9363m	4675611.4857m	1094.483m	NVL	
539	2199804.7989m	4675612.6419m	1093.928m	BV	
540	2199805.9135m	4675614.0392m	1093.912m	BV	
541	2199806.9003m	4675614.9215m	1094.081m	BV	
542	2199807.6480m	4675615.7887m	1094.433m	NVL	
543	2199808.6128m	4675616.5840m	1094.393m	LIND	
544	2199810.2208m	4675613.2284m	1094.549m	ALC	
545	2199811.5310m	4675612.3508m	1094.476m	ALC	
546	2199810.8899m	4675612.8386m	1093.372m	LOMO TUBO	
547	2199812.5479m	4675612.8161m	1094.642m	NVL	
548	2199811.5077m	4675613.5708m	1094.086m	NVL	
549	2199811.4006m	4675613.8138m	1093.353m	NVL	
550	2199810.9206m	4675613.9486m	1093.436m	NVL	
551	2199810.5396m	4675613.9605m	1094.258m	NVL	
552	2199809.9143m	4675614.7134m	1094.892m	NVL	
553	2199813.1758m	4675613.0903m	1094.603m	LIND	
554	2199811.7785m	4675614.3259m	1093.865m	LIND	
555	2199810.9453m	4675614.7726m	1094.068m	LIND	
556	2199811.6334m	4675614.3548m	1093.156m	LIND	
557	2199811.2674m	4675614.6147m	1093.175m	LIND	
558	2199810.4042m	4675615.1305m	1094.629m	LIND	
559	2199808.3321m	4675608.4589m	1094.615m	ALC	
560	2199807.9752m	4675607.9728m	1094.072m	ALC	
561	2199807.5843m	4675607.6067m	1094.411m	ALC	
562	2199806.5402m	4675608.1654m	1094.366m	ALC	
563	2199806.8730m	4675608.7645m	1094.137m	ALC	
564	2199807.3209m	4675609.1676m	1094.569m	ALC	
565	2199807.7360m	4675608.7317m	1093.497m	LOMO TUBO	
566	2199808.2476m	4675606.7019m	1095.201m	NVL	
567	2199808.7654m	4675607.4700m	1094.727m	NVL	
568	2199808.8913m	4675607.7701m	1094.796m	NVL	
569	2199809.2162m	4675608.2552m	1094.853m	NVL	
570	2199809.6811m	4675608.6293m	1094.520m	BV	
571	2199807.2734m	4675610.8046m	1094.170m	BV	
572	2199806.8758m	4675609.4755m	1094.885m	NVL	
573	2199805.7992m	4675608.0122m	1095.301m	LIND	
574	2199816.5017m	4675599.2572m	1096.422m	LIND	
575	2199816.8405m	4675599.8583m	1096.323m	NVL	
576	2199817.5852m	4675600.8175m	1095.284m	BV	
577	2199818.7748m	4675602.2338m	1095.320m	BV	
578	2199820.6244m	4675603.7414m	1095.450m	BV	
579	2199821.4772m	4675604.4636m	1095.967m	NVL	
580	2199822.6350m	4675605.2619m	1096.281m	LIND	
581	2199832.0922m	4675597.3156m	1097.408m	LIND	
582	2199830.9886m	4675595.8953m	1096.957m	NVL	
583	2199830.8818m	4675595.3952m	1096.250m	BV	
584	2199829.9313m	4675593.6170m	1096.343m	BV	
585	2199828.6956m	4675592.2756m	1096.352m	BV	

586	2199827.3631m	4675590.6792m	1097.627m	NVL	
587	2199838.2794m	4675582.4403m	1098.868m	LIND	
588	2199838.6052m	4675582.9904m	1098.517m	NVL	
589	2199839.0151m	4675583.5045m	1097.620m	BV	
590	2199840.0308m	4675584.4508m	1097.584m	BV	
591	2199841.4713m	4675586.2502m	1097.597m	BV	
592	2199842.2311m	4675586.9604m	1098.494m	NVL	
593	2199843.8109m	4675587.6359m	1098.802m	LIND	
594	2199852.2658m	4675580.8772m	1099.774m	LIND	
595	2199851.6973m	4675579.3071m	1099.994m	NVL	
596	2199851.2405m	4675578.5399m	1098.595m	BV	
597	2199849.6529m	4675577.1785m	1098.553m	BV	
598	2199848.7423m	4675575.7082m	1098.703m	BV	
599	2199848.2734m	4675575.1521m	1099.462m	NVL	
600	2199847.8306m	4675574.7390m	1099.876m	LIND	
601	2199858.6160m	4675565.8660m	1101.240m	LIND	
602	2199859.6467m	4675567.1523m	1100.117m	BV	
603	2199860.7274m	4675568.0566m	1100.126m	BV	
604	2199862.0950m	4675569.6440m	1100.065m	BV	
605	2199862.5949m	4675570.0981m	1100.680m	NVL	
606	2199863.6896m	4675571.1364m	1101.149m	LIND	
607	2199874.9252m	4675561.8086m	1102.388m	LIND	
608	2199874.3385m	4675560.6814m	1102.049m	NVL	
609	2199873.7958m	4675559.7833m	1101.401m	BV	
610	2199872.3661m	4675558.6289m	1101.464m	BV	
611	2199871.4805m	4675557.2166m	1101.512m	BV	
612	2199870.5189m	4675555.7313m	1102.588m	LIND	
613	2199880.8384m	4675546.8352m	1103.776m	LIND	
614	2199881.4882m	4675547.3674m	1103.298m	NVL	
615	2199882.1050m	4675548.1566m	1102.771m	BV	
616	2199883.2267m	4675549.1789m	1102.838m	BV	
617	2199884.6043m	4675550.8073m	1102.689m	BV	
618	2199885.4241m	4675551.3245m	1103.259m	NVL	
619	2199886.9559m	4675552.2120m	1103.797m	LIND	
620	2199893.4444m	4675536.1118m	1105.361m	LIND	
621	2199894.8319m	4675537.7352m	1104.384m	BV	
622	2199896.2966m	4675538.8416m	1104.399m	BV	
623	2199897.2461m	4675540.8588m	1104.245m	BV	
624	2199897.9669m	4675541.4170m	1105.056m	NVL	
625	2199898.7746m	4675542.5813m	1105.377m	LIND	
626	2199904.8519m	4675527.0680m	1106.362m	LIND	
627	2199905.5987m	4675527.9042m	1106.090m	NVL	
628	2199906.3684m	4675529.0484m	1105.609m	BV	
629	2199907.4600m	4675530.3167m	1105.545m	BV	
630	2199908.6365m	4675532.0040m	1105.573m	BV	
631	2199908.7904m	4675532.3781m	1105.822m	NVL	
632	2199909.7230m	4675533.7933m	1105.891m	LIND	
633	2199921.4357m	4675524.1656m	1107.584m	LIND	
634	2199920.8920m	4675523.3325m	1107.672m	NVL	
635	2199920.4252m	4675522.4883m	1106.736m	BV	
636	2199919.5067m	4675520.8951m	1106.751m	BV	
637	2199918.5072m	4675519.1288m	1106.860m	BV	
638	2199917.6833m	4675518.5686m	1107.309m	NVL	
639	2199917.1686m	4675517.6104m	1107.608m	LIND	
640	2199927.5420m	4675509.0153m	1108.391m	LIND	
641	2199928.0988m	4675509.5915m	1108.342m	NVL	
642	2199928.9116m	4675510.5267m	1107.843m	BV	
643	2199930.1932m	4675511.7671m	1107.765m	BV	
644	2199931.2928m	4675513.3514m	1107.830m	BV	
645	2199932.6133m	4675515.1568m	1108.453m	LIND	
646	2199941.3643m	4675508.0362m	1109.187m	LIND	
647	2199940.3065m	4675507.1709m	1108.760m	NVL	
648	2199940.1218m	4675506.1739m	1108.362m	BV	
649	2199939.1302m	4675504.6186m	1108.513m	BV	
650	2199938.1956m	4675503.3263m	1108.607m	BV	
651	2199937.4379m	4675502.2551m	1108.928m	LIND	
652	2199936.5162m	4675501.1649m	1109.183m	LIND	
653	2199954.5275m	4675496.5739m	1110.215m	LIND	
654	2199954.5238m	4675495.2749m	1109.986m	NVL	
655	2199954.0190m	4675494.8478m	1109.673m	BV	
656	2199953.0476m	4675492.6975m	1109.754m	BV	

657	2199951.8230m	4675491.2781m	1109.726m	BV	
658	2199950.7964m	4675489.8469m	1110.075m	LIND	
659	2199951.4363m	4675490.1800m	1110.259m	NVL	
660	2199958.7049m	4675484.3891m	1110.453m	GAS	
661	2199959.3520m	4675483.9043m	1110.573m	GAS	
662	2199960.0812m	4675483.2935m	1110.710m	GAS	
663	2199962.3711m	4675480.2421m	1110.976m	LIND	
664	2199962.9359m	4675480.9203m	1110.588m	BV	
665	2199965.0355m	4675482.3909m	1110.404m	BV	
666	2199966.6641m	4675483.6913m	1110.561m	BV	
667	2199967.7356m	4675485.3746m	1110.940m	LIND	
668	2199975.8417m	4675477.8529m	1111.919m	LIND	
669	2199973.7594m	4675475.3843m	1110.991m	BV	
670	2199972.1660m	4675473.3019m	1110.980m	BV	
671	2199971.7522m	4675472.4477m	1111.762m	NVL	
672	2199971.5124m	4675472.0687m	1111.692m	LIND	
673	2199975.2680m	4675476.8187m	1110.980m	BV	
674	2199983.1246m	4675471.1319m	1112.342m	LIND	
675	2199982.5211m	4675469.5448m	1111.755m	NVL	
676	2199982.3881m	4675469.3387m	1111.668m	BV	
677	2199981.0886m	4675467.7214m	1111.498m	BV	
678	2199979.9160m	4675466.1490m	1111.583m	BV	
679	2199979.3391m	4675465.7699m	1111.976m	NVL	
680	2199978.8032m	4675465.3237m	1112.078m	LIND	
681	2199986.6604m	4675457.8219m	1112.829m	LIND	
682	2199986.6712m	4675458.2959m	1112.691m	NVL	
683	2199986.9461m	4675458.8400m	1112.170m	BV	
684	2199988.3498m	4675459.9054m	1112.070m	BV	
685	2199989.7164m	4675461.3058m	1112.100m	BV	
686	2199990.5272m	4675462.0430m	1112.587m	NVL	
687	2199991.2139m	4675463.0392m	1112.927m	LIND	
688	2200001.7509m	4675452.2271m	1113.979m	LIND	
689	2200001.2691m	4675451.5310m	1113.587m	NVL	
690	2200000.5175m	4675450.3038m	1113.084m	BV	
691	2200000.0097m	4675449.3697m	1113.239m	BV	
692	2199998.2981m	4675448.0022m	1113.271m	BV	
693	2199997.1854m	4675446.8159m	1113.907m	LIND	
694	2200010.9329m	4675441.5557m	1115.061m	LIND	
695	2200010.1743m	4675440.3255m	1114.403m	BV	
696	2200009.1096m	4675439.0592m	1114.273m	BV	
697	2200007.5731m	4675437.3988m	1114.400m	BV	
698	2200006.3665m	4675436.0694m	1115.089m	BV	
699	2200019.7848m	4675431.3032m	1116.112m	LIND	
700	2200019.2891m	4675430.3651m	1115.651m	NVL	
701	2200018.4224m	4675429.1558m	1115.344m	BV	
702	2200017.2637m	4675428.1105m	1115.299m	BV	
703	2200015.8871m	4675426.7531m	1115.472m	BV	
704	2200015.0063m	4675425.9689m	1115.839m	LIND	
705	2200028.6286m	4675421.1957m	1117.268m	LIND	
706	2200027.8619m	4675420.3235m	1116.747m	NVL	
707	2200026.8331m	4675419.4642m	1116.395m	BV	
708	2200025.7844m	4675418.5269m	1116.605m	BV	
709	2200024.1998m	4675416.9394m	1116.679m	BV	
710	2200023.6011m	4675416.0233m	1116.975m	LIND	
711	2200037.8556m	4675410.6723m	1118.458m	LIND	
712	2200037.5138m	4675410.0062m	1117.944m	NVL	
713	2200036.5111m	4675408.7419m	1117.285m	BV	
714	2200035.4684m	4675407.7696m	1117.370m	BV	
715	2200034.3997m	4675406.5033m	1117.303m	BV	
716	2200033.7481m	4675405.3651m	1117.680m	NVL	
717	2200033.0292m	4675404.9779m	1117.796m	LIND	
718	2200043.3422m	4675394.3018m	1117.651m	LIND	
719	2200043.8623m	4675393.6490m	1117.382m	ACCESO	
720	2200044.7868m	4675395.5072m	1117.583m	BV	
721	2200046.1344m	4675396.9016m	1117.744m	BV	
722	2200047.0452m	4675397.9108m	1117.806m	BV	
723	2200048.6076m	4675399.7823m	1118.411m	LIND	
724	2200047.2042m	4675390.4469m	1117.373m	LIND	
725	2200046.7772m	4675390.7628m	1117.201m	ACCESO	
726	2200053.7349m	4675384.6317m	1117.802m	LIND	
727	2200053.9378m	4675385.0038m	1117.853m	BV	

728	2200054.5136m	4675385.5679m	1117.655m	BV	
729	2200055.3792m	4675387.0312m	1117.797m	BV	
730	2200057.5107m	4675388.6668m	1117.907m	BV	
731	2200058.9775m	4675389.6902m	1118.673m	LIND	
732	2200057.2492m	4675390.7947m	1118.050m	NVL	
733	2200057.0230m	4675391.2006m	1118.330m	NVL	
734	2200056.2987m	4675392.3104m	1118.096m	NVL	
735	2200055.3208m	4675391.8942m	1117.517m	NVL	
736	2200056.1312m	4675390.6034m	1117.671m	ALC	
737	2200055.3650m	4675391.2782m	1117.716m	ALC	
738	2200057.1340m	4675391.5077m	1117.712m	ALC	
739	2200056.3678m	4675392.1985m	1117.740m	ALC	
740	2200055.8329m	4675391.6563m	1117.259m	ALC	
741	2200055.9841m	4675391.0624m	1116.309m	BATEA TUBO	
742	2200052.9012m	4675386.9045m	1117.722m	ALC	
743	2200051.9080m	4675387.9062m	1117.825m	ALC	
744	2200052.2501m	4675387.3283m	1116.407m	LOMO TUBO	
745	2200051.5171m	4675387.4851m	1116.352m	NVL	
746	2200052.5783m	4675386.6734m	1116.411m	NVL	
747	2200052.7984m	4675386.2575m	1117.238m	NVL	
748	2200052.4855m	4675385.8364m	1117.617m	NVL	
749	2200051.1911m	4675387.4880m	1117.150m	NVL	
750	2200050.1692m	4675386.9057m	1117.253m	LIND	
751	2200052.3596m	4675385.7803m	1117.747m	LIND	
752	2200061.7434m	4675375.8070m	1117.975m	LIND	
753	2200062.2332m	4675376.2261m	1117.837m	BV	
754	2200063.6867m	4675378.0915m	1117.793m	BV	
755	2200066.0212m	4675379.9882m	1118.071m	BV	
756	2200066.4141m	4675380.3953m	1118.197m	LIND	
757	2200073.2823m	4675368.9422m	1118.303m	LIND	
758	2200072.6664m	4675368.4940m	1118.022m	BV	
759	2200071.2727m	4675367.4936m	1117.961m	BV	
760	2200069.4701m	4675366.1621m	1117.910m	BV	
761	2200069.0202m	4675365.7100m	1117.819m	LIND	
762	2200073.3893m	4675354.4652m	1118.340m	LIND	
763	2200074.3093m	4675354.6265m	1118.140m	BV	
764	2200076.3992m	4675355.0661m	1118.095m	BV	
765	2200078.7440m	4675355.8017m	1118.081m	BV	
766	2200080.1118m	4675356.4241m	1118.126m	LIND	
767	2200082.7533m	4675344.0069m	1118.519m	LIND	
768	2200081.8284m	4675343.4786m	1118.309m	BV	
769	2200079.5306m	4675342.8060m	1118.280m	BV	
770	2200077.3627m	4675342.3343m	1118.311m	BV	
771	2200076.4418m	4675341.9771m	1118.650m	LIND	
772	2200085.2381m	4675330.4826m	1118.750m	LIND	
773	2200083.4801m	4675330.2081m	1118.603m	BV	
774	2200081.8832m	4675330.0426m	1118.664m	BV	
775	2200079.7082m	4675329.9050m	1118.556m	BV	
776	2200078.2672m	4675329.8506m	1118.969m	LIND	
777	2200080.0523m	4675319.0141m	1119.410m	LIND	
778	2200080.8733m	4675319.1013m	1119.251m	NVL	
779	2200081.3772m	4675319.1435m	1118.849m	BV	
780	2200083.1233m	4675319.0700m	1119.027m	BV	
781	2200085.2672m	4675319.2596m	1118.968m	BV	
782	2200087.2961m	4675319.5601m	1119.319m	LIND	
783	2200081.4398m	4675313.7265m	1119.531m	GAS	
784	2200081.7110m	4675312.8876m	1119.410m	GAS	
785	2200081.7283m	4675311.6416m	1119.435m	GAS	
786	2200082.4568m	4675303.0328m	1119.855m	LIND	
787	2200083.6947m	4675303.2051m	1119.595m	BV	
788	2200085.0327m	4675303.3565m	1119.586m	BV	
789	2200086.7706m	4675303.5290m	1119.512m	BV	
790	2200088.6506m	4675303.6705m	1119.762m	NVL	
791	2200089.7235m	4675303.8338m	1120.180m	LIND	
792	2200090.1923m	4675290.3019m	1120.221m	NVL	
793	2200091.4232m	4675290.6883m	1121.158m	LIND	
794	2200089.1744m	4675290.1787m	1120.022m	BV	
795	2200087.0305m	4675289.8731m	1120.062m	BV	
796	2200085.4195m	4675289.6336m	1120.251m	BV	
797	2200084.4786m	4675289.4813m	1120.520m	LIND	
798	2200086.0637m	4675278.2528m	1121.398m	LIND	

799	2200086.8777m	4675278.4560m	1121.060m	NVL	
800	2200087.5186m	4675278.5062m	1120.711m	BV	
801	2200088.9086m	4675278.4976m	1120.728m	BV	
802	2200090.4956m	4675278.6510m	1120.789m	BV	
803	2200091.9095m	4675278.8624m	1121.026m	NVL	
804	2200093.1255m	4675279.0488m	1122.112m	LIND	
805	2200095.4939m	4675263.3284m	1123.495m	LIND	
806	2200095.2159m	4675263.2293m	1123.492m	NVL	
807	2200094.0750m	4675262.9340m	1122.157m	NVL	
808	2200093.1000m	4675262.8948m	1121.726m	BV	
809	2200091.4140m	4675262.8203m	1121.723m	BV	
810	2200089.8672m	4675262.2538m	1121.707m	BV	
811	2200088.9133m	4675262.0476m	1122.186m	LIND	
812	2200090.3980m	4675248.6820m	1122.936m	LIND	
813	2200091.0590m	4675248.8322m	1122.693m	NVL	
814	2200091.6289m	4675248.9253m	1122.290m	BV	
815	2200093.3650m	4675248.7948m	1122.322m	BV	
816	2200095.0429m	4675248.8883m	1122.482m	BV	
817	2200096.4139m	4675248.9887m	1123.309m	NVL	
818	2200097.3518m	4675249.3019m	1124.054m	LIND	
819	2200098.4079m	4675234.8092m	1125.067m	LIND	
820	2200097.2949m	4675234.9049m	1124.384m	NVL	
821	2200096.2549m	4675234.9406m	1123.861m	NVL	
822	2200095.3089m	4675234.8854m	1123.356m	BV	
823	2200093.9868m	4675235.0150m	1123.333m	BV	
824	2200092.0537m	4675235.3685m	1123.332m	BV	
825	2200091.2036m	4675235.8782m	1123.411m	LIND	
826	2200091.4488m	4675235.2753m	1123.803m	ALC	
827	2200091.1841m	4675233.9422m	1123.836m	ALC	
828	2200091.1069m	4675234.8072m	1122.654m	LOMO TUBO	
829	2200090.9168m	4675235.1131m	1123.103m	NVL	
830	2200090.7750m	4675234.5401m	1123.169m	NVL	
831	2200090.7939m	4675234.6371m	1122.332m	NVL	
832	2200090.6889m	4675234.9381m	1122.303m	NVL	
833	2200096.0193m	4675233.2406m	1123.714m	ALC	
834	2200096.2530m	4675234.5066m	1123.821m	ALC	
835	2200097.5091m	4675234.1030m	1123.672m	ALC	
836	2200097.3284m	4675233.0099m	1123.791m	ALC	
837	2200096.4494m	4675233.1597m	1123.286m	ALC	
838	2200097.4215m	4675232.6460m	1124.507m	NVL	
839	2200096.7086m	4675232.4558m	1123.655m	NVL	
840	2200096.1135m	4675232.6776m	1123.318m	NVL	
841	2200095.6845m	4675232.7995m	1123.640m	NVL	
842	2200095.2245m	4675232.8194m	1123.512m	BV	
843	2200088.3775m	4675221.8554m	1124.457m	LIND	
844	2200089.0747m	4675221.3446m	1124.010m	BV	
845	2200090.8718m	4675221.0011m	1123.936m	BV	
846	2200092.6379m	4675220.5916m	1124.021m	BV	
847	2200093.9990m	4675220.3420m	1124.976m	NVL	
848	2200086.4301m	4675209.1139m	1125.504m	LIND	
849	2200087.2121m	4675208.9641m	1124.905m	BV	
850	2200088.6593m	4675208.5665m	1124.727m	BV	
851	2200090.6403m	4675208.4091m	1124.852m	BV	
852	2200092.3433m	4675208.2295m	1125.776m	NVL	
853	2200086.8940m	4675195.0970m	1126.301m	LIND	
854	2200087.3730m	4675195.1271m	1125.789m	BV	
855	2200089.0351m	4675194.8096m	1125.660m	BV	
856	2200090.7930m	4675195.1161m	1125.683m	BV	
857	2200092.1349m	4675195.5875m	1126.194m	NVL	
858	2200092.6379m	4675195.5976m	1126.590m	NVL	
859	2200093.2268m	4675195.8748m	1126.562m	LIND	
860	2200089.4856m	4675182.4327m	1126.778m	LIND	
861	2200090.0675m	4675182.5669m	1126.339m	BV	
862	2200091.6914m	4675183.2344m	1126.217m	BV	
863	2200093.5492m	4675183.6559m	1126.273m	BV	
864	2200094.6422m	4675183.7362m	1126.775m	NVL	
865	2200095.7512m	4675183.6445m	1127.094m	LIND	
866	2200098.5853m	4675172.7523m	1127.755m	LIND	
867	2200097.8484m	4675172.5531m	1127.244m	NVL	
868	2200096.5435m	4675171.9417m	1126.690m	BV	
869	2200095.0057m	4675171.4163m	1126.686m	BV	

870	2200093.5439m	4675170.7629m	1126.701m	BV	
871	2200092.5600m	4675170.4206m	1127.247m	LIND	
872	2200097.5070m	4675156.0960m	1127.641m	LIND	
873	2200098.1249m	4675156.4052m	1127.265m	BV	
874	2200099.6288m	4675156.7646m	1127.275m	BV	
875	2200101.3967m	4675157.0881m	1127.331m	BV	
876	2200102.5685m	4675157.7194m	1127.821m	NVL	
877	2200103.6463m	4675158.3267m	1128.744m	LIND	
878	2200106.1783m	4675147.9344m	1127.578m	ALC	
879	2200106.6712m	4675148.0146m	1127.316m	ALC	
880	2200107.0276m	4675146.8127m	1127.350m	ALC	
881	2200106.4646m	4675146.8005m	1127.535m	ALC	
882	2200106.8715m	4675146.8996m	1126.610m	ALC	
883	2200106.5903m	4675147.8575m	1126.713m	ALC	
884	2200107.1987m	4675146.4437m	1128.015m	NVL	
885	2200107.8515m	4675146.9639m	1128.605m	NVL	
886	2200107.6562m	4675148.1158m	1128.388m	NVL	
887	2200106.8001m	4675148.3356m	1128.023m	NVL	
888	2200105.9240m	4675148.8813m	1127.943m	NVL	
889	2200106.9678m	4675146.1356m	1127.938m	NVL	
890	2200100.5499m	4675145.5458m	1127.813m	ALC	
891	2200099.5379m	4675145.5746m	1126.917m	NVL	
892	2200100.0140m	4675145.2037m	1127.464m	NVL	
893	2200099.2216m	4675146.7155m	1126.485m	NVL	
894	2200099.8936m	4675146.8307m	1126.793m	LOMO TUBO	
895	2200101.9571m	4675141.5202m	1128.048m	NVL	
896	2200102.5130m	4675141.5864m	1127.823m	BV	
897	2200104.1139m	4675142.1658m	1127.758m	BV	
898	2200105.9818m	4675142.4694m	1127.757m	BV	
899	2200107.7588m	4675142.5609m	1128.233m	NVL	
900	2200108.9258m	4675142.5492m	1129.050m	NVL	
901	2200110.2978m	4675128.2276m	1128.554m	LIND	
902	2200108.3519m	4675127.9030m	1128.101m	NVL	
903	2200106.2421m	4675127.1574m	1128.127m	BV	
904	2200104.3261m	4675126.9709m	1128.351m	BV	
905	2200103.3481m	4675126.9686m	1128.753m	LIND	
906	2200102.2382m	4675116.0933m	1129.931m	LIND	
907	2200102.7542m	4675115.9335m	1129.391m	NVL	
908	2200103.9403m	4675115.7948m	1128.828m	BV	
909	2200105.7404m	4675115.3333m	1129.069m	BV	
910	2200107.6544m	4675115.2228m	1129.199m	BV	
911	2200109.0074m	4675115.1762m	1129.450m	NVL	
912	2200109.6725m	4675115.0394m	1129.544m	LIND	
913	2200100.8663m	4675105.0559m	1130.320m	LIND	
914	2200101.4223m	4675104.9641m	1130.109m	NVL	
915	2200102.5803m	4675104.9144m	1129.367m	BV	
916	2200104.5754m	4675104.6010m	1129.555m	BV	
917	2200106.3385m	4675104.1055m	1129.575m	BV	
918	2200107.0416m	4675104.0527m	1130.604m	NVL	
919	2200107.5576m	4675103.7848m	1131.056m	LIND	
920	2200107.4916m	4675093.3608m	1132.202m	LIND	
921	2200106.8166m	4675093.3306m	1131.991m	NVL	
922	2200105.0947m	4675092.8641m	1130.568m	BV	
923	2200103.5248m	4675092.6377m	1130.477m	BV	
924	2200101.8548m	4675092.4622m	1130.401m	BV	
925	2200100.2229m	4675092.0577m	1130.957m	LIND	
926	2200102.7905m	4675079.4745m	1131.421m	LIND	
927	2200103.2874m	4675079.5766m	1131.191m	NVL	
928	2200103.9535m	4675079.4948m	1130.881m	BV	
929	2200105.6564m	4675079.7223m	1130.994m	BV	
930	2200107.5703m	4675080.0478m	1131.014m	BV	
931	2200109.3081m	4675080.5833m	1131.936m	NVL	
932	2200109.9721m	4675080.7565m	1132.790m	LIND	
933	2200105.1620m	4675067.0031m	1132.318m	LIND	
934	2200105.7779m	4675067.1083m	1131.940m	NVL	
935	2200106.3779m	4675067.1735m	1131.483m	BV	
936	2200108.4039m	4675067.0570m	1131.472m	BV	
937	2200110.2429m	4675067.2286m	1131.413m	BV	
938	2200111.5259m	4675067.3299m	1131.692m	NVL	
939	2200112.7257m	4675067.7463m	1132.547m	LIND	
940	2200106.8307m	4675057.1026m	1132.507m	LIND	

941	2200103.2955m	4675054.4346m	1132.939m	LIND	
942	2200103.3866m	4675053.8876m	1132.909m	ACCESO	
943	2200104.2078m	4675049.7829m	1133.019m	ACCESO	
944	2200104.3259m	4675049.3759m	1133.089m	LIND	
945	2200104.3289m	4675049.3859m	1133.104m	LIND	
946	2200108.8432m	4675048.2522m	1132.659m	LIND	
947	2200109.4310m	4675052.6333m	1131.980m	BV	
948	2200108.8327m	4675057.3692m	1131.817m	BV	
949	2200110.6526m	4675057.4927m	1131.887m	BV	
950	2200112.5285m	4675057.7602m	1131.830m	BV	
951	2200114.4554m	4675058.2137m	1132.671m	LIND	
952	2200109.4438m	4675046.1563m	1132.693m	GAS	
953	2200109.3316m	4675047.0003m	1133.007m	GAS	
954	2200109.5962m	4675044.8484m	1132.833m	GAS	
955	2200109.4278m	4675039.1883m	1133.687m	LIND	
956	2200110.0537m	4675039.3415m	1133.291m	NVL	
957	2200110.9437m	4675039.4208m	1132.668m	BV	
958	2200113.1356m	4675039.5844m	1132.651m	BV	
959	2200115.4296m	4675039.6930m	1132.544m	BV	
960	2200116.5476m	4675039.8583m	1133.096m	NVL	
961	2200117.2295m	4675039.9205m	1133.142m	LIND	
962	2200110.4624m	4675026.0796m	1134.132m	LIND	
963	2200111.6125m	4675025.7169m	1133.200m	ACCESO	
964	2200111.9311m	4675020.0590m	1132.960m	ACCESO	
965	2200111.7462m	4675019.6370m	1133.554m	LIND	
966	2200113.0413m	4675019.4033m	1132.472m	BV	
967	2200114.6204m	4675019.2348m	1132.478m	BV	
968	2200116.8725m	4675018.8254m	1132.617m	BV	
969	2200118.0025m	4675018.6327m	1133.245m	LIND	
970	2200107.4943m	4675008.5958m	1131.006m	LIND	
971	2200108.5035m	4675007.9951m	1130.763m	BV	
972	2200110.1898m	4675006.9455m	1130.884m	BV	
973	2200112.0591m	4675005.6881m	1130.915m	BV	
974	2200112.6792m	4675005.3412m	1131.055m	LIND	
975	2200098.3172m	4674998.3342m	1129.932m	LIND	
976	2200098.8164m	4674997.8313m	1129.533m	BV	
977	2200100.0977m	4674996.4847m	1129.343m	BV	
978	2200101.1733m	4674994.6290m	1129.402m	BV	
979	2200102.2695m	4674993.8493m	1129.420m	LIND	
980	2200094.1807m	4674993.0710m	1129.280m	BV	
981	2200092.1208m	4674989.1315m	1128.992m	BV	
982	2200091.2147m	4674985.8472m	1129.034m	BV	
983	2200090.6784m	4674979.8871m	1129.085m	BV	
984	2200092.9225m	4674979.3737m	1129.055m	BV	
985	2200095.0865m	4674979.6403m	1128.999m	BV	
986	2200095.6079m	4674985.3014m	1128.919m	BV	
987	2200093.3347m	4674985.8698m	1128.938m	BV	
988	2200096.4132m	4674987.8307m	1128.981m	BV	
989	2200094.3229m	4674988.6591m	1129.010m	BV	
990	2200098.3252m	4674991.4132m	1128.888m	BV	
991	2200096.7358m	4674992.8188m	1129.252m	BV	
992	2200094.2812m	4674994.7591m	1129.537m	LIND	
993	2200090.8306m	4674989.8181m	1129.007m	LIND	
994	2200089.6487m	4674985.8698m	1129.038m	LIND	
995	2200089.0125m	4674979.3186m	1129.082m	LIND	
996	2200098.8346m	4674989.8844m	1129.144m	M CONTEN	
997	2200099.1246m	4674989.8864m	1129.156m	M CONTEN	
998	2200097.7161m	4674977.2200m	1128.741m	M CONTEN	
999	2200097.9671m	4674977.2191m	1128.743m	M CONTEN	
1000	2200097.6626m	4674975.5260m	1127.915m	LIND	
1001	2200096.2407m	4674975.3596m	1128.754m	NVL	
1002	2200095.1106m	4674975.5073m	1129.106m	BV	
1003	2200096.2603m	4674983.8686m	1128.878m	NVL	
1004	2200093.1045m	4674975.7427m	1129.194m	BV	
1005	2200091.0135m	4674976.0682m	1129.255m	BV	
1006	2200089.3895m	4674975.8307m	1128.817m	LIND	
1007	2200087.8831m	4674977.4543m	1128.341m	M CONTEN	
1008	2200087.6971m	4674977.4232m	1128.317m	M CONTEN	
1009	2200086.7582m	4674984.2210m	1128.365m	M CONTEN	
1010	2200086.9542m	4674984.2270m	1128.344m	M CONTEN	
1011	2200087.6950m	4674981.0912m	1128.275m	NVL	

1012	2200088.0125m	4674986.6523m	1128.350m	NVL	
1013	2200087.0893m	4674987.3431m	1127.634m	NVL	
1014	2200088.5756m	4674989.8185m	1128.567m	NVL	
1015	2200089.2460m	4674991.7907m	1128.688m	NVL	
1016	2200098.1632m	4674966.2362m	1129.559m	LIND	
1017	2200097.0852m	4674966.1489m	1129.557m	BV	
1018	2200094.4223m	4674965.8431m	1129.632m	BV	
1019	2200092.6914m	4674965.6456m	1129.758m	BV	
1020	2200090.9534m	4674965.4451m	1129.890m	LIND	
1021	2200099.0928m	4674956.9044m	1130.829m	LIND	
1022	2200097.8929m	4674956.6791m	1130.712m	BV	
1023	2200096.0509m	4674956.5166m	1130.721m	BV	
1024	2200093.4000m	4674956.1898m	1130.587m	BV	
1025	2200091.8781m	4674956.1144m	1131.349m	LIND	
1026	2200096.6642m	4674944.9207m	1132.694m	LIND	
1027	2200096.1431m	4674945.1096m	1132.177m	BV	
1028	2200093.7067m	4674946.7309m	1132.179m	BV	
1029	2200091.6974m	4674947.6014m	1132.092m	BV	
1030	2200090.3473m	4674948.2540m	1132.670m	LIND	
1031	2200095.3527m	4674942.9684m	1132.984m	LIND	
1032	2200094.6497m	4674943.1132m	1132.762m	ACCESO	
1033	2200091.1492m	4674937.8962m	1133.543m	ACCESO	
1034	2200093.9407m	4674936.0570m	1134.152m	ACCESO	
1035	2200097.7738m	4674939.0331m	1134.014m	ACCESO	
1036	2200097.7105m	4674940.4180m	1133.968m	LIND	
1037	2200092.2114m	4674937.0525m	1133.874m	LIND	
1038	2200091.4853m	4674937.2873m	1133.601m	LIND	
1039	2200089.4101m	4674934.6387m	1135.053m	LIND	
1040	2200088.6240m	4674935.0135m	1134.592m	NVL	
1041	2200087.9388m	4674935.4763m	1134.042m	BV	
1042	2200086.4445m	4674936.7839m	1134.073m	BV	
1043	2200084.4830m	4674938.3883m	1134.257m	BV	
1044	2200084.0209m	4674938.7762m	1134.730m	NVL	
1045	2200083.4917m	4674939.5920m	1135.035m	LIND	
1046	2200083.5047m	4674925.4241m	1137.228m	LIND	
1047	2200082.5736m	4674925.6868m	1136.420m	NVL	
1048	2200081.9506m	4674925.7786m	1136.052m	BV	
1049	2200079.7513m	4674926.7610m	1136.117m	BV	
1050	2200077.3660m	4674927.8723m	1136.137m	BV	
1051	2200076.3769m	4674928.2851m	1136.830m	LIND	
1053	2199691.5539m	4674232.6491m	1180.935m	BV	
1054	2199691.9830m	4674232.1842m	1180.804m	LIND	
1055	2199690.8096m	4674233.6969m	1180.861m	BV	
1056	2199689.7753m	4674234.7266m	1180.700m	BV	
1057	2199689.1521m	4674235.5464m	1180.855m	LIND	
1058	2199695.2611m	4674235.6741m	1180.747m	BV	
1059	2199694.2397m	4674237.0529m	1180.673m	BV	
1060	2199693.1243m	4674238.4465m	1180.840m	BV	
1061	2199698.5389m	4674236.3831m	1180.868m	BV	
1062	2199699.9034m	4674234.3295m	1180.937m	BV	
1063	2199699.8342m	4674231.8014m	1181.187m	BV	
1064	2199699.7589m	4674229.2864m	1181.126m	BV	
1065	2199701.3410m	4674228.8559m	1181.356m	BV	
1066	2199702.8140m	4674228.7743m	1180.954m	BV	
1067	2199702.9560m	4674232.4643m	1180.819m	BV	
1068	2199701.2590m	4674232.2588m	1181.054m	BV	
1069	2199703.0387m	4674236.8263m	1180.727m	BV	
1070	2199696.4745m	4674234.0525m	1181.352m	LIND	
1071	2199698.0858m	4674233.1959m	1181.747m	LIND	
1072	2199698.7587m	4674229.7171m	1181.541m	LIND	
1073	2199706.2174m	4674241.4832m	1181.368m	LIND	
1074	2199703.3554m	4674241.4604m	1180.589m	BV	
1075	2199700.9452m	4674242.4017m	1180.455m	BV	
1076	2199698.5289m	4674243.4191m	1180.327m	BV	
1077	2199695.8215m	4674244.8513m	1181.068m	LIND	
1078	2199700.8497m	4674251.2517m	1179.860m	ALC	
1079	2199699.8948m	4674247.3364m	1180.242m	ALC	
1080	2199697.5118m	4674247.1568m	1179.777m	ALC	
1081	2199699.4705m	4674251.9943m	1180.270m	ALC	
1082	2199700.0679m	4674250.6025m	1179.271m	LOMO TUBO	
1083	2199699.0514m	4674252.1712m	1179.463m	NVL	

1084	2199699.3436m	4674251.6733m	1178.730m	NVL	
1085	2199699.1971m	4674249.8513m	1178.250m	NVL	
1086	2199697.5573m	4674248.9858m	1179.743m	NVL	
1087	2199705.3350m	4674250.2380m	1179.956m	ALC	
1088	2199705.3285m	4674248.4310m	1180.080m	ALC	
1089	2199706.5577m	4674247.6673m	1179.815m	ALC	
1090	2199706.6569m	4674250.7193m	1180.064m	ALC	
1091	2199706.8247m	4674251.2844m	1180.218m	LIND	
1092	2199706.1484m	4674248.8202m	1178.741m	BATEA TUBO	
1093	2199705.5185m	4674248.3530m	1179.973m	NVL	
1094	2199706.9614m	4674248.5874m	1180.218m	NVL	
1095	2199705.9878m	4674251.0512m	1180.039m	NVL	
1096	2199704.6754m	4674248.8218m	1180.020m	BV	
1097	2199702.8354m	4674248.9253m	1180.089m	BV	
1098	2199701.1892m	4674249.5618m	1180.077m	BV	
1099	2199707.2904m	4674259.3315m	1179.547m	BV	
1100	2199707.8664m	4674259.3487m	1179.904m	LIND	
1101	2199705.4603m	4674259.7370m	1179.425m	BV	
1102	2199703.4742m	4674260.1825m	1179.328m	BV	
1103	2199701.2200m	4674260.7498m	1180.006m	LIND	
1104	2199710.6690m	4674271.4605m	1179.284m	LIND	
1105	2199709.9660m	4674271.6293m	1179.040m	NVL	
1106	2199709.4910m	4674271.7091m	1178.595m	BV	
1107	2199707.9508m	4674272.2667m	1178.543m	BV	
1108	2199706.3807m	4674272.7623m	1178.570m	BV	
1109	2199705.4896m	4674272.9460m	1178.862m	NVL	
1110	2199704.6596m	4674273.0048m	1179.289m	LIND	
1111	2199707.5186m	4674283.5626m	1178.837m	LIND	
1112	2199708.3627m	4674283.2918m	1178.324m	NVL	
1113	2199709.0658m	4674283.0760m	1177.655m	BV	
1114	2199710.4790m	4674282.2044m	1177.665m	BV	
1115	2199712.1371m	4674281.9919m	1177.863m	BV	
1116	2199712.4871m	4674282.0360m	1178.340m	NVL	
1117	2199713.3851m	4674281.8792m	1178.576m	LIND	
1118	2199711.1875m	4674294.8946m	1177.692m	LIND	
1119	2199711.2924m	4674295.2336m	1177.566m	ACCESO	
1120	2199713.0553m	4674299.0461m	1177.238m	ACCESO	
1121	2199713.8843m	4674299.1974m	1177.343m	LIND	
1122	2199715.1115m	4674298.4267m	1176.635m	BV	
1123	2199717.0018m	4674297.3292m	1176.788m	BV	
1124	2199718.8951m	4674296.2308m	1176.785m	BV	
1125	2199719.2911m	4674296.0499m	1177.003m	NVL	
1126	2199719.9092m	4674295.7921m	1177.231m	LIND	
1127	2199727.0815m	4674305.2941m	1176.197m	LIND	
1128	2199726.5203m	4674306.1419m	1176.179m	NVL	
1129	2199726.0662m	4674306.5148m	1175.772m	BV	
1130	2199724.8309m	4674307.7344m	1175.861m	BV	
1131	2199723.2946m	4674308.8310m	1175.906m	BV	
1132	2199722.2214m	4674309.3777m	1176.335m	LIND	
1133	2199731.1593m	4674309.6242m	1176.217m	LIND	
1134	2199731.0072m	4674310.1132m	1176.267m	NVL	
1135	2199730.4510m	4674310.8620m	1175.347m	BV	
1136	2199729.2606m	4674312.2517m	1175.564m	BV	
1137	2199728.0482m	4674313.6833m	1175.533m	BV	
1138	2199727.2990m	4674314.3951m	1175.777m	LIND	
1139	2199734.8348m	4674311.5022m	1175.662m	LIND	
1140	2199734.4446m	4674312.2991m	1175.709m	NVL	
1141	2199733.9983m	4674313.3100m	1175.182m	BV	
1142	2199733.1189m	4674314.8498m	1175.908m	BV	
1143	2199732.1543m	4674316.7085m	1175.342m	BV	
1144	2199731.4071m	4674317.6473m	1175.714m	LIND	
1145	2199738.7752m	4674317.1274m	1181.411m	LIND	
1146	2199738.7713m	4674313.3614m	1178.969m	LIND	
1147	2199738.4359m	4674314.8663m	1178.197m	BV	
1148	2199737.5822m	4674317.0880m	1178.112m	BV	
1149	2199736.9357m	4674319.0918m	1177.311m	BV	
1150	2199748.3971m	4674321.2341m	1174.479m	LIND	
1151	2199748.8458m	4674318.8002m	1174.476m	BV	
1152	2199749.3034m	4674316.4623m	1174.160m	BV	
1153	2199749.3277m	4674315.5473m	1174.847m	NVL	
1154	2199749.6239m	4674314.6744m	1175.488m	LIND	

1155	2199749.2530m	4674321.6073m	1174.367m	ACCESO	
1156	2199751.8244m	4674323.6540m	1174.192m	ACCESO	
1157	2199754.9238m	4674322.1889m	1174.107m	LIND	
1158	2199755.4371m	4674321.3340m	1174.052m	BV	
1159	2199755.6935m	4674319.5921m	1174.022m	BV	
1160	2199755.8282m	4674317.3911m	1173.765m	BV	
1161	2199755.9624m	4674316.5762m	1174.425m	NVL	
1162	2199755.9826m	4674315.6712m	1175.188m	LIND	
1163	2199767.7612m	4674317.1445m	1174.376m	LIND	
1164	2199767.5469m	4674318.3864m	1173.766m	BV	
1165	2199767.5233m	4674320.2934m	1173.531m	BV	
1166	2199767.2379m	4674322.0253m	1173.583m	BV	
1167	2199766.9985m	4674323.4443m	1173.887m	LIND	
1168	2199777.0149m	4674328.8441m	1173.533m	LIND	
1169	2199777.9222m	4674328.0163m	1173.265m	NVL	
1170	2199778.5153m	4674327.7435m	1173.041m	BV	
1171	2199779.9856m	4674326.4539m	1173.156m	BV	
1172	2199781.3530m	4674325.1903m	1173.166m	BV	
1173	2199782.3683m	4674324.0216m	1173.812m	LIND	
1174	2199784.7844m	4674341.5273m	1173.369m	LIND	
1175	2199785.4114m	4674341.3434m	1173.147m	NVL	
1176	2199786.5546m	4674340.9228m	1172.500m	BV	
1177	2199788.8089m	4674339.8704m	1172.631m	BV	
1178	2199790.6631m	4674339.0289m	1172.668m	BV	
1179	2199791.6563m	4674338.3462m	1173.302m	LIND	
1180	2199791.5727m	4674340.3922m	1172.987m	ALC	
1181	2199792.2573m	4674341.7884m	1172.924m	ALC	
1182	2199791.9967m	4674340.3503m	1172.307m	ALC	
1183	2199792.7234m	4674341.6315m	1172.285m	ALC	
1184	2199792.1466m	4674340.9403m	1172.086m	LOMO TUBO	
1185	2199792.9093m	4674341.8115m	1172.849m	NVL	
1186	2199792.2818m	4674340.0334m	1172.859m	NVL	
1187	2199792.7407m	4674340.5475m	1172.819m	NVL	
1188	2199793.1562m	4674342.3596m	1173.167m	LIND	
1189	2199792.2811m	4674339.1244m	1173.640m	LIND	
1190	2199787.3810m	4674342.9020m	1172.952m	ALC	
1191	2199788.0577m	4674344.0862m	1172.960m	ALC	
1192	2199787.5738m	4674343.5180m	1171.738m	ALC	
1193	2199786.3870m	4674342.7737m	1172.739m	NVL	
1194	2199787.4385m	4674344.8570m	1172.848m	NVL	
1195	2199786.7086m	4674344.2548m	1171.502m	NVL	
1196	2199785.5058m	4674343.7875m	1172.720m	NVL	
1197	2199786.9704m	4674345.1969m	1173.083m	NVL	
1198	2199787.2701m	4674346.1200m	1173.435m	LIND	
1199	2199792.8339m	4674343.3955m	1172.894m	NVL	
1200	2199793.5200m	4674343.0707m	1173.346m	LIND	
1201	2199792.5108m	4674343.4834m	1172.469m	BV	
1202	2199790.9486m	4674344.1820m	1172.377m	BV	
1203	2199789.0044m	4674345.0904m	1172.374m	BV	
1204	2199797.5070m	4674353.7208m	1171.419m	BV	
1205	2199797.8851m	4674353.4189m	1171.872m	NVL	
1206	2199798.3941m	4674353.2171m	1172.098m	LIND	
1207	2199795.9408m	4674354.4704m	1171.451m	BV	
1208	2199794.3215m	4674355.5029m	1171.522m	BV	
1209	2199793.3404m	4674355.7627m	1172.072m	NVL	
1210	2199792.6103m	4674356.1705m	1172.343m	LIND	
1211	2199804.9541m	4674363.8579m	1170.823m	LIND	
1212	2199803.7129m	4674364.5896m	1170.194m	BV	
1213	2199802.5946m	4674365.6533m	1170.035m	BV	
1214	2199801.1864m	4674366.5489m	1170.101m	BV	
1215	2199800.2242m	4674367.1866m	1170.576m	NVL	
1216	2199799.4582m	4674367.3314m	1170.828m	LIND	
1217	2199811.5382m	4674374.3128m	1169.655m	LIND	
1218	2199810.8811m	4674374.6616m	1169.460m	NVL	
1219	2199810.4671m	4674374.8055m	1169.168m	BV	
1220	2199809.2618m	4674375.9001m	1169.241m	BV	
1221	2199807.8495m	4674376.9367m	1169.320m	BV	
1222	2199806.9994m	4674377.2915m	1169.795m	NVL	
1223	2199806.1912m	4674377.7763m	1169.894m	LIND	
1224	2199818.3084m	4674384.3727m	1169.015m	LIND	
1225	2199819.1920m	4674385.6749m	1168.914m	LIND	

1226	2199817.1353m	4674384.7903m	1168.849m	BV	
1227	2199815.5240m	4674385.6309m	1168.838m	BV	
1228	2199814.1088m	4674386.2645m	1168.888m	BV	
1229	2199812.4866m	4674387.1100m	1169.039m	LIND	
1230	2199812.7669m	4674385.9631m	1169.118m	GAS	
1231	2199813.2107m	4674386.7502m	1169.002m	GAS	
1232	2199813.6285m	4674387.5003m	1169.004m	GAS	
1233	2199819.4999m	4674386.0280m	1168.890m	ACCESO	
1234	2199822.3161m	4674385.4818m	1169.365m	ACCESO	
1235	2199821.0645m	4674390.8934m	1168.820m	ACCESO	
1236	2199823.7070m	4674389.2222m	1168.942m	ACCESO	
1237	2199821.1845m	4674391.1175m	1168.703m	LIND	
1238	2199822.8363m	4674402.5339m	1168.455m	LIND	
1239	2199820.7843m	4674402.6374m	1168.199m	BV	
1240	2199819.2722m	4674402.7559m	1168.161m	BV	
1241	2199817.5092m	4674402.8024m	1168.310m	BV	
1242	2199816.7442m	4674402.7772m	1168.533m	LIND	
1243	2199824.1463m	4674413.1693m	1168.101m	LIND	
1244	2199823.1162m	4674413.6120m	1167.793m	NVL	
1245	2199822.3822m	4674413.6758m	1167.235m	BV	
1246	2199821.1761m	4674414.0215m	1167.347m	BV	
1247	2199819.6759m	4674414.5310m	1167.403m	BV	
1248	2199818.6839m	4674414.6988m	1168.253m	LIND	
1249	2199829.4222m	4674424.3408m	1168.031m	LIND	
1250	2199828.2641m	4674424.6485m	1167.077m	NVL	
1251	2199826.2638m	4674425.6179m	1166.263m	BV	
1252	2199824.9026m	4674426.3275m	1166.373m	BV	
1253	2199823.4135m	4674426.8101m	1166.556m	BV	
1254	2199822.8284m	4674427.0229m	1166.810m	LIND	
1255	2199835.1057m	4674436.5724m	1166.690m	LIND	
1256	2199832.3203m	4674438.0416m	1165.857m	BV	
1257	2199831.0361m	4674438.8302m	1165.678m	BV	
1258	2199829.3459m	4674439.4978m	1165.668m	BV	
1259	2199827.8448m	4674439.9123m	1166.177m	LIND	
1260	2199841.2685m	4674448.0221m	1165.816m	LIND	
1261	2199841.8622m	4674449.0953m	1165.774m	ACCESO	
1262	2199843.1979m	4674453.9276m	1165.684m	ACCESO	
1263	2199840.0438m	4674457.8168m	1165.225m	LIND	
1264	2199838.9977m	4674458.2015m	1165.325m	BV	
1265	2199837.2396m	4674458.2940m	1165.251m	BV	
1266	2199835.0786m	4674458.4664m	1165.192m	BV	
1267	2199833.3624m	4674458.9999m	1165.119m	LIND	
1268	2199833.9226m	4674465.6470m	1164.606m	BOX	
1269	2199833.9550m	4674464.1121m	1164.530m	BOX	
1270	2199831.8392m	4674467.0695m	1164.203m	BOX	
1271	2199832.9573m	4674463.0678m	1164.212m	BOX	
1272	2199833.9637m	4674465.3251m	1162.752m	BOX	
1273	2199833.4705m	4674466.0549m	1165.379m	BOX	
1274	2199833.6330m	4674464.2810m	1164.681m	BOX	
1275	2199832.2129m	4674464.4626m	1164.789m	NVL	
1276	2199830.9315m	4674466.0602m	1165.034m	NVL	
1277	2199832.9891m	4674467.4868m	1166.512m	NVL	
1278	2199839.7422m	4674466.9697m	1165.463m	BOX	
1279	2199839.9485m	4674465.8407m	1162.903m	BOX	
1280	2199840.6134m	4674466.3709m	1162.918m	BOX	
1281	2199840.5154m	4674466.3249m	1164.344m	BOX	
1282	2199838.5220m	4674464.2743m	1163.215m	BOX	
1283	2199840.2623m	4674462.9998m	1162.679m	BOX	
1284	2199840.4493m	4674463.0809m	1161.859m	BOX	
1285	2199839.9958m	4674464.8847m	1161.541m	NVL	
1286	2199841.5301m	4674463.8622m	1161.914m	NVL	
1287	2199839.2766m	4674465.4295m	1161.982m	NVL	
1288	2199840.8432m	4674466.9770m	1163.266m	NVL	
1289	2199837.6472m	4674463.4121m	1164.221m	BV	
1290	2199837.5122m	4674466.9070m	1164.093m	BV	
1291	2199833.8352m	4674466.9120m	1164.087m	BV	
1292	2199833.8923m	4674463.2130m	1164.115m	BV	
1293	2199838.1599m	4674478.7032m	1164.797m	LIND	
1294	2199837.3100m	4674478.5250m	1164.735m	NVL	
1295	2199836.7240m	4674478.4258m	1164.322m	BV	
1296	2199834.7961m	4674478.0993m	1164.391m	BV	

1297	2199832.5011m	4674478.0976m	1164.436m	BV	
1298	2199831.1651m	4674478.1003m	1165.026m	LIND	
1299	2199830.3335m	4674491.0160m	1166.309m	LIND	
1300	2199831.8934m	4674491.3025m	1166.773m	NVL	
1301	2199832.9584m	4674491.3548m	1166.208m	BV	
1302	2199835.2484m	4674491.4224m	1166.288m	BV	
1303	2199837.1664m	4674491.1850m	1166.234m	BV	
1304	2199837.7244m	4674491.2261m	1166.538m	NVL	
1305	2199838.4834m	4674491.2573m	1166.607m	LIND	
1306	2199840.6790m	4674499.8459m	1168.701m	LIND	
1307	2199839.8229m	4674500.3067m	1168.447m	NVL	
1308	2199839.5098m	4674500.4376m	1168.132m	BV	
1309	2199837.8377m	4674500.8701m	1168.087m	BV	
1310	2199835.8966m	4674501.3546m	1168.123m	BV	
1311	2199831.2726m	4674501.2593m	1168.647m	LIND	
1312	2199845.5645m	4674508.6873m	1171.439m	LIND	
1313	2199844.8094m	4674509.1701m	1170.706m	NVL	
1314	2199844.2283m	4674509.5719m	1170.102m	BV	
1315	2199842.7961m	4674510.2675m	1169.969m	BV	
1316	2199841.3338m	4674511.0661m	1170.086m	BV	
1317	2199840.8408m	4674511.3850m	1170.592m	NVL	
1318	2199838.2314m	4674512.6063m	1173.646m	LIND	
1319	2199847.9146m	4674511.9150m	1171.281m	LIND	
1320	2199848.5053m	4674512.8631m	1171.312m	ACCESO	
1321	2199851.4890m	4674517.7200m	1171.880m	ACCESO	
1322	2199846.6260m	4674514.1426m	1170.976m	BV	
1323	2199849.7086m	4674518.9475m	1171.445m	BV	
1324	2199855.7820m	4674528.2002m	1173.236m	LIND	
1325	2199855.4090m	4674528.3861m	1172.955m	NVL	
1326	2199854.4699m	4674528.8158m	1172.174m	BV	
1327	2199853.0046m	4674529.6184m	1172.101m	BV	
1328	2199851.0074m	4674530.5188m	1172.266m	BV	
1329	2199849.4922m	4674531.0964m	1173.097m	NVL	
1330	2199848.5592m	4674531.1201m	1173.489m	LIND	
1331	2199852.4240m	4674539.0472m	1172.948m	LIND	
1332	2199850.0590m	4674542.4406m	1172.388m	LIND	
1333	2199849.7200m	4674542.5555m	1172.633m	ACCESO	
1334	2199851.3411m	4674545.8279m	1172.685m	ACCESO	
1335	2199851.7801m	4674545.9271m	1172.721m	LIND	
1336	2199856.3460m	4674546.1493m	1172.418m	LIND	
1337	2199855.8732m	4674541.8992m	1171.884m	BV	
1338	2199858.6291m	4674545.8190m	1171.688m	BV	
1339	2199860.5424m	4674544.7745m	1171.545m	BV	
1340	2199862.1926m	4674543.9940m	1171.596m	BV	
1341	2199863.7578m	4674543.3844m	1172.284m	LIND	
1342	2199861.6452m	4674555.9958m	1171.696m	LIND	
1343	2199863.4435m	4674555.0243m	1171.209m	BV	
1344	2199865.4098m	4674553.8959m	1171.184m	BV	
1345	2199867.3002m	4674552.7534m	1171.149m	BV	
1346	2199868.9153m	4674552.1499m	1171.691m	LIND	
1347	2199864.5450m	4674560.5096m	1171.438m	GAS	
1348	2199864.1182m	4674559.8985m	1171.280m	GAS	
1349	2199865.0168m	4674561.2748m	1171.448m	GAS	
1350	2199871.0713m	4674573.5265m	1171.132m	LIND	
1351	2199872.1495m	4674573.0518m	1170.850m	NVL	
1352	2199872.7326m	4674572.7409m	1170.596m	BV	
1353	2199874.3488m	4674572.0284m	1170.632m	BV	
1354	2199876.2090m	4674571.3029m	1170.599m	BV	
1355	2199878.3312m	4674570.4785m	1171.148m	LIND	
1356	2199877.6095m	4674587.0663m	1170.523m	LIND	
1357	2199878.4046m	4674586.7465m	1170.669m	NVL	
1358	2199879.0657m	4674586.3387m	1170.166m	BV	
1359	2199880.4920m	4674585.3991m	1170.104m	BV	
1360	2199881.8922m	4674584.6465m	1170.230m	BV	
1361	2199884.0684m	4674584.1231m	1170.858m	LIND	
1362	2199890.3793m	4674598.7559m	1170.060m	LIND	
1363	2199889.7522m	4674598.9827m	1169.591m	NVL	
1364	2199888.9931m	4674599.2155m	1169.267m	BV	
1365	2199887.6439m	4674600.0041m	1169.156m	BV	
1366	2199886.3207m	4674600.5727m	1169.247m	BV	
1367	2199885.1656m	4674601.0024m	1169.881m	LIND	

1368	2199891.7175m	4674615.7093m	1168.698m	LIND	
1369	2199892.2946m	4674615.4984m	1168.417m	NVL	
1370	2199892.8876m	4674615.2706m	1167.987m	BV	
1371	2199894.3148m	4674614.5970m	1167.870m	BV	
1372	2199895.6330m	4674613.7774m	1168.035m	BV	
1373	2199896.8452m	4674613.3527m	1169.045m	NVL	
1374	2199897.5491m	4674613.4159m	1169.359m	LIND	
1375	2199903.1719m	4674624.9385m	1168.620m	LIND	
1376	2199902.4458m	4674625.3833m	1167.792m	NVL	
1377	2199901.5707m	4674625.7550m	1167.232m	BV	
1378	2199900.1973m	4674627.0546m	1167.012m	BV	
1379	2199898.7672m	4674627.6402m	1166.948m	BV	
1380	2199898.0090m	4674628.2940m	1167.487m	NVL	
1381	2199897.3019m	4674628.7048m	1167.374m	LIND	
1382	2199904.5840m	4674631.8749m	1166.968m	ALC	
1383	2199905.1536m	4674633.0860m	1166.971m	ALC	
1384	2199905.6517m	4674632.6862m	1166.553m	ALC	
1385	2199906.2388m	4674632.4943m	1166.838m	ALC	
1386	2199905.1210m	4674631.7520m	1166.496m	ALC	
1387	2199905.7621m	4674631.3752m	1166.805m	ALC	
1388	2199905.0348m	4674632.4550m	1165.591m	BATEA TUBO	
1389	2199905.8356m	4674633.1112m	1166.826m	NVL	
1390	2199905.3092m	4674631.1051m	1166.946m	NVL	
1391	2199906.2880m	4674631.7393m	1166.861m	NVL	
1392	2199907.2257m	4674632.9626m	1168.096m	LIND	
1393	2199906.1253m	4674630.5973m	1168.155m	LIND	
1394	2199899.9775m	4674633.6716m	1166.943m	ALC	
1395	2199900.5661m	4674634.8797m	1166.876m	ALC	
1396	2199900.0743m	4674634.2766m	1165.465m	BATEA TUBO	
1397	2199899.9450m	4674635.4806m	1165.939m	NVL	
1398	2199899.2274m	4674634.0384m	1165.806m	NVL	
1399	2199899.1571m	4674634.8293m	1165.316m	NVL	
1400	2199917.8819m	4674635.7166m	1169.384m	LIND	
1401	2199916.9092m	4674638.3063m	1167.750m	ACCESO	
1402	2199915.9698m	4674643.3051m	1167.719m	ACCESO	
1403	2199913.8009m	4674646.3675m	1168.206m	LIND	
1404	2199908.3456m	4674640.4399m	1166.614m	BV	
1405	2199910.8509m	4674646.5186m	1166.351m	BV	
1406	2199913.2209m	4674646.4083m	1168.182m	NVL	
1407	2199909.0226m	4674647.3151m	1166.280m	BV	
1408	2199907.0455m	4674647.8406m	1166.420m	BV	
1409	2199905.7693m	4674648.4512m	1166.281m	LIND	
1410	2199906.6834m	4674648.0455m	1166.692m	NVL	
1411	2199912.0451m	4674663.4390m	1165.915m	LIND	
1412	2199912.6872m	4674663.2111m	1166.366m	NVL	
1413	2199913.3323m	4674662.9093m	1166.019m	BV	
1414	2199915.0784m	4674662.3428m	1165.985m	BV	
1415	2199916.7316m	4674661.6293m	1166.045m	BV	
1416	2199918.3488m	4674661.0757m	1167.398m	NVL	
1417	2199919.8380m	4674660.3751m	1168.137m	LIND	
1418	2199924.6648m	4674671.5375m	1167.665m	LIND	
1419	2199923.6798m	4674671.7252m	1167.221m	NVL	
1420	2199921.8924m	4674673.0137m	1165.946m	BV	
1421	2199920.1882m	4674673.8472m	1165.896m	BV	
1422	2199918.5369m	4674674.7648m	1165.807m	BV	
1423	2199917.4148m	4674675.1615m	1165.431m	LIND	
1424	2199918.0519m	4674674.9316m	1165.869m	NVL	
1425	2199926.2612m	4674680.8259m	1165.531m	ALC	
1426	2199925.7666m	4674679.5738m	1165.460m	ALC	
1427	2199926.8337m	4674679.0711m	1165.186m	ALC	
1428	2199927.3894m	4674680.2503m	1165.143m	ALC	
1429	2199926.1924m	4674680.2839m	1164.103m	BATEA TUBO	
1430	2199926.7757m	4674679.0391m	1166.001m	NVL	
1431	2199925.9528m	4674679.0119m	1165.496m	NVL	
1432	2199927.5692m	4674680.9413m	1166.165m	NVL	
1433	2199927.8695m	4674680.0014m	1166.599m	NVL	
1434	2199926.6795m	4674679.9461m	1164.176m	NVL	
1435	2199924.7954m	4674680.2265m	1165.892m	BV	
1436	2199923.3134m	4674680.4091m	1165.778m	BV	
1437	2199921.9900m	4674681.6027m	1165.665m	BV	
1438	2199921.1580m	4674681.7585m	1165.545m	ALC	

1439	2199921.7186m	4674682.9697m	1165.472m	ALC	
1440	2199921.4384m	4674683.8996m	1164.951m	ALC	
1441	2199920.3141m	4674681.4303m	1164.869m	ALC	
1442	2199921.5298m	4674682.3906m	1163.829m	BATEA TUBO	
1443	2199920.8498m	4674682.2914m	1163.947m	NVL	
1444	2199920.8866m	4674683.1844m	1164.476m	NVL	
1445	2199920.6130m	4674681.8264m	1164.353m	NVL	
1446	2199922.2604m	4674683.6978m	1165.593m	NVL	
1447	2199920.7663m	4674680.7924m	1165.608m	NVL	
1448	2199933.0774m	4674691.0249m	1166.813m	LIND	
1449	2199932.6374m	4674691.1427m	1166.676m	NVL	
1450	2199929.9762m	4674691.7980m	1165.769m	BV	
1451	2199928.2060m	4674692.3955m	1165.716m	BV	
1452	2199926.3569m	4674692.8040m	1165.661m	BV	
1453	2199925.7818m	4674693.0058m	1165.850m	NVL	
1454	2199925.1788m	4674693.1686m	1165.647m	LIND	
1455	2199934.6834m	4674701.6193m	1167.525m	LIND	
1456	2199933.8834m	4674701.6281m	1167.176m	NVL	
1457	2199932.1074m	4674701.8296m	1165.770m	BV	
1458	2199930.1832m	4674702.2190m	1165.718m	BV	
1459	2199928.4332m	4674702.5266m	1165.728m	BV	
1460	2199927.5591m	4674702.6513m	1165.894m	NVL	
1461	2199926.6601m	4674702.7951m	1165.732m	LIND	
1462	2199928.6678m	4674711.0806m	1166.291m	GAS	
1463	2199928.4900m	4674710.2836m	1166.263m	GAS	
1464	2199928.6956m	4674711.8126m	1166.348m	GAS	
1465	2199928.5701m	4674713.5716m	1166.478m	LIND	
1466	2199929.8651m	4674713.4080m	1166.069m	BV	
1467	2199931.3261m	4674713.3134m	1166.156m	BV	
1468	2199933.0332m	4674713.2098m	1166.193m	BV	
1469	2199935.1683m	4674712.8734m	1168.564m	NVL	
1470	2199936.2923m	4674712.6658m	1168.981m	LIND	
1471	2199937.7958m	4674725.1392m	1168.970m	LIND	
1472	2199936.6028m	4674725.1668m	1168.126m	NVL	
1473	2199934.5617m	4674725.5643m	1166.784m	BV	
1474	2199933.0517m	4674725.5949m	1166.741m	BV	
1475	2199931.3756m	4674725.8394m	1166.670m	BV	
1476	2199930.4546m	4674725.9101m	1166.881m	LIND	
1477	2199939.6226m	4674725.9647m	1168.551m	ACCESO	
1478	2199941.9741m	4674731.2754m	1168.355m	ACCESO	
1479	2199939.9540m	4674738.7608m	1169.050m	LIND	
1480	2199939.1330m	4674738.9266m	1168.737m	NVL	
1481	2199936.9439m	4674739.0229m	1166.486m	BV	
1482	2199935.1309m	4674739.1144m	1166.386m	BV	
1483	2199933.0859m	4674739.2669m	1166.344m	BV	
1484	2199932.3479m	4674739.2467m	1166.442m	LIND	
1485	2199941.8987m	4674750.3903m	1168.483m	LIND	
1486	2199940.4576m	4674750.7149m	1168.212m	NVL	
1487	2199938.0566m	4674750.8123m	1166.030m	BV	
1488	2199936.2286m	4674751.0537m	1165.979m	BV	
1489	2199934.6495m	4674751.1043m	1165.957m	BV	
1490	2199933.6685m	4674751.2000m	1165.841m	LIND	
1491	2199934.7154m	4674762.2073m	1165.715m	LIND	
1492	2199935.7575m	4674762.0966m	1165.612m	BV	
1493	2199937.3525m	4674761.9491m	1165.648m	BV	
1494	2199939.3815m	4674761.8656m	1165.654m	BV	
1495	2199941.7925m	4674761.7753m	1167.668m	NVL	
1496	2199943.2766m	4674761.5057m	1168.212m	LIND	
1497	2199944.7788m	4674771.4671m	1167.826m	LIND	
1498	2199943.2527m	4674771.7977m	1167.240m	NVL	
1499	2199940.6366m	4674772.3320m	1165.208m	BV	
1500	2199938.7745m	4674772.7685m	1165.184m	BV	
1501	2199936.9834m	4674773.1260m	1165.138m	BV	
1502	2199935.7023m	4674773.2446m	1165.380m	LIND	
1503	2199937.2171m	4674781.2710m	1165.052m	LIND	
1504	2199938.7232m	4674780.8664m	1164.880m	BV	
1505	2199940.5614m	4674780.2870m	1164.856m	BV	
1506	2199942.5155m	4674779.6035m	1164.757m	BV	
1507	2199944.5848m	4674778.8151m	1166.769m	NVL	
1508	2199945.8598m	4674778.6044m	1167.329m	LIND	
1509	2199946.4878m	4674782.1436m	1166.643m	NVL	

1510	2199947.4209m	4674781.7269m	1167.131m	LIND	
1511	2199948.6500m	4674785.2432m	1166.499m	NVL	
1512	2199949.6201m	4674784.6165m	1166.927m	LIND	
1513	2199953.0937m	4674789.7385m	1166.015m	NVL	
1514	2199953.9539m	4674788.9407m	1166.582m	LIND	
1515	2199951.3802m	4674791.4250m	1163.859m	BV	
1516	2199949.8618m	4674792.9586m	1163.967m	BV	
1517	2199948.2492m	4674795.0941m	1163.907m	BV	
1518	2199947.7100m	4674795.8750m	1164.024m	LIND	
1519	2199946.9136m	4674786.5347m	1164.328m	BV	
1520	2199944.9142m	4674787.8502m	1164.382m	BV	
1521	2199942.6497m	4674789.9175m	1164.544m	BV	
1522	2199941.0554m	4674790.7701m	1165.059m	LIND	
1523	2199944.7205m	4674783.2241m	1164.624m	BV	
1524	2199942.3663m	4674784.1955m	1164.642m	BV	
1525	2199939.9199m	4674785.3838m	1164.698m	BV	
1526	2199938.8118m	4674785.7965m	1164.932m	LIND	
1527	2199959.7373m	4674801.7643m	1162.920m	BV	
1528	2199960.5917m	4674800.2746m	1162.974m	BV	
1529	2199961.2302m	4674798.8028m	1163.184m	BV	
1530	2199960.8235m	4674797.4256m	1163.281m	ALC	
1531	2199961.9583m	4674798.1460m	1163.264m	ALC	
1532	2199962.1645m	4674797.5940m	1162.783m	ALC	
1533	2199962.6297m	4674796.9811m	1163.147m	ALC	
1534	2199961.4808m	4674796.3558m	1163.161m	ALC	
1535	2199961.0897m	4674797.0107m	1162.786m	ALC	
1536	2199961.4315m	4674797.6698m	1161.747m	BATEA TUBO	
1537	2199962.7044m	4674797.9532m	1163.446m	NVL	
1538	2199962.3808m	4674796.4681m	1163.990m	NVL	
1539	2199960.8938m	4674796.5757m	1163.274m	NVL	
1540	2199962.1301m	4674795.5290m	1165.436m	LIND	
1541	2199958.7593m	4674801.9051m	1163.280m	ALC	
1542	2199959.9881m	4674802.5134m	1163.269m	ALC	
1543	2199959.3182m	4674802.3882m	1161.323m	BATEA TUBO	
1544	2199959.0590m	4674802.9701m	1161.265m	NVL	
1545	2199959.4669m	4674803.2363m	1161.907m	NVL	
1546	2199958.1161m	4674802.5519m	1162.497m	NVL	
1547	2199958.1381m	4674802.5339m	1162.521m	NVL	
1548	2199971.5035m	4674808.1806m	1161.347m	LIND	
1549	2199971.6275m	4674808.3657m	1161.317m	BV	
1550	2199972.3119m	4674806.6899m	1161.343m	BV	
1551	2199973.4104m	4674804.9122m	1161.368m	BV	
1552	2199974.8512m	4674802.3026m	1163.519m	LIND	
1553	2199985.7367m	4674811.2126m	1158.902m	BV	
1554	2199985.1401m	4674813.2145m	1158.779m	BV	
1555	2199984.0246m	4674815.1602m	1158.842m	BV	
1556	2199983.6573m	4674816.1020m	1159.076m	LIND	
1557	2199988.3225m	4674808.4414m	1161.277m	LIND	
1558	2199993.8179m	4674821.3039m	1157.048m	LIND	
1559	2199994.4522m	4674820.0021m	1156.295m	BV	
1560	2199995.3728m	4674818.0443m	1156.354m	BV	
1561	2199996.2123m	4674816.2106m	1156.458m	BV	
1562	2199997.4360m	4674813.6879m	1159.097m	LIND	
1563	2200005.5233m	4674826.8642m	1154.604m	LIND	
1564	2200006.0728m	4674825.1383m	1154.063m	BV	
1565	2200006.8522m	4674823.4556m	1154.102m	BV	
1566	2200007.6698m	4674821.6218m	1154.136m	BV	
1567	2200008.4134m	4674819.3690m	1156.822m	LIND	
1568	2200019.3613m	4674823.3391m	1154.415m	LIND	
1569	2200018.9184m	4674826.3919m	1151.964m	BV	
1570	2200022.4159m	4674824.7359m	1151.698m	ACCESO	
1571	2200027.2486m	4674825.8803m	1151.816m	ACCESO	
1572	2200025.6895m	4674829.8068m	1150.433m	BV	
1573	2200029.0961m	4674831.1678m	1149.649m	BV	
1574	2200028.2956m	4674832.8136m	1149.652m	BV	
1575	2200027.3482m	4674834.2603m	1149.763m	BV	
1576	2200026.2517m	4674835.9910m	1150.388m	LIND	
1577	2200026.4128m	4674835.5820m	1150.166m	NVL	
1578	2200030.0098m	4674828.4850m	1151.913m	LIND	
1579	2200037.3984m	4674840.8091m	1148.356m	LIND	
1580	2200037.7295m	4674840.4772m	1147.929m	NVL	

1581	2200038.1347m	4674839.5093m	1147.539m	BV	
1582	2200038.7832m	4674837.9025m	1147.606m	BV	
1583	2200039.7716m	4674836.3588m	1147.613m	BV	
1584	2200040.9583m	4674834.0481m	1150.130m	LIND	
1585	2200040.4440m	4674835.0520m	1148.896m	NVL	
1586	2200045.8673m	4674844.7725m	1146.753m	ALC	
1587	2200047.0001m	4674845.4648m	1146.727m	ALC	
1588	2200046.1691m	4674845.3366m	1145.813m	LOMO TUBO	
1589	2200046.0320m	4674845.6905m	1145.861m	NVL	
1590	2200046.9029m	4674846.1568m	1146.159m	NVL	
1591	2200045.0721m	4674845.5533m	1146.277m	NVL	
1592	2200045.5988m	4674846.3434m	1146.095m	LIND	
1593	2200046.8854m	4674844.4238m	1146.124m	BV	
1594	2200047.8548m	4674842.7571m	1146.333m	BV	
1595	2200048.9632m	4674841.3804m	1146.698m	BV	
1596	2200049.1612m	4674841.3584m	1146.951m	ALC	
1597	2200048.0904m	4674840.8201m	1146.841m	ALC	
1598	2200049.8976m	4674840.1306m	1146.656m	ALC	
1599	2200048.9337m	4674839.6134m	1146.813m	ALC	
1600	2200050.4566m	4674840.1208m	1147.440m	NVL	
1601	2200048.8899m	4674839.0513m	1147.634m	NVL	
1602	2200048.7154m	4674840.8453m	1145.562m	BATEA TUBO	
1603	2200056.0155m	4674847.4883m	1145.119m	BV	
1604	2200057.9697m	4674846.9569m	1146.197m	LIND	
1605	2200054.0283m	4674848.2488m	1145.108m	BV	
1606	2200052.1719m	4674849.5113m	1145.050m	BV	
1607	2200050.9667m	4674850.4109m	1145.384m	NVL	
1608	2200050.4166m	4674850.7378m	1145.462m	LIND	
1609	2200064.5167m	4674861.0077m	1144.567m	LIND	
1610	2200062.6887m	4674861.1872m	1143.278m	BV	
1611	2200060.4854m	4674862.3166m	1143.259m	BV	
1612	2200057.9481m	4674863.0499m	1143.251m	BV	
1613	2200057.0721m	4674863.2786m	1143.716m	NVL	
1614	2200056.6541m	4674863.3245m	1143.723m	LIND	
1615	2200067.3524m	4674865.8815m	1143.326m	LIND	
1616	2200070.6411m	4674866.6214m	1142.116m	ACCESO	
1617	2200074.5261m	4674870.3195m	1141.977m	ACCESO	
1618	2200075.1899m	4674871.2357m	1142.142m	LIND	
1619	2200073.2944m	4674872.6922m	1142.031m	LIND	
1620	2200072.2194m	4674876.4179m	1141.767m	LIND	
1621	2200066.6117m	4674871.9323m	1141.876m	BV	
1622	2200070.4290m	4674881.2554m	1140.828m	BV	
1623	2200072.8511m	4674881.1011m	1141.672m	LIND	
1624	2200072.1420m	4674881.2469m	1141.496m	NVL	
1625	2200068.1688m	4674882.0267m	1140.749m	BV	
1626	2200066.1116m	4674882.8132m	1140.863m	BV	
1627	2200063.9206m	4674882.9976m	1141.624m	LIND	
1628	2200062.8359m	4674878.2563m	1141.844m	GAS	
1629	2200062.3303m	4674876.8771m	1142.096m	GAS	
1630	2200062.1686m	4674875.8681m	1142.142m	GAS	
1631	2200065.9180m	4674885.0941m	1140.887m	ALC	
1632	2200066.4545m	4674886.6983m	1140.853m	ALC	
1633	2200065.7104m	4674887.2191m	1140.263m	NVL	
1634	2200066.1443m	4674887.5642m	1141.026m	NVL	
1635	2200064.9800m	4674884.8319m	1140.797m	NVL	
1636	2200065.4120m	4674885.0760m	1139.841m	NVL	
1637	2200065.9438m	4674885.7921m	1139.422m	BATEA TUBO	
1638	2200065.5917m	4674886.0540m	1139.257m	NVL	
1639	2200064.6736m	4674886.5578m	1139.312m	LIND	
1640	2200072.8673m	4674883.9051m	1140.734m	ALC	
1641	2200072.6227m	4674882.6400m	1140.761m	ALC	
1642	2200071.3255m	4674883.1676m	1140.765m	ALC	
1643	2200071.8271m	4674884.4658m	1140.840m	ALC	
1644	2200072.3402m	4674884.1689m	1140.453m	ALC	
1645	2200071.9595m	4674883.0538m	1140.453m	ALC	
1646	2200071.7683m	4674883.7578m	1139.403m	BATEA TUBO	
1647	2200072.3014m	4674883.5469m	1139.407m	NVL	
1648	2200073.0391m	4674884.5461m	1140.852m	NVL	
1649	2200072.3828m	4674882.2669m	1141.119m	NVL	
1650	2200073.4314m	4674883.4542m	1141.136m	LIND	
1651	2200070.4592m	4674884.2144m	1140.460m	BV	

9.3 TRAMO 3- SECTOR VILLA DEL LAGO

PARAMETROS INICIALES					
PUNTO	NORTE	ESTE	ELEVACION	CODIGO	OBSERVACION
1	2199607.4668m	4676062.3746m	1068.818m	base_1	
2	2199653.3378m	4676201.5695m	1072.785m	B_3451696	
12	2199653.3378m	4676201.5695m	1072.785m	GPS2	
101	2199616.7771m	4676072.0952m	1068.717m	LIND	
102	2199617.4281m	4676072.0064m	1068.356m	NVL	
103	2199615.6400m	4676072.5149m	1068.419m	BV	
104	2199613.3068m	4676073.0932m	1068.457m	BV	
105	2199608.9775m	4676074.2880m	1069.416m	LIND	
106	2199610.4036m	4676073.6864m	1068.575m	BV	
107	2199612.0874m	4676085.0219m	1069.647m	LIND	
108	2199613.3234m	4676085.2122m	1068.624m	BV	
109	2199615.6245m	4676084.8429m	1068.636m	BV	
110	2199617.9226m	4676084.3565m	1068.656m	BV	
111	2199619.1927m	4676084.1369m	1069.104m	LIND	
112	2199620.0007m	4676084.2251m	1068.807m	NVL	
113	2199619.8740m	4676086.6571m	1069.050m	ACCESO	
114	2199619.2786m	4676084.4519m	1069.075m	ACCESO	
115	2199619.3052m	4676078.6569m	1068.306m	ACCESO	
116	2199620.3911m	4676082.5572m	1068.348m	ACCESO	
117	2199619.0071m	4676082.7558m	1069.071m	LIND	
118	2199618.0163m	4676078.3066m	1068.741m	LIND	
119	2199615.3694m	4676099.3808m	1070.070m	LIND	
120	2199616.8784m	4676099.2962m	1068.724m	BV	
121	2199619.2555m	4676098.9529m	1068.904m	BV	
122	2199621.9567m	4676098.3047m	1069.276m	BV	
123	2199622.7038m	4676098.1809m	1069.378m	LIND	
124	2199625.7116m	4676113.0247m	1069.728m	LIND	
125	2199625.0005m	4676113.2445m	1069.191m	BV	
126	2199622.6633m	4676114.0379m	1069.138m	BV	
127	2199620.5192m	4676114.5123m	1069.016m	BV	
128	2199618.6410m	4676115.1147m	1070.362m	LIND	
129	2199621.7727m	4676126.9886m	1070.622m	LIND	
130	2199622.9017m	4676126.8799m	1069.496m	BV	
131	2199625.4408m	4676126.5496m	1069.505m	BV	
132	2199627.5859m	4676126.1922m	1069.589m	BV	
133	2199628.2389m	4676126.1624m	1070.250m	LIND	
134	2199630.7324m	4676138.8651m	1070.710m	LIND	
135	2199630.1313m	4676139.0960m	1069.940m	BV	
136	2199627.9791m	4676139.7584m	1069.886m	BV	
137	2199625.5689m	4676140.3997m	1069.791m	BV	
138	2199624.3648m	4676140.7573m	1070.868m	LIND	
139	2199626.7175m	4676152.4710m	1071.186m	LIND	
140	2199628.2827m	4676152.0424m	1070.168m	BV	
141	2199630.5489m	4676151.3451m	1070.362m	BV	
142	2199632.5358m	4676151.4856m	1070.520m	BV	
143	2199633.3439m	4676151.3239m	1071.270m	LIND	
144	2199636.6007m	4676162.6158m	1071.501m	LIND	
145	2199634.4552m	4676164.2062m	1070.928m	BV	
146	2199636.0076m	4676162.9556m	1071.018m	BV	
147	2199632.3120m	4676165.0116m	1070.820m	BV	
148	2199630.2127m	4676166.1670m	1072.554m	LIND	
149	2199632.3214m	4676174.3086m	1073.796m	LIND	
150	2199635.1836m	4676173.5804m	1071.454m	BV	
151	2199637.3079m	4676172.6280m	1071.483m	BV	
152	2199639.8351m	4676171.7317m	1071.555m	BV	
153	2199636.0202m	4676175.1376m	1071.539m	ALC	
154	2199639.9390m	4676172.0827m	1071.564m	ALC	
155	2199640.5357m	4676173.2609m	1071.534m	ALC	
156	2199641.6437m	4676173.1792m	1071.486m	ALC	
157	2199640.3852m	4676171.4058m	1071.457m	ALC	
158	2199635.4875m	4676173.9125m	1071.572m	ALC	
159	2199634.4014m	4676174.3922m	1071.424m	ALC	
160	2199634.9671m	4676175.5933m	1071.633m	ALC	
161	2199641.5009m	4676186.9251m	1072.196m	BV	
162	2199644.0621m	4676186.2909m	1072.049m	BV	
163	2199646.4073m	4676185.3925m	1072.109m	BV	
164	2199646.8583m	4676185.2437m	1072.018m	LIND	

165	2199641.2436m	4676187.7641m	1073.231m	LIND	
166	2199647.5872m	4676200.0209m	1072.689m	BV	
167	2199649.6676m	4676198.6544m	1072.540m	BV	
168	2199652.0279m	4676197.6391m	1072.725m	BV	
169	2199656.8019m	4676208.1004m	1073.411m	BV	
170	2199654.4646m	4676209.1538m	1073.348m	BV	
171	2199652.3723m	4676210.2882m	1073.508m	BV	
172	2199606.5553m	4676067.6333m	1068.793m	LIND	
173	2199606.6054m	4676067.2484m	1068.827m	ACCESO	
174	2199607.8401m	4676061.4667m	1068.805m	ACCESO	
175	2199608.4650m	4676061.5299m	1068.735m	LIND	
176	2199609.7530m	4676061.7152m	1068.611m	BV	
177	2199612.7389m	4676061.8831m	1068.515m	BV	
178	2199615.5209m	4676062.1159m	1068.339m	BV	
179	2199616.4589m	4676062.1541m	1068.553m	LIND	
180	2199617.9942m	4676053.7626m	1068.655m	LIND	
181	2199617.1833m	4676053.3073m	1068.187m	BV	
182	2199614.9585m	4676052.5907m	1068.394m	BV	
183	2199612.5517m	4676052.1840m	1068.494m	BV	
184	2199612.7181m	4676046.9551m	1068.137m	LIND	
185	2199614.2011m	4676046.9055m	1068.394m	LIND	
186	2199615.0742m	4676039.4647m	1068.492m	LIND	
187	2199615.9401m	4676039.7580m	1068.475m	BV	
188	2199617.9340m	4676040.1465m	1068.452m	BV	
189	2199620.2421m	4676040.0032m	1068.438m	BV	
190	2199621.0550m	4676040.1634m	1068.771m	LIND	
191	2199615.5933m	4676035.7219m	1068.515m	LIND	
192	2199612.9433m	4676032.0181m	1069.007m	LIND	
193	2199612.7347m	4676030.7561m	1069.210m	ACCESO	
194	2199612.9021m	4676025.7761m	1069.255m	ACCESO	
195	2199613.0802m	4676025.3812m	1069.445m	LIND	
196	2199615.5043m	4676021.3449m	1069.023m	LIND	
197	2199616.4104m	4676021.0751m	1068.818m	BV	
198	2199618.7133m	4676021.4778m	1068.811m	BV	
199	2199620.9803m	4676021.5374m	1068.842m	BV	
200	2199621.6253m	4676021.4516m	1069.426m	LIND	
201	2199616.2597m	4676009.1401m	1069.688m	LIND	
202	2199616.5927m	4676009.2762m	1069.089m	BV	
203	2199619.2216m	4676009.4589m	1068.898m	BV	
204	2199621.7934m	4676010.3806m	1068.553m	BV	
205	2199622.7699m	4676012.2399m	1069.532m	LIND	
206	2199615.4064m	4676003.1458m	1069.107m	LIND	
207	2199615.4054m	4676003.1478m	1069.117m	LIND	
208	2199615.4945m	4676002.8128m	1069.024m	ACCESO	
209	2199618.9470m	4676001.0068m	1068.939m	ACCESO	
210	2199620.0724m	4675999.7491m	1068.911m	LIND	
211	2199620.4503m	4676000.0372m	1068.494m	BV	
212	2199620.4523m	4676000.0342m	1068.508m	BV	
213	2199622.5070m	4676001.0998m	1068.264m	BV	
214	2199624.5257m	4676002.1554m	1068.060m	BV	
215	2199626.2938m	4676001.8949m	1069.215m	LIND	
216	2199632.7358m	4675994.5027m	1068.147m	LIND	
217	2199631.4700m	4675993.7363m	1067.453m	BV	
218	2199629.5515m	4675992.0118m	1067.456m	BV	
219	2199627.7290m	4675990.4013m	1067.606m	BV	
220	2199627.4831m	4675989.9892m	1067.907m	LIND	
221	2199634.6103m	4675982.3192m	1067.004m	LIND	
222	2199634.9582m	4675982.5873m	1066.773m	BV	
223	2199636.3267m	4675984.3047m	1066.837m	BV	
224	2199638.3842m	4675986.1573m	1067.061m	BV	
225	2199638.8887m	4675987.7454m	1068.494m	LIND	
226	2199645.2210m	4675976.1012m	1066.704m	LIND	
227	2199644.8560m	4675975.9251m	1066.508m	BV	
228	2199642.2243m	4675974.9883m	1066.434m	BV	
229	2199639.9775m	4675974.2617m	1066.329m	BV	
230	2199639.3996m	4675973.9326m	1066.747m	LIND	
231	2199639.4420m	4675968.8876m	1066.703m	LIND	
232	2199641.9289m	4675962.3113m	1066.940m	LIND	
233	2199643.7959m	4675962.1358m	1066.355m	BV	
234	2199646.3250m	4675961.9265m	1066.379m	BV	
235	2199648.8278m	4675962.4392m	1066.311m	BV	
236	2199649.3067m	4675962.8333m	1066.699m	LIND	
237	2199641.3555m	4675970.5801m	1066.136m	ALC	
238	2199641.3319m	4675969.4231m	1066.166m	ALC	
239	2199641.2297m	4675969.8951m	1065.078m	BATEA TUBO	
240	2199640.5006m	4675970.2789m	1065.290m	QUEBR	

241	2199639.0183m	4675971.3884m	1065.238m	QUEBR	
242	2199637.9702m	4675971.9482m	1065.256m	QUEBR	
243	2199638.5140m	4675972.4263m	1065.309m	NVL	
244	2199637.5456m	4675970.4600m	1065.666m	NVL	
245	2199638.5457m	4675970.1113m	1065.869m	NVL	
246	2199640.2669m	4675969.3858m	1066.108m	NVL	
247	2199640.5913m	4675971.4479m	1066.228m	NVL	
248	2199640.9930m	4675968.9410m	1065.911m	NVL	
249	2199640.1019m	4675972.8357m	1066.290m	BV	
250	2199639.6703m	4675975.1606m	1066.334m	BV	
251	2199641.6456m	4675970.4762m	1066.351m	BV	
252	2199641.1952m	4675968.3471m	1066.159m	BV	
253	2199647.9670m	4675968.9700m	1064.943m	BATEA TUBO	
254	2199647.8482m	4675968.1279m	1065.915m	ALC	
255	2199647.5198m	4675969.6068m	1066.096m	ALC	
256	2199647.0857m	4675970.1687m	1066.521m	LIND	
257	2199646.4871m	4675972.2275m	1066.670m	LIND	
258	2199647.8113m	4675971.3059m	1066.506m	NVL	
259	2199648.2308m	4675969.7350m	1065.282m	NVL	
260	2199648.1036m	4675970.4470m	1065.621m	NVL	
261	2199649.1762m	4675968.1883m	1065.392m	NVL	
262	2199648.9366m	4675966.7802m	1066.423m	NVL	
263	2199648.2698m	4675966.0870m	1066.760m	LIND	
264	2199647.9687m	4675966.2890m	1066.214m	BV	
265	2199645.4429m	4675965.8072m	1066.339m	BV	
266	2199648.6999m	4675969.2312m	1064.829m	NVL	
267	2199650.1661m	4675957.9876m	1066.685m	GAS	
268	2199644.3804m	4675956.7689m	1066.945m	GAS	
269	2199644.2081m	4675957.8579m	1066.933m	GAS	
270	2199644.5638m	4675955.5770m	1067.078m	GAS	
271	2199649.1851m	4675957.8243m	1066.540m	GAS	
272	2199651.1660m	4675958.2769m	1066.381m	GAS	
273	2199652.0163m	4675953.5761m	1066.844m	LIND	
274	2199652.7558m	4675951.7913m	1066.758m	ACCESO	
275	2199650.5179m	4675947.7807m	1067.002m	ACCESO	
276	2199648.5638m	4675948.2271m	1066.617m	BV	
277	2199646.4117m	4675948.5895m	1066.629m	BV	
278	2199643.9345m	4675949.3548m	1066.529m	BV	
279	2199642.8204m	4675949.8035m	1067.636m	LIND	
280	2199645.0554m	4675953.1091m	1066.426m	BV	
281	2199645.0365m	4675956.3421m	1066.453m	BV	
282	2199650.0916m	4675956.1005m	1066.539m	BV	
283	2199649.4430m	4675951.0414m	1066.633m	BV	
284	2199644.9126m	4675938.1811m	1066.913m	BV	
285	2199642.8634m	4675938.9125m	1066.887m	BV	
286	2199640.9572m	4675939.8520m	1066.884m	BV	
287	2199639.7191m	4675940.2436m	1068.037m	LIND	
288	2199646.9148m	4675937.6797m	1067.301m	LIND	
289	2199642.6177m	4675927.1205m	1067.892m	LIND	
290	2199640.7716m	4675927.5079m	1067.163m	BV	
291	2199638.7474m	4675928.3084m	1067.136m	BV	
292	2199637.0562m	4675928.9179m	1067.165m	BV	
293	2199635.8792m	4675929.0306m	1068.550m	LIND	
294	2199632.2947m	4675916.5976m	1067.812m	BV	
295	2199634.6829m	4675915.7242m	1067.533m	BV	
296	2199636.4361m	4675915.1767m	1067.539m	BV	
297	2199637.9452m	4675914.5941m	1068.326m	LIND	
298	2199631.1606m	4675917.0632m	1068.560m	LIND	
299	2199629.1029m	4675915.9697m	1068.567m	LIND	
300	2199628.8979m	4675915.7466m	1068.564m	ACCESO	
301	2199628.5272m	4675911.0835m	1068.406m	ACCESO	
302	2199628.1616m	4675909.7944m	1068.537m	LIND	
303	2199629.7856m	4675909.7879m	1068.330m	BV	
304	2199632.3819m	4675908.8426m	1068.111m	BV	
305	2199634.4820m	4675908.4132m	1068.124m	BV	
306	2199635.6711m	4675908.0155m	1068.459m	LIND	
307	2199634.1506m	4675906.2311m	1068.131m	ALC	
308	2199633.8110m	4675904.8980m	1068.161m	ALC	
309	2199634.2528m	4675905.5041m	1066.416m	BATEA TUBO	
310	2199634.7420m	4675904.7462m	1067.440m	NVL	
311	2199635.4210m	4675904.7174m	1067.019m	NVL	
312	2199635.0076m	4675906.0223m	1067.073m	NVL	
313	2199634.0871m	4675904.4661m	1067.964m	NVL	
314	2199629.3553m	4675907.1577m	1068.324m	ALC	
315	2199628.9787m	4675905.8386m	1068.346m	ALC	
316	2199635.3665m	4675906.4814m	1067.842m	NVL	

317	2199628.9277m	4675905.8266m	1068.327m	ALC	
318	2199627.7926m	4675906.3083m	1068.250m	ALC	
319	2199628.0883m	4675907.3414m	1068.234m	ALC	
320	2199628.9685m	4675906.4016m	1066.833m	BATEA TUBO	
321	2199628.4236m	4675906.1395m	1067.802m	ALC	
322	2199633.3065m	4675892.3078m	1068.187m	LIND	
323	2199632.1235m	4675892.3725m	1068.263m	BV	
324	2199629.7683m	4675892.8438m	1068.204m	BV	
325	2199627.5163m	4675892.8732m	1068.229m	BV	
326	2199626.2853m	4675892.9019m	1069.284m	LIND	
327	2199627.9951m	4675868.6973m	1069.360m	LIND	
328	2199629.2081m	4675868.8547m	1068.340m	BV	
329	2199631.7940m	4675869.1234m	1068.354m	BV	
330	2199634.3650m	4675869.2431m	1068.239m	BV	
331	2199635.1589m	4675869.4184m	1068.434m	LIND	
332	2199638.0341m	4675857.9312m	1068.552m	LIND	
333	2199637.5512m	4675857.6670m	1068.141m	BV	
334	2199634.9735m	4675856.5623m	1068.443m	BV	
335	2199632.3538m	4675855.4156m	1068.415m	BV	
336	2199631.0280m	4675855.0092m	1068.822m	LIND	
337	2199642.8987m	4675848.7095m	1068.652m	LIND	
338	2199642.4199m	4675848.2014m	1068.422m	BV	
339	2199640.1462m	4675846.9178m	1068.617m	BV	
340	2199636.9517m	4675845.3819m	1068.631m	BV	
341	2199635.4448m	4675844.8784m	1068.744m	LIND	
342	2199638.5962m	4675843.4273m	1068.484m	BOX	
343	2199639.5736m	4675841.8916m	1068.501m	BOX	
344	2199639.0380m	4675840.4644m	1068.208m	BOX	
345	2199637.0301m	4675843.6669m	1068.255m	BOX	
346	2199638.8874m	4675842.7114m	1066.721m	BATEA TUBO	
347	2199638.4389m	4675840.9793m	1066.963m	NVL	
348	2199639.4391m	4675840.0816m	1068.297m	NVL	
349	2199637.8782m	4675839.7691m	1067.812m	NVL	
350	2199636.8052m	4675843.3928m	1067.000m	NVL	
351	2199638.5342m	4675843.3043m	1066.477m	BOX	
352	2199639.3856m	4675841.8805m	1066.641m	BOX	
353	2199638.9011m	4675840.2794m	1067.159m	NVL	
354	2199637.8594m	4675842.6151m	1066.457m	QUEBR	
355	2199635.2780m	4675840.6694m	1066.459m	QUEBR	
356	2199636.2013m	4675839.3586m	1066.991m	NVL	
357	2199634.6037m	4675841.6612m	1066.796m	NVL	
358	2199643.6774m	4675846.4597m	1068.306m	BOX	
359	2199644.4277m	4675845.2050m	1068.335m	BOX	
360	2199643.7921m	4675847.3648m	1068.530m	NVL	
361	2199643.2702m	4675847.1296m	1068.416m	BOX	
362	2199643.6504m	4675846.3197m	1066.487m	BOX	
363	2199644.5358m	4675844.9720m	1066.382m	BOX	
364	2199645.6497m	4675845.3803m	1068.127m	BOX	
365	2199644.2618m	4675848.4209m	1068.386m	BOX	
366	2199645.4750m	4675847.8403m	1066.314m	NVL	
367	2199646.0716m	4675845.6794m	1066.273m	NVL	
368	2199645.9522m	4675846.9834m	1066.124m	QUEBR	
369	2199647.9938m	4675848.5480m	1066.195m	QUEBR	
370	2199649.6232m	4675846.9344m	1066.057m	NVL	
371	2199646.8750m	4675851.2416m	1066.608m	NVL	
372	2199647.2752m	4675850.5708m	1066.028m	NVL	
373	2199645.6596m	4675827.8203m	1069.130m	LIND	
374	2199646.5155m	4675827.9705m	1069.165m	BV	
375	2199649.5493m	4675828.6444m	1069.351m	BV	
376	2199651.8142m	4675829.2160m	1069.176m	BV	
377	2199652.5991m	4675829.6172m	1069.167m	LIND	
378	2199655.6427m	4675816.8461m	1070.352m	LIND	
379	2199654.4227m	4675816.6368m	1069.580m	BV	
380	2199652.3789m	4675815.9082m	1069.644m	BV	
381	2199649.9540m	4675815.4785m	1069.584m	BV	
382	2199648.6491m	4675815.0891m	1070.383m	LIND	
383	2199655.7118m	4675805.4591m	1070.608m	LIND	
384	2199655.4249m	4675805.3480m	1069.904m	BV	
385	2199653.1521m	4675804.7394m	1070.010m	BV	
386	2199650.9471m	4675804.4258m	1070.178m	BV	
387	2199649.5122m	4675804.3264m	1070.798m	LIND	
388	2199657.5145m	4675795.8816m	1071.261m	LIND	
389	2199656.1315m	4675796.1032m	1070.345m	BV	
390	2199654.2466m	4675795.5057m	1070.456m	BV	
391	2199652.6068m	4675795.1092m	1070.531m	BV	
392	2199651.0668m	4675794.8668m	1071.241m	LIND	

393	2199653.5600m	4675787.0575m	1071.382m	GAS	
394	2199653.2437m	4675788.0784m	1071.341m	GAS	
395	2199653.9173m	4675785.9076m	1071.477m	GAS	
396	2199653.9405m	4675781.5696m	1071.712m	LIND	
397	2199655.4795m	4675781.8251m	1071.266m	BV	
398	2199657.2263m	4675782.5975m	1071.361m	BV	
399	2199658.6212m	4675782.6739m	1071.391m	BV	
400	2199660.4011m	4675783.2194m	1072.017m	LIND	
401	2199663.5309m	4675773.0943m	1072.706m	LIND	
402	2199662.4040m	4675772.8140m	1071.925m	BV	
403	2199660.3901m	4675772.3474m	1071.850m	BV	
404	2199658.6024m	4675771.4179m	1071.815m	BV	
405	2199657.0255m	4675770.9365m	1072.636m	LIND	
406	2199660.2683m	4675760.9404m	1072.842m	LIND	
407	2199661.8181m	4675761.6388m	1072.462m	BV	
408	2199663.9631m	4675761.9014m	1072.670m	BV	
409	2199665.4039m	4675762.6098m	1072.716m	BV	
410	2199666.5897m	4675763.2672m	1073.042m	LIND	
411	2199670.3318m	4675752.1922m	1073.831m	LIND	
412	2199667.8101m	4675750.9085m	1073.042m	BV	
413	2199669.6310m	4675751.5680m	1073.050m	BV	
414	2199666.0443m	4675750.2140m	1072.969m	BV	
415	2199664.5435m	4675749.6946m	1074.051m	LIND	
416	2199668.9028m	4675738.0348m	1074.441m	LIND	
417	2199670.0126m	4675738.7661m	1073.894m	BV	
418	2199671.9063m	4675739.6327m	1073.609m	BV	
419	2199673.6992m	4675740.1222m	1073.856m	BV	
420	2199673.9541m	4675740.3152m	1074.110m	NVL	
421	2199674.5281m	4675740.5224m	1074.399m	LIND	
422	2199678.7989m	4675730.2266m	1074.914m	LIND	
423	2199678.3500m	4675729.9615m	1074.430m	NVL	
424	2199678.1210m	4675729.9044m	1074.350m	BV	
425	2199676.4272m	4675729.1939m	1074.304m	BV	
426	2199674.2756m	4675727.7973m	1074.354m	BV	
427	2199672.9539m	4675726.9900m	1075.082m	LIND	
428	2199674.5725m	4675721.1964m	1075.309m	LIND	
429	2199673.1245m	4675717.6160m	1075.026m	LIND	
430	2199676.2394m	4675721.4479m	1074.884m	BV	
431	2199675.4341m	4675718.8186m	1075.194m	BV	
432	2199673.8158m	4675716.4752m	1075.034m	BV	
433	2199678.3080m	4675712.1625m	1075.835m	BV	
434	2199678.6605m	4675710.4156m	1076.099m	LIND	
435	2199676.2158m	4675709.2359m	1076.232m	LIND	
436	2199674.3613m	4675711.2173m	1075.330m	BV	
437	2199678.2516m	4675717.0274m	1075.251m	NVL	
438	2199665.4662m	4675704.2159m	1076.453m	BV	
439	2199665.0472m	4675704.3957m	1076.866m	NVL	
440	2199667.9267m	4675702.4415m	1076.310m	BV	
441	2199669.1751m	4675701.2629m	1077.389m	NVL	
442	2199682.0799m	4675712.5305m	1075.719m	BV	
443	2199684.0255m	4675713.8581m	1075.738m	BV	
444	2199685.9672m	4675715.2306m	1075.826m	BV	
445	2199687.4748m	4675716.6220m	1075.899m	NVL	
446	2199694.8389m	4675709.0191m	1077.374m	NVL	
447	2199694.3152m	4675707.7919m	1077.254m	NVL	
448	2199693.6436m	4675706.5908m	1076.880m	BV	
449	2199692.5879m	4675705.5975m	1077.048m	BV	
450	2199691.5192m	4675704.5352m	1077.009m	BV	
451	2199690.6745m	4675703.4629m	1077.348m	NVL	
452	2199689.9560m	4675701.6727m	1079.460m	LIND	
453	2199696.2735m	4675696.0845m	1081.495m	LIND	
454	2199701.8961m	4675690.6391m	1082.467m	LIND	
455	2199702.4998m	4675691.5582m	1080.980m	NVL	
456	2199703.9123m	4675693.2546m	1078.965m	BV	
457	2199704.7551m	4675694.0439m	1079.039m	BV	
458	2199706.2317m	4675695.6173m	1079.185m	BV	
459	2199707.3913m	4675696.7446m	1079.688m	LIND	
460	2199715.4306m	4675688.7799m	1080.997m	LIND	
461	2199714.4669m	4675687.6086m	1080.547m	BV	
462	2199713.3583m	4675686.0313m	1080.775m	BV	
463	2199712.3927m	4675684.6320m	1080.924m	BV	
464	2199711.3850m	4675683.8597m	1082.653m	NVL	
465	2199710.9113m	4675682.5516m	1083.461m	LIND	
466	2199719.4467m	4675674.0060m	1084.650m	LIND	
467	2199719.9455m	4675674.8151m	1083.607m	NVL	
468	2199720.9213m	4675675.5634m	1082.461m	BV	

469	2199722.5578m	4675677.1949m	1082.285m	BV	
470	2199723.5335m	4675678.3841m	1082.376m	BV	
471	2199725.4861m	4675679.9027m	1082.247m	LIND	
472	2199733.5489m	4675673.2529m	1083.766m	LIND	
473	2199732.1655m	4675671.2006m	1083.500m	BV	
474	2199731.4228m	4675670.1263m	1083.674m	BV	
475	2199729.8405m	4675667.5359m	1083.612m	BV	
476	2199727.7478m	4675666.4253m	1085.806m	LIND	
477	2199728.4692m	4675668.7525m	1083.945m	ALC	
478	2199727.3869m	4675669.6162m	1083.881m	ALC	
479	2199726.5742m	4675668.6100m	1083.429m	ALC	
480	2199727.5085m	4675667.7972m	1083.406m	ALC	
481	2199727.6771m	4675669.0363m	1082.435m	BATEA TUBO	
482	2199726.5331m	4675669.0530m	1084.312m	NVL	
483	2199726.8074m	4675667.9351m	1084.631m	NVL	
484	2199728.1385m	4675667.6734m	1084.270m	NVL	
485	2199727.6376m	4675667.3533m	1085.042m	NVL	
486	2199730.4779m	4675673.3011m	1083.273m	ALC	
487	2199731.3720m	4675672.8423m	1083.342m	ALC	
488	2199731.1380m	4675673.0503m	1082.032m	BATEA TUBO	
489	2199731.7968m	4675673.6365m	1083.024m	NVL	
490	2199730.2046m	4675674.4690m	1083.407m	NVL	
491	2199731.4416m	4675674.2794m	1082.081m	NVL	
492	2199730.9297m	4675673.9982m	1082.256m	NVL	
493	2199730.6553m	4675675.6121m	1083.116m	LIND	
494	2199741.9047m	4675666.8243m	1084.663m	LIND	
495	2199741.1800m	4675665.7811m	1084.976m	NVL	
496	2199740.6842m	4675665.0599m	1084.528m	BV	
497	2199739.7387m	4675663.3767m	1084.838m	BV	
498	2199738.3992m	4675661.5073m	1084.561m	BV	
499	2199737.0355m	4675660.6579m	1086.079m	NVL	
500	2199736.1107m	4675659.8917m	1086.946m	LIND	
501	2199750.9237m	4675659.7168m	1086.181m	LIND	
502	2199750.5829m	4675659.0307m	1086.415m	NVL	
503	2199749.9911m	4675658.3016m	1085.764m	BV	
504	2199749.3294m	4675657.1624m	1086.170m	BV	
505	2199748.3219m	4675655.3911m	1086.198m	BV	
506	2199747.1515m	4675653.2428m	1087.649m	NVL	
507	2199746.5479m	4675651.7806m	1088.703m	LIND	
508	2199762.4671m	4675651.1161m	1088.115m	LIND	
509	2199762.1093m	4675650.7020m	1088.141m	NVL	
510	2199761.9215m	4675649.7389m	1087.424m	BV	
511	2199761.9165m	4675649.7389m	1087.420m	BV	
512	2199761.1450m	4675648.1587m	1087.633m	BV	
513	2199760.0575m	4675646.1554m	1087.689m	BV	
514	2199758.9060m	4675644.4891m	1089.148m	NVL	
515	2199757.9253m	4675643.4288m	1090.178m	LIND	
516	2199773.4834m	4675642.8781m	1089.470m	LIND	
517	2199772.7299m	4675641.4119m	1089.121m	NVL	
518	2199773.0248m	4675641.7540m	1089.618m	NVL	
519	2199771.9583m	4675639.9867m	1089.269m	BV	
520	2199770.8518m	4675638.2154m	1089.422m	BV	
521	2199768.3944m	4675635.8737m	1091.403m	LIND	
522	2199783.7237m	4675635.0030m	1091.354m	LIND	
523	2199783.2808m	4675634.4389m	1091.297m	NVL	
524	2199782.8801m	4675633.4098m	1090.694m	BV	
525	2199782.2035m	4675631.9966m	1090.954m	BV	
526	2199780.4830m	4675630.3351m	1091.020m	BV	
527	2199778.2184m	4675628.7685m	1092.488m	LIND	
528	2199782.4836m	4675628.1397m	1091.318m	GAS	
529	2199783.2007m	4675627.6229m	1091.360m	GAS	
530	2199784.0869m	4675626.9511m	1091.544m	GAS	
531	2199796.8864m	4675625.2427m	1092.767m	LIND	
532	2199796.4237m	4675624.2416m	1092.768m	NVL	
533	2199795.8449m	4675623.4674m	1092.429m	BV	
534	2199794.9673m	4675622.1242m	1092.547m	BV	
535	2199793.9578m	4675620.2099m	1092.721m	BV	
536	2199792.3723m	4675618.3694m	1093.771m	LIND	
537	2199803.2547m	4675609.9805m	1095.103m	LIND	
538	2199803.9363m	4675611.4857m	1094.483m	NVL	
539	2199804.7989m	4675612.6419m	1093.928m	BV	
540	2199805.9135m	4675614.0392m	1093.912m	BV	
541	2199806.9003m	4675614.9215m	1094.081m	BV	
542	2199807.6480m	4675615.7887m	1094.433m	NVL	
543	2199808.6128m	4675616.5840m	1094.393m	LIND	
544	2199810.2208m	4675613.2284m	1094.549m	ALC	

545	2199811.5310m	4675612.3508m	1094.476m	ALC	
546	2199810.8899m	4675612.8386m	1093.372m	LOMO TUBO	
547	2199812.5479m	4675612.8161m	1094.642m	NVL	
548	2199811.5077m	4675613.5708m	1094.086m	NVL	
549	2199811.4006m	4675613.8138m	1093.353m	NVL	
550	2199810.9206m	4675613.9486m	1093.436m	NVL	
551	2199810.5396m	4675613.9605m	1094.258m	NVL	
552	2199809.9143m	4675614.7134m	1094.892m	NVL	
553	2199813.1758m	4675613.0903m	1094.603m	LIND	
554	2199811.7785m	4675614.3259m	1093.865m	LIND	
555	2199810.9453m	4675614.7726m	1094.068m	LIND	
556	2199811.6334m	4675614.3548m	1093.156m	LIND	
557	2199811.2674m	4675614.6147m	1093.175m	LIND	
558	2199810.4042m	4675615.1305m	1094.629m	LIND	
559	2199808.3321m	4675608.4589m	1094.615m	ALC	
560	2199807.9752m	4675607.9728m	1094.072m	ALC	
561	2199807.5843m	4675607.6067m	1094.411m	ALC	
562	2199806.5402m	4675608.1654m	1094.366m	ALC	
563	2199806.8730m	4675608.7645m	1094.137m	ALC	
564	2199807.3209m	4675609.1676m	1094.569m	ALC	
565	2199807.7360m	4675608.7317m	1093.497m	LOMO TUBO	
566	2199808.2476m	4675606.7019m	1095.201m	NVL	
567	2199808.7654m	4675607.4700m	1094.727m	NVL	
568	2199808.8913m	4675607.7701m	1094.796m	NVL	
569	2199809.2162m	4675608.2552m	1094.853m	NVL	
570	2199809.6811m	4675608.6293m	1094.520m	BV	
571	2199807.2734m	4675610.8046m	1094.170m	BV	
572	2199806.8758m	4675609.4755m	1094.885m	NVL	
573	2199805.7992m	4675608.0122m	1095.301m	LIND	
574	2199816.5017m	4675599.2572m	1096.422m	LIND	
575	2199816.8405m	4675599.8583m	1096.323m	NVL	
576	2199817.5852m	4675600.8175m	1095.284m	BV	
577	2199818.7748m	4675602.2338m	1095.320m	BV	
578	2199820.6244m	4675603.7414m	1095.450m	BV	
579	2199821.4772m	4675604.4636m	1095.967m	NVL	
580	2199822.6350m	4675605.2619m	1096.281m	LIND	
581	2199832.0922m	4675597.3156m	1097.408m	LIND	
582	2199830.9886m	4675595.8953m	1096.957m	NVL	
583	2199830.8818m	4675595.3952m	1096.250m	BV	
584	2199829.9313m	4675593.6170m	1096.343m	BV	
585	2199828.6956m	4675592.2756m	1096.352m	BV	
586	2199827.3631m	4675590.6792m	1097.627m	NVL	
587	2199838.2794m	4675582.4403m	1098.868m	LIND	
588	2199838.6052m	4675582.9904m	1098.517m	NVL	
589	2199839.0151m	4675583.5045m	1097.620m	BV	
590	2199840.0308m	4675584.4508m	1097.584m	BV	
591	2199841.4713m	4675586.2502m	1097.597m	BV	
592	2199842.2311m	4675586.9604m	1098.494m	NVL	
593	2199843.8109m	4675587.6359m	1098.802m	LIND	
594	2199852.2658m	4675580.8772m	1099.774m	LIND	
595	2199851.6973m	4675579.3071m	1099.994m	NVL	
596	2199851.2405m	4675578.5399m	1098.595m	BV	
597	2199849.6529m	4675577.1785m	1098.553m	BV	
598	2199848.7423m	4675575.7082m	1098.703m	BV	
599	2199848.2734m	4675575.1521m	1099.462m	NVL	
600	2199847.8306m	4675574.7390m	1099.876m	LIND	
601	2199858.6160m	4675565.8660m	1101.240m	LIND	
602	2199859.6467m	4675567.1523m	1100.117m	BV	
603	2199860.7274m	4675568.0566m	1100.126m	BV	
604	2199862.0950m	4675569.6440m	1100.065m	BV	
605	2199862.5949m	4675570.0981m	1100.680m	NVL	
606	2199863.6896m	4675571.1364m	1101.149m	LIND	
607	2199874.9252m	4675561.8086m	1102.388m	LIND	
608	2199874.3385m	4675560.6814m	1102.049m	NVL	
609	2199873.7958m	4675559.7833m	1101.401m	BV	
610	2199872.3661m	4675558.6289m	1101.464m	BV	
611	2199871.4805m	4675557.2166m	1101.512m	BV	
612	2199870.5189m	4675555.7313m	1102.588m	LIND	
613	2199880.8384m	4675546.8352m	1103.776m	LIND	
614	2199881.4882m	4675547.3674m	1103.298m	NVL	
615	2199882.1050m	4675548.1566m	1102.771m	BV	
616	2199883.2267m	4675549.1789m	1102.838m	BV	
617	2199884.6043m	4675550.8073m	1102.689m	BV	
618	2199885.4241m	4675551.3245m	1103.259m	NVL	
619	2199886.9559m	4675552.2120m	1103.797m	LIND	
620	2199893.4444m	4675536.1118m	1105.361m	LIND	

621	2199894.8319m	4675537.7352m	1104.384m	BV	
622	2199896.2966m	4675538.8416m	1104.399m	BV	
623	2199897.2461m	4675540.8588m	1104.245m	BV	
624	2199897.9669m	4675541.4170m	1105.056m	NVL	
625	2199898.7746m	4675542.5813m	1105.377m	LIND	
626	2199904.8519m	4675527.0680m	1106.362m	LIND	
627	2199905.5987m	4675527.9042m	1106.090m	NVL	
628	2199906.3684m	4675529.0484m	1105.609m	BV	
629	2199907.4600m	4675530.3167m	1105.545m	BV	
630	2199908.6365m	4675532.0040m	1105.573m	BV	
631	2199908.7904m	4675532.3781m	1105.822m	NVL	
632	2199909.7230m	4675533.7933m	1105.891m	LIND	
633	2199921.4357m	4675524.1656m	1107.584m	LIND	
634	2199920.8920m	4675523.3325m	1107.672m	NVL	
635	2199920.4252m	4675522.4883m	1106.736m	BV	
636	2199919.5067m	4675520.8951m	1106.751m	BV	
637	2199918.5072m	4675519.1288m	1106.860m	BV	
638	2199917.6833m	4675518.5686m	1107.309m	NVL	
639	2199917.1686m	4675517.6104m	1107.608m	LIND	
640	2199927.5420m	4675509.0153m	1108.391m	LIND	
641	2199928.0988m	4675509.5915m	1108.342m	NVL	
642	2199928.9116m	4675510.5267m	1107.843m	BV	
643	2199930.1932m	4675511.7671m	1107.765m	BV	
644	2199931.2928m	4675513.3514m	1107.830m	BV	
645	2199932.6133m	4675515.1568m	1108.453m	LIND	
646	2199941.3643m	4675508.0362m	1109.187m	LIND	
647	2199940.3065m	4675507.1709m	1108.760m	NVL	
648	2199940.1218m	4675506.1739m	1108.362m	BV	
649	2199939.1302m	4675504.6186m	1108.513m	BV	
650	2199938.1956m	4675503.3263m	1108.607m	BV	
651	2199937.4379m	4675502.2551m	1108.928m	LIND	
652	2199936.5162m	4675501.1649m	1109.183m	LIND	
653	2199954.5275m	4675496.5739m	1110.215m	LIND	
654	2199954.5238m	4675495.2749m	1109.986m	NVL	
655	2199954.0190m	4675494.8478m	1109.673m	BV	
656	2199953.0476m	4675492.6975m	1109.754m	BV	
657	2199951.8230m	4675491.2781m	1109.726m	BV	
658	2199950.7964m	4675489.8469m	1110.075m	LIND	
659	2199951.4363m	4675490.1800m	1110.259m	NVL	
660	2199958.7049m	4675484.3891m	1110.453m	GAS	
661	2199959.3520m	4675483.9043m	1110.573m	GAS	
662	2199960.0812m	4675483.2935m	1110.710m	GAS	
663	2199962.3711m	4675480.2421m	1110.976m	LIND	
664	2199962.9359m	4675480.9203m	1110.588m	BV	
665	2199965.0355m	4675482.3909m	1110.404m	BV	
666	2199966.6641m	4675483.6913m	1110.561m	BV	
667	2199967.7356m	4675485.3746m	1110.940m	LIND	
668	2199975.8417m	4675477.8529m	1111.919m	LIND	
669	2199973.7594m	4675475.3843m	1110.991m	BV	
670	2199972.1660m	4675473.3019m	1110.980m	BV	
671	2199971.7522m	4675472.4477m	1111.762m	NVL	
672	2199971.5124m	4675472.0687m	1111.692m	LIND	
673	2199975.2680m	4675476.8187m	1110.980m	BV	
674	2199983.1246m	4675471.1319m	1112.342m	LIND	
675	2199982.5211m	4675469.5448m	1111.755m	NVL	
676	2199982.3881m	4675469.3387m	1111.668m	BV	
677	2199981.0886m	4675467.7214m	1111.498m	BV	
678	2199979.9160m	4675466.1490m	1111.583m	BV	
679	2199979.3391m	4675465.7699m	1111.976m	NVL	
680	2199978.8032m	4675465.3237m	1112.078m	LIND	
681	2199986.6604m	4675457.8219m	1112.829m	LIND	
682	2199986.6712m	4675458.2959m	1112.691m	NVL	
683	2199986.9461m	4675458.8400m	1112.170m	BV	
684	2199988.3498m	4675459.9054m	1112.070m	BV	
685	2199989.7164m	4675461.3058m	1112.100m	BV	
686	2199990.5272m	4675462.0430m	1112.587m	NVL	
687	2199991.2139m	4675463.0392m	1112.927m	LIND	
688	2200001.7509m	4675452.2271m	1113.979m	LIND	
689	2200001.2691m	4675451.5310m	1113.587m	NVL	
690	2200000.5175m	4675450.3038m	1113.084m	BV	
691	2200000.0097m	4675449.3697m	1113.239m	BV	
692	2199998.2981m	4675448.0022m	1113.271m	BV	
693	2199997.1854m	4675446.8159m	1113.907m	LIND	
694	2200010.9329m	4675441.5557m	1115.061m	LIND	
695	2200010.1743m	4675440.3255m	1114.403m	BV	
696	2200009.1096m	4675439.0592m	1114.273m	BV	

697	2200007.5731m	4675437.3988m	1114.400m	BV	
698	2200006.3665m	4675436.0694m	1115.089m	BV	
699	2200019.7848m	4675431.3032m	1116.112m	LIND	
700	2200019.2891m	4675430.3651m	1115.651m	NVL	
701	2200018.4224m	4675429.1558m	1115.344m	BV	
702	2200017.2637m	4675428.1105m	1115.299m	BV	
703	2200015.8871m	4675426.7531m	1115.472m	BV	
704	2200015.0063m	4675425.9689m	1115.839m	LIND	
705	2200028.6286m	4675421.1957m	1117.268m	LIND	
706	2200027.8619m	4675420.3235m	1116.747m	NVL	
707	2200026.8331m	4675419.4642m	1116.395m	BV	
708	2200025.7844m	4675418.5269m	1116.605m	BV	
709	2200024.1998m	4675416.9394m	1116.679m	BV	
710	2200023.6011m	4675416.0233m	1116.975m	LIND	
711	2200037.8556m	4675410.6723m	1118.458m	LIND	
712	2200037.5138m	4675410.0062m	1117.944m	NVL	
713	2200036.5111m	4675408.7419m	1117.285m	BV	
714	2200035.4684m	4675407.7696m	1117.370m	BV	
715	2200034.3997m	4675406.5033m	1117.303m	BV	
716	2200033.7481m	4675405.3651m	1117.680m	NVL	
717	2200033.0292m	4675404.9779m	1117.796m	LIND	
718	2200043.3422m	4675394.3018m	1117.651m	LIND	
719	2200043.8623m	4675393.6490m	1117.382m	ACCESO	
720	2200044.7868m	4675395.5072m	1117.583m	BV	
721	2200046.1344m	4675396.9016m	1117.744m	BV	
722	2200047.0452m	4675397.9108m	1117.806m	BV	
723	2200048.6076m	4675399.7823m	1118.411m	LIND	
724	2200047.2042m	4675390.4469m	1117.373m	LIND	
725	2200046.7772m	4675390.7628m	1117.201m	ACCESO	
726	2200053.7349m	4675384.6317m	1117.802m	LIND	
727	2200053.9378m	4675385.0038m	1117.853m	BV	
728	2200054.5136m	4675385.5679m	1117.655m	BV	
729	2200055.3792m	4675387.0312m	1117.797m	BV	
730	2200057.5107m	4675388.6668m	1117.907m	BV	
731	2200058.9775m	4675389.6902m	1118.673m	LIND	
732	2200057.2492m	4675390.7947m	1118.050m	NVL	
733	2200057.0230m	4675391.2006m	1118.330m	NVL	
734	2200056.2987m	4675392.3104m	1118.096m	NVL	
735	2200055.3208m	4675391.8942m	1117.517m	NVL	
736	2200056.1312m	4675390.6034m	1117.671m	ALC	
737	2200055.3650m	4675391.2782m	1117.716m	ALC	
738	2200057.1340m	4675391.5077m	1117.712m	ALC	
739	2200056.3678m	4675392.1985m	1117.740m	ALC	
740	2200055.8329m	4675391.6563m	1117.259m	ALC	
741	2200055.9841m	4675391.0624m	1116.309m	BATEA TUBO	
742	2200052.9012m	4675386.9045m	1117.722m	ALC	
743	2200051.9080m	4675387.9062m	1117.825m	ALC	
744	2200052.2501m	4675387.3283m	1116.407m	LOMO TUBO	
745	2200051.5171m	4675387.4851m	1116.352m	NVL	
746	2200052.5783m	4675386.6734m	1116.411m	NVL	
747	2200052.7984m	4675386.2575m	1117.238m	NVL	
748	2200052.4855m	4675385.8364m	1117.617m	NVL	
749	2200051.1911m	4675387.4880m	1117.150m	NVL	
750	2200050.1692m	4675386.9057m	1117.253m	LIND	
751	2200052.3596m	4675385.7803m	1117.747m	LIND	
752	2200061.7434m	4675375.8070m	1117.975m	LIND	
753	2200062.2332m	4675376.2261m	1117.837m	BV	
754	2200063.6867m	4675378.0915m	1117.793m	BV	
755	2200066.0212m	4675379.9882m	1118.071m	BV	
756	2200066.4141m	4675380.3953m	1118.197m	LIND	
757	2200073.2823m	4675368.9422m	1118.303m	LIND	
758	2200072.6664m	4675368.4940m	1118.022m	BV	
759	2200071.2727m	4675367.4936m	1117.961m	BV	
760	2200069.4701m	4675366.1621m	1117.910m	BV	
761	2200069.0202m	4675365.7100m	1117.819m	LIND	
762	2200073.3893m	4675354.4652m	1118.340m	LIND	
763	2200074.3093m	4675354.6265m	1118.140m	BV	
764	2200076.3992m	4675355.0661m	1118.095m	BV	
765	2200078.7440m	4675355.8017m	1118.081m	BV	
766	2200080.1118m	4675356.4241m	1118.126m	LIND	
767	2200082.7533m	4675344.0069m	1118.519m	LIND	
768	2200081.8284m	4675343.4786m	1118.309m	BV	
769	2200079.5306m	4675342.8060m	1118.280m	BV	
770	2200077.3627m	4675342.3343m	1118.311m	BV	
771	2200076.4418m	4675341.9771m	1118.650m	LIND	
772	2200085.2381m	4675330.4826m	1118.750m	LIND	

773	2200083.4801m	4675330.2081m	1118.603m	BV	
774	2200081.8832m	4675330.0426m	1118.664m	BV	
775	2200079.7082m	4675329.9050m	1118.556m	BV	
776	2200078.2672m	4675329.8506m	1118.969m	LIND	
777	2200080.0523m	4675319.0141m	1119.410m	LIND	
778	2200080.8733m	4675319.1013m	1119.251m	NVL	
779	2200081.3772m	4675319.1435m	1118.849m	BV	
780	2200083.1233m	4675319.0700m	1119.027m	BV	
781	2200085.2672m	4675319.2596m	1118.968m	BV	
782	2200087.2961m	4675319.5601m	1119.319m	LIND	
783	2200081.4398m	4675313.7265m	1119.531m	GAS	
784	2200081.7110m	4675312.8876m	1119.410m	GAS	
785	2200081.7283m	4675311.6416m	1119.435m	GAS	
786	2200082.4568m	4675303.0328m	1119.855m	LIND	
787	2200083.6947m	4675303.2051m	1119.595m	BV	
788	2200085.0327m	4675303.3565m	1119.586m	BV	
789	2200086.7706m	4675303.5290m	1119.512m	BV	
790	2200088.6506m	4675303.6705m	1119.762m	NVL	
791	2200089.7235m	4675303.8338m	1120.180m	LIND	
792	2200090.1923m	4675290.3019m	1120.221m	NVL	
793	2200091.4232m	4675290.6883m	1121.158m	LIND	
794	2200089.1744m	4675290.1787m	1120.022m	BV	
795	2200087.0305m	4675289.8731m	1120.062m	BV	
796	2200085.4195m	4675289.6336m	1120.251m	BV	
797	2200084.4786m	4675289.4813m	1120.520m	LIND	
798	2200086.0637m	4675278.2528m	1121.398m	LIND	
799	2200086.8777m	4675278.4560m	1121.060m	NVL	
800	2200087.5186m	4675278.5062m	1120.711m	BV	
801	2200088.9086m	4675278.4976m	1120.728m	BV	
802	2200090.4956m	4675278.6510m	1120.789m	BV	
803	2200091.9095m	4675278.8624m	1121.026m	NVL	
804	2200093.1255m	4675279.0488m	1122.112m	LIND	
805	2200095.4939m	4675263.3284m	1123.495m	LIND	
806	2200095.2159m	4675263.2293m	1123.492m	NVL	
807	2200094.0750m	4675262.9340m	1122.157m	NVL	
808	2200093.1000m	4675262.8948m	1121.726m	BV	
809	2200091.4140m	4675262.8203m	1121.723m	BV	
810	2200089.8672m	4675262.2538m	1121.707m	BV	
811	2200088.9133m	4675262.0476m	1122.186m	LIND	
812	2200090.3980m	4675248.6820m	1122.936m	LIND	
813	2200091.0590m	4675248.8322m	1122.693m	NVL	
814	2200091.6289m	4675248.9253m	1122.290m	BV	
815	2200093.3650m	4675248.7948m	1122.322m	BV	
816	2200095.0429m	4675248.8883m	1122.482m	BV	
817	2200096.4139m	4675248.9887m	1123.309m	NVL	
818	2200097.3518m	4675249.3019m	1124.054m	LIND	
819	2200098.4079m	4675234.8092m	1125.067m	LIND	
820	2200097.2949m	4675234.9049m	1124.384m	NVL	
821	2200096.2549m	4675234.9406m	1123.861m	NVL	
822	2200095.3089m	4675234.8854m	1123.356m	BV	
823	2200093.9868m	4675235.0150m	1123.333m	BV	
824	2200092.0537m	4675235.3685m	1123.332m	BV	
825	2200091.2036m	4675235.8782m	1123.411m	LIND	
826	2200091.4488m	4675235.2753m	1123.803m	ALC	
827	2200091.1841m	4675233.9422m	1123.836m	ALC	
828	2200091.1069m	4675234.8072m	1122.654m	LOMO TUBO	
829	2200090.9168m	4675235.1131m	1123.103m	NVL	
830	2200090.7750m	4675234.5401m	1123.169m	NVL	
831	2200090.7939m	4675234.6371m	1122.332m	NVL	
832	2200090.6889m	4675234.9381m	1122.303m	NVL	
833	2200096.0193m	4675233.2406m	1123.714m	ALC	
834	2200096.2530m	4675234.5066m	1123.821m	ALC	
835	2200097.5091m	4675234.1030m	1123.672m	ALC	
836	2200097.3284m	4675233.0099m	1123.791m	ALC	
837	2200096.4494m	4675233.1597m	1123.286m	ALC	
838	2200097.4215m	4675232.6460m	1124.507m	NVL	
839	2200096.7086m	4675232.4558m	1123.655m	NVL	
840	2200096.1135m	4675232.6776m	1123.318m	NVL	
841	2200095.6845m	4675232.7995m	1123.640m	NVL	
842	2200095.2245m	4675232.8194m	1123.512m	BV	
843	2200088.3775m	4675221.8554m	1124.457m	LIND	
844	2200089.0747m	4675221.3446m	1124.010m	BV	
845	2200090.8718m	4675221.0011m	1123.936m	BV	
846	2200092.6379m	4675220.5916m	1124.021m	BV	
847	2200093.9990m	4675220.3420m	1124.976m	NVL	
848	2200086.4301m	4675209.1139m	1125.504m	LIND	

849	2200087.2121m	4675208.9641m	1124.905m	BV	
850	2200088.6593m	4675208.5665m	1124.727m	BV	
851	2200090.6403m	4675208.4091m	1124.852m	BV	
852	2200092.3433m	4675208.2295m	1125.776m	NVL	
853	2200086.8940m	4675195.0970m	1126.301m	LIND	
854	2200087.3730m	4675195.1271m	1125.789m	BV	
855	2200089.0351m	4675194.8096m	1125.660m	BV	
856	2200090.7930m	4675195.1161m	1125.683m	BV	
857	2200092.1349m	4675195.5875m	1126.194m	NVL	
858	2200092.6379m	4675195.5976m	1126.590m	NVL	
859	2200093.2268m	4675195.8748m	1126.562m	LIND	
860	2200089.4856m	4675182.4327m	1126.778m	LIND	
861	2200090.0675m	4675182.5669m	1126.339m	BV	
862	2200091.6914m	4675183.2344m	1126.217m	BV	
863	2200093.5492m	4675183.6559m	1126.273m	BV	
864	2200094.6422m	4675183.7362m	1126.775m	NVL	
865	2200095.7512m	4675183.6445m	1127.094m	LIND	
866	2200098.5853m	4675172.7523m	1127.755m	LIND	
867	2200097.8484m	4675172.5531m	1127.244m	NVL	
868	2200096.5435m	4675171.9417m	1126.690m	BV	
869	2200095.0057m	4675171.4163m	1126.686m	BV	
870	2200093.5439m	4675170.7629m	1126.701m	BV	
871	2200092.5600m	4675170.4206m	1127.247m	LIND	
872	2200097.5070m	4675156.0960m	1127.641m	LIND	
873	2200098.1249m	4675156.4052m	1127.265m	BV	
874	2200099.6288m	4675156.7646m	1127.275m	BV	
875	2200101.3967m	4675157.0881m	1127.331m	BV	
876	2200102.5685m	4675157.7194m	1127.821m	NVL	
877	2200103.6463m	4675158.3267m	1128.744m	LIND	
878	2200106.1783m	4675147.9344m	1127.578m	ALC	
879	2200106.6712m	4675148.0146m	1127.316m	ALC	
880	2200107.0276m	4675146.8127m	1127.350m	ALC	
881	2200106.4646m	4675146.8005m	1127.535m	ALC	
882	2200106.8715m	4675146.8996m	1126.610m	ALC	
883	2200106.5903m	4675147.8575m	1126.713m	ALC	
884	2200107.1987m	4675146.4437m	1128.015m	NVL	
885	2200107.8515m	4675146.9639m	1128.605m	NVL	
886	2200107.6562m	4675148.1158m	1128.388m	NVL	
887	2200106.8001m	4675148.3356m	1128.023m	NVL	
888	2200105.9240m	4675148.8813m	1127.943m	NVL	
889	2200106.9678m	4675146.1356m	1127.938m	NVL	
890	2200100.5499m	4675145.5458m	1127.813m	ALC	
891	2200099.5379m	4675145.5746m	1126.917m	NVL	
892	2200100.0140m	4675145.2037m	1127.464m	NVL	
893	2200099.2216m	4675146.7155m	1126.485m	NVL	
894	2200099.8936m	4675146.8307m	1126.793m	LOMO TUBO	
895	2200101.9571m	4675141.5202m	1128.048m	NVL	
896	2200102.5130m	4675141.5864m	1127.823m	BV	
897	2200104.1139m	4675142.1658m	1127.758m	BV	
898	2200105.9818m	4675142.4694m	1127.757m	BV	
899	2200107.7588m	4675142.5609m	1128.233m	NVL	
900	2200108.9258m	4675142.5492m	1129.050m	NVL	
901	2200110.2978m	4675128.2276m	1128.554m	LIND	
902	2200108.3519m	4675127.9030m	1128.101m	NVL	
903	2200106.2421m	4675127.1574m	1128.127m	BV	
904	2200104.3261m	4675126.9709m	1128.351m	BV	
905	2200103.3481m	4675126.9686m	1128.753m	LIND	
906	2200102.2382m	4675116.0933m	1129.931m	LIND	
907	2200102.7542m	4675115.9335m	1129.391m	NVL	
908	2200103.9403m	4675115.7948m	1128.828m	BV	
909	2200105.7404m	4675115.3333m	1129.069m	BV	
910	2200107.6544m	4675115.2228m	1129.199m	BV	
911	2200109.0074m	4675115.1762m	1129.450m	NVL	
912	2200109.6725m	4675115.0394m	1129.544m	LIND	
913	2200100.8663m	4675105.0559m	1130.320m	LIND	
914	2200101.4223m	4675104.9641m	1130.109m	NVL	
915	2200102.5803m	4675104.9144m	1129.367m	BV	
916	2200104.5754m	4675104.6010m	1129.555m	BV	
917	2200106.3385m	4675104.1055m	1129.575m	BV	
918	2200107.0416m	4675104.0527m	1130.604m	NVL	
919	2200107.5576m	4675103.7848m	1131.056m	LIND	
920	2200107.4916m	4675093.3608m	1132.202m	LIND	
921	2200106.8166m	4675093.3306m	1131.991m	NVL	
922	2200105.0947m	4675092.8641m	1130.568m	BV	
923	2200103.5248m	4675092.6377m	1130.477m	BV	
924	2200101.8548m	4675092.4622m	1130.401m	BV	

925	2200100.2229m	4675092.0577m	1130.957m	LIND	
926	2200102.7905m	4675079.4745m	1131.421m	LIND	
927	2200103.2874m	4675079.5766m	1131.191m	NVL	
928	2200103.9535m	4675079.4948m	1130.881m	BV	
929	2200105.6564m	4675079.7223m	1130.994m	BV	
930	2200107.5703m	4675080.0478m	1131.014m	BV	
931	2200109.3081m	4675080.5833m	1131.936m	NVL	
932	2200109.9721m	4675080.7565m	1132.790m	LIND	
933	2200105.1620m	4675067.0031m	1132.318m	LIND	
934	2200105.7779m	4675067.1083m	1131.940m	NVL	
935	2200106.3779m	4675067.1735m	1131.483m	BV	
936	2200108.4039m	4675067.0570m	1131.472m	BV	
937	2200110.2429m	4675067.2286m	1131.413m	BV	
938	2200111.5259m	4675067.3299m	1131.692m	NVL	
939	2200112.7257m	4675067.7463m	1132.547m	LIND	
940	2200106.8307m	4675057.1026m	1132.507m	LIND	
941	2200103.2955m	4675054.4346m	1132.939m	LIND	
942	2200103.3866m	4675053.8876m	1132.909m	ACCESO	
943	2200104.2078m	4675049.7829m	1133.019m	ACCESO	
944	2200104.3259m	4675049.3759m	1133.089m	LIND	
945	2200104.3289m	4675049.3859m	1133.104m	LIND	
946	2200108.8432m	4675048.2522m	1132.659m	LIND	
947	2200109.4310m	4675052.6333m	1131.980m	BV	
948	2200108.8327m	4675057.3692m	1131.817m	BV	
949	2200110.6526m	4675057.4927m	1131.887m	BV	
950	2200112.5285m	4675057.7602m	1131.830m	BV	
951	2200114.4554m	4675058.2137m	1132.671m	LIND	
952	2200109.4438m	4675046.1563m	1132.693m	GAS	
953	2200109.3316m	4675047.0003m	1133.007m	GAS	
954	2200109.5962m	4675044.8484m	1132.833m	GAS	
955	2200109.4278m	4675039.1883m	1133.687m	LIND	
956	2200110.0537m	4675039.3415m	1133.291m	NVL	
957	2200110.9437m	4675039.4208m	1132.668m	BV	
958	2200113.1356m	4675039.5844m	1132.651m	BV	
959	2200115.4296m	4675039.6930m	1132.544m	BV	
960	2200116.5476m	4675039.8583m	1133.096m	NVL	
961	2200117.2295m	4675039.9205m	1133.142m	LIND	
962	2200110.4624m	4675026.0796m	1134.132m	LIND	
963	2200111.6125m	4675025.7169m	1133.200m	ACCESO	
964	2200111.9311m	4675020.0590m	1132.960m	ACCESO	
965	2200111.7462m	4675019.6370m	1133.554m	LIND	
966	2200113.0413m	4675019.4033m	1132.472m	BV	
967	2200114.6204m	4675019.2348m	1132.478m	BV	
968	2200116.8725m	4675018.8254m	1132.617m	BV	
969	2200118.0025m	4675018.6327m	1133.245m	LIND	
970	2200107.4943m	4675008.5958m	1131.006m	LIND	
971	2200108.5035m	4675007.9951m	1130.763m	BV	
972	2200110.1898m	4675006.9455m	1130.884m	BV	
973	2200112.0591m	4675005.6881m	1130.915m	BV	
974	2200112.6792m	4675005.3412m	1131.055m	LIND	
975	2200098.3172m	4674998.3342m	1129.932m	LIND	
976	2200098.8164m	4674997.8313m	1129.533m	BV	
977	2200100.0977m	4674996.4847m	1129.343m	BV	
978	2200101.1733m	4674994.6290m	1129.402m	BV	
979	2200102.2695m	4674993.8493m	1129.420m	LIND	
980	2200094.1807m	4674993.0710m	1129.280m	BV	
981	2200092.1208m	4674989.1315m	1128.992m	BV	
982	2200091.2147m	4674985.8472m	1129.034m	BV	
983	2200090.6784m	4674979.8871m	1129.085m	BV	
984	2200092.9225m	4674979.3737m	1129.055m	BV	
985	2200095.0865m	4674979.6403m	1128.999m	BV	
986	2200095.6079m	4674985.3014m	1128.919m	BV	
987	2200093.3347m	4674985.8698m	1128.938m	BV	
988	2200096.4132m	4674987.8307m	1128.981m	BV	
989	2200094.3229m	4674988.6591m	1129.010m	BV	
990	2200098.3252m	4674991.4132m	1128.888m	BV	
991	2200096.7358m	4674992.8188m	1129.252m	BV	
992	2200094.2812m	4674994.7591m	1129.537m	LIND	
993	2200090.8306m	4674989.8181m	1129.007m	LIND	
994	2200089.6487m	4674985.8698m	1129.038m	LIND	
995	2200089.0125m	4674979.3186m	1129.082m	LIND	
996	2200098.8346m	4674989.8844m	1129.144m	M CONTEN	
997	2200099.1246m	4674989.8864m	1129.156m	M CONTEN	
998	2200097.7161m	4674977.2200m	1128.741m	M CONTEN	
999	2200097.9671m	4674977.2191m	1128.743m	M CONTEN	
1000	2200097.6626m	4674975.5260m	1127.915m	LIND	

1001	2200096.2407m	4674975.3596m	1128.754m	NVL	
1002	2200095.1106m	4674975.5073m	1129.106m	BV	
1003	2200096.2603m	4674983.8686m	1128.878m	NVL	
1004	2200093.1045m	4674975.7427m	1129.194m	BV	
1005	2200091.0135m	4674976.0682m	1129.255m	BV	
1006	2200089.3895m	4674975.8307m	1128.817m	LIND	
1007	2200087.8831m	4674977.4543m	1128.341m	M CONTEN	
1008	2200087.6971m	4674977.4232m	1128.317m	M CONTEN	
1009	2200086.7582m	4674984.2210m	1128.365m	M CONTEN	
1010	2200086.9542m	4674984.2270m	1128.344m	M CONTEN	
1011	2200087.6950m	4674981.0912m	1128.275m	NVL	
1012	2200088.0125m	4674986.6523m	1128.350m	NVL	
1013	2200087.0893m	4674987.3431m	1127.634m	NVL	
1014	2200088.5756m	4674989.8185m	1128.567m	NVL	
1015	2200089.2460m	4674991.7907m	1128.688m	NVL	
1016	2200098.1632m	4674966.2362m	1129.559m	LIND	
1017	2200097.0852m	4674966.1489m	1129.557m	BV	
1018	2200094.4223m	4674965.8431m	1129.632m	BV	
1019	2200092.6914m	4674965.6456m	1129.758m	BV	
1020	2200090.9534m	4674965.4451m	1129.890m	LIND	
1021	2200099.0928m	4674956.9044m	1130.829m	LIND	
1022	2200097.8929m	4674956.6791m	1130.712m	BV	
1023	2200096.0509m	4674956.5166m	1130.721m	BV	
1024	2200093.4000m	4674956.1898m	1130.587m	BV	
1025	2200091.8781m	4674956.1144m	1131.349m	LIND	
1026	2200096.6642m	4674944.9207m	1132.694m	LIND	
1027	2200096.1431m	4674945.1096m	1132.177m	BV	
1028	2200093.7067m	4674946.7309m	1132.179m	BV	
1029	2200091.6974m	4674947.6014m	1132.092m	BV	
1030	2200090.3473m	4674948.2540m	1132.670m	LIND	
1031	2200095.3527m	4674942.9684m	1132.984m	LIND	
1032	2200094.6497m	4674943.1132m	1132.762m	ACCESO	
1033	2200091.1492m	4674937.8962m	1133.543m	ACCESO	
1034	2200093.9407m	4674936.0570m	1134.152m	ACCESO	
1035	2200097.7738m	4674939.0331m	1134.014m	ACCESO	
1036	2200097.7105m	4674940.4180m	1133.968m	LIND	
1037	2200092.2114m	4674937.0525m	1133.874m	LIND	
1038	2200091.4853m	4674937.2873m	1133.601m	LIND	
1039	2200089.4101m	4674934.6387m	1135.053m	LIND	
1040	2200088.6240m	4674935.0135m	1134.592m	NVL	
1041	2200087.9388m	4674935.4763m	1134.042m	BV	
1042	2200086.4445m	4674936.7839m	1134.073m	BV	
1043	2200084.4830m	4674938.3883m	1134.257m	BV	
1044	2200084.0209m	4674938.7762m	1134.730m	NVL	
1045	2200083.4917m	4674939.5920m	1135.035m	LIND	
1046	2200083.5047m	4674925.4241m	1137.228m	LIND	
1047	2200082.5736m	4674925.6868m	1136.420m	NVL	
1048	2200081.9506m	4674925.7786m	1136.052m	BV	
1049	2200079.7513m	4674926.7610m	1136.117m	BV	
1050	2200077.3660m	4674927.8723m	1136.137m	BV	
1051	2200076.3769m	4674928.2851m	1136.830m	LIND	
1053	2199691.5539m	4674232.6491m	1180.935m	BV	
1054	2199691.9830m	4674232.1842m	1180.804m	LIND	
1055	2199690.8096m	4674233.6969m	1180.861m	BV	
1056	2199689.7753m	4674234.7266m	1180.700m	BV	
1057	2199689.1521m	4674235.5464m	1180.855m	LIND	
1058	2199695.2611m	4674235.6741m	1180.747m	BV	
1059	2199694.2397m	4674237.0529m	1180.673m	BV	
1060	2199693.1243m	4674238.4465m	1180.840m	BV	
1061	2199698.5389m	4674236.3831m	1180.868m	BV	
1062	2199699.9034m	4674234.3295m	1180.937m	BV	
1063	2199699.8342m	4674231.8014m	1181.187m	BV	
1064	2199699.7589m	4674229.2864m	1181.126m	BV	
1065	2199701.3410m	4674228.8559m	1181.356m	BV	
1066	2199702.8140m	4674228.7743m	1180.954m	BV	
1067	2199702.9560m	4674232.4643m	1180.819m	BV	
1068	2199701.2590m	4674232.2588m	1181.054m	BV	
1069	2199703.0387m	4674236.8263m	1180.727m	BV	
1070	2199696.4745m	4674234.0525m	1181.352m	LIND	
1071	2199698.0858m	4674233.1959m	1181.747m	LIND	
1072	2199698.7587m	4674229.7171m	1181.541m	LIND	
1073	2199706.2174m	4674241.4832m	1181.368m	LIND	
1074	2199703.3554m	4674241.4604m	1180.589m	BV	
1075	2199700.9452m	4674242.4017m	1180.455m	BV	
1076	2199698.5289m	4674243.4191m	1180.327m	BV	
1077	2199695.8215m	4674244.8513m	1181.068m	LIND	

1078	2199700.8497m	4674251.2517m	1179.860m	ALC	
1079	2199699.8948m	4674247.3364m	1180.242m	ALC	
1080	2199697.5118m	4674247.1568m	1179.777m	ALC	
1081	2199699.4705m	4674251.9943m	1180.270m	ALC	
1082	2199700.0679m	4674250.6025m	1179.271m	LOMO TUBO	
1083	2199699.0514m	4674252.1712m	1179.463m	NVL	
1084	2199699.3436m	4674251.6733m	1178.730m	NVL	
1085	2199699.1971m	4674249.8513m	1178.250m	NVL	
1086	2199697.5573m	4674248.9858m	1179.743m	NVL	
1087	2199705.3350m	4674250.2380m	1179.956m	ALC	
1088	2199705.3285m	4674248.4310m	1180.080m	ALC	
1089	2199706.5577m	4674247.6673m	1179.815m	ALC	
1090	2199706.6569m	4674250.7193m	1180.064m	ALC	
1091	2199706.8247m	4674251.2844m	1180.218m	LIND	
1092	2199706.1484m	4674248.8202m	1178.741m	BATEA TUBO	
1093	2199705.5185m	4674248.3530m	1179.973m	NVL	
1094	2199706.9614m	4674248.5874m	1180.218m	NVL	
1095	2199705.9878m	4674251.0512m	1180.039m	NVL	
1096	2199704.6754m	4674248.8218m	1180.020m	BV	
1097	2199702.8354m	4674248.9253m	1180.089m	BV	
1098	2199701.1892m	4674249.5618m	1180.077m	BV	
1099	2199707.2904m	4674259.3315m	1179.547m	BV	
1100	2199707.8664m	4674259.3487m	1179.904m	LIND	
1101	2199705.4603m	4674259.7370m	1179.425m	BV	
1102	2199703.4742m	4674260.1825m	1179.328m	BV	
1103	2199701.2200m	4674260.7498m	1180.006m	LIND	
1104	2199710.6690m	4674271.4605m	1179.284m	LIND	
1105	2199709.9660m	4674271.6293m	1179.040m	NVL	
1106	2199709.4910m	4674271.7091m	1178.595m	BV	
1107	2199707.9508m	4674272.2667m	1178.543m	BV	
1108	2199706.3807m	4674272.7623m	1178.570m	BV	
1109	2199705.4896m	4674272.9460m	1178.862m	NVL	
1110	2199704.6596m	4674273.0048m	1179.289m	LIND	
1111	2199707.5186m	4674283.5626m	1178.837m	LIND	
1112	2199708.3627m	4674283.2918m	1178.324m	NVL	
1113	2199709.0658m	4674283.0760m	1177.655m	BV	
1114	2199710.4790m	4674282.2044m	1177.665m	BV	
1115	2199712.1371m	4674281.9919m	1177.863m	BV	
1116	2199712.4871m	4674282.0360m	1178.340m	NVL	
1117	2199713.3851m	4674281.8792m	1178.576m	LIND	
1118	2199711.1875m	4674294.8946m	1177.692m	LIND	
1119	2199711.2924m	4674295.2336m	1177.566m	ACCESO	
1120	2199713.0553m	4674299.0461m	1177.238m	ACCESO	
1121	2199713.8843m	4674299.1974m	1177.343m	LIND	
1122	2199715.1115m	4674298.4267m	1176.635m	BV	
1123	2199717.0018m	4674297.3292m	1176.788m	BV	
1124	2199718.8951m	4674296.2308m	1176.785m	BV	
1125	2199719.2911m	4674296.0499m	1177.003m	NVL	
1126	2199719.9092m	4674295.7921m	1177.231m	LIND	
1127	2199727.0815m	4674305.2941m	1176.197m	LIND	
1128	2199726.5203m	4674306.1419m	1176.179m	NVL	
1129	2199726.0662m	4674306.5148m	1175.772m	BV	
1130	2199724.8309m	4674307.7344m	1175.861m	BV	
1131	2199723.2946m	4674308.8310m	1175.906m	BV	
1132	2199722.2214m	4674309.3777m	1176.335m	LIND	
1133	2199731.1593m	4674309.6242m	1176.217m	LIND	
1134	2199731.0072m	4674310.1132m	1176.267m	NVL	
1135	2199730.4510m	4674310.8620m	1175.347m	BV	
1136	2199729.2606m	4674312.2517m	1175.564m	BV	
1137	2199728.0482m	4674313.6833m	1175.533m	BV	
1138	2199727.2990m	4674314.3951m	1175.777m	LIND	
1139	2199734.8348m	4674311.5022m	1175.662m	LIND	
1140	2199734.4446m	4674312.2991m	1175.709m	NVL	
1141	2199733.9983m	4674313.3100m	1175.182m	BV	
1142	2199733.1189m	4674314.8498m	1175.908m	BV	
1143	2199732.1543m	4674316.7085m	1175.342m	BV	
1144	2199731.4071m	4674317.6473m	1175.714m	LIND	
1145	2199738.7752m	4674317.1274m	1181.411m	LIND	
1146	2199738.7713m	4674313.3614m	1178.969m	LIND	
1147	2199738.4359m	4674314.8663m	1178.197m	BV	
1148	2199737.5822m	4674317.0880m	1178.112m	BV	
1149	2199736.9357m	4674319.0918m	1177.311m	BV	
1150	2199748.3971m	4674321.2341m	1174.479m	LIND	
1151	2199748.8458m	4674318.8002m	1174.476m	BV	
1152	2199749.3034m	4674316.4623m	1174.160m	BV	
1153	2199749.3277m	4674315.5473m	1174.847m	NVL	

1154	2199749.6239m	4674314.6744m	1175.488m	LIND	
1155	2199749.2530m	4674321.6073m	1174.367m	ACCESO	
1156	2199751.8244m	4674323.6540m	1174.192m	ACCESO	
1157	2199754.9238m	4674322.1889m	1174.107m	LIND	
1158	2199755.4371m	4674321.3340m	1174.052m	BV	
1159	2199755.6935m	4674319.5921m	1174.022m	BV	
1160	2199755.8282m	4674317.3911m	1173.765m	BV	
1161	2199755.9624m	4674316.5762m	1174.425m	NVL	
1162	2199755.9826m	4674315.6712m	1175.188m	LIND	
1163	2199767.7612m	4674317.1445m	1174.376m	LIND	
1164	2199767.5469m	4674318.3864m	1173.766m	BV	
1165	2199767.5233m	4674320.2934m	1173.531m	BV	
1166	2199767.2379m	4674322.0253m	1173.583m	BV	
1167	2199766.9985m	4674323.4443m	1173.887m	LIND	
1168	2199777.0149m	4674328.8441m	1173.533m	LIND	
1169	2199777.9222m	4674328.0163m	1173.265m	NVL	
1170	2199778.5153m	4674327.7435m	1173.041m	BV	
1171	2199779.9856m	4674326.4539m	1173.156m	BV	
1172	2199781.3530m	4674325.1903m	1173.166m	BV	
1173	2199782.3683m	4674324.0216m	1173.812m	LIND	
1174	2199784.7844m	4674341.5273m	1173.369m	LIND	
1175	2199785.4114m	4674341.3434m	1173.147m	NVL	
1176	2199786.5546m	4674340.9228m	1172.500m	BV	
1177	2199788.8089m	4674339.8704m	1172.631m	BV	
1178	2199790.6631m	4674339.0289m	1172.668m	BV	
1179	2199791.6563m	4674338.3462m	1173.302m	LIND	
1180	2199791.5727m	4674340.3922m	1172.987m	ALC	
1181	2199792.2573m	4674341.7884m	1172.924m	ALC	
1182	2199791.9967m	4674340.3503m	1172.307m	ALC	
1183	2199792.7234m	4674341.6315m	1172.285m	ALC	
1184	2199792.1466m	4674340.9403m	1172.086m	LOMO TUBO	
1185	2199792.9093m	4674341.8115m	1172.849m	NVL	
1186	2199792.2818m	4674340.0334m	1172.859m	NVL	
1187	2199792.7407m	4674340.5475m	1172.819m	NVL	
1188	2199793.1562m	4674342.3596m	1173.167m	LIND	
1189	2199792.2811m	4674339.1244m	1173.640m	LIND	
1190	2199787.3810m	4674342.9020m	1172.952m	ALC	
1191	2199788.0577m	4674344.0862m	1172.960m	ALC	
1192	2199787.5738m	4674343.5180m	1171.738m	ALC	
1193	2199786.3870m	4674342.7737m	1172.739m	NVL	
1194	2199787.4385m	4674344.8570m	1172.848m	NVL	
1195	2199786.7086m	4674344.2548m	1171.502m	NVL	
1196	2199785.5058m	4674343.7875m	1172.720m	NVL	
1197	2199786.9704m	4674345.1969m	1173.083m	NVL	
1198	2199787.2701m	4674346.1200m	1173.435m	LIND	
1199	2199792.8339m	4674343.3955m	1172.894m	NVL	
1200	2199793.5200m	4674343.0707m	1173.346m	LIND	
1201	2199792.5108m	4674343.4834m	1172.469m	BV	
1202	2199790.9486m	4674344.1820m	1172.377m	BV	
1203	2199789.0044m	4674345.0904m	1172.374m	BV	
1204	2199797.5070m	4674353.7208m	1171.419m	BV	
1205	2199797.8851m	4674353.4189m	1171.872m	NVL	
1206	2199798.3941m	4674353.2171m	1172.098m	LIND	
1207	2199795.9408m	4674354.4704m	1171.451m	BV	
1208	2199794.3215m	4674355.5029m	1171.522m	BV	
1209	2199793.3404m	4674355.7627m	1172.072m	NVL	
1210	2199792.6103m	4674356.1705m	1172.343m	LIND	
1211	2199804.9541m	4674363.8579m	1170.823m	LIND	
1212	2199803.7129m	4674364.5896m	1170.194m	BV	
1213	2199802.5946m	4674365.6533m	1170.035m	BV	
1214	2199801.1864m	4674366.5489m	1170.101m	BV	
1215	2199800.2242m	4674367.1866m	1170.576m	NVL	
1216	2199799.4582m	4674367.3314m	1170.828m	LIND	
1217	2199811.5382m	4674374.3128m	1169.655m	LIND	
1218	2199810.8811m	4674374.6616m	1169.460m	NVL	
1219	2199810.4671m	4674374.8055m	1169.168m	BV	
1220	2199809.2618m	4674375.9001m	1169.241m	BV	
1221	2199807.8495m	4674376.9367m	1169.320m	BV	
1222	2199806.9994m	4674377.2915m	1169.795m	NVL	
1223	2199806.1912m	4674377.7763m	1169.894m	LIND	
1224	2199818.3084m	4674384.3727m	1169.015m	LIND	
1225	2199819.1920m	4674385.6749m	1168.914m	LIND	
1226	2199817.1353m	4674384.7903m	1168.849m	BV	
1227	2199815.5240m	4674385.6309m	1168.838m	BV	
1228	2199814.1088m	4674386.2645m	1168.888m	BV	
1229	2199812.4866m	4674387.1100m	1169.039m	LIND	

1230	2199812.7669m	4674385.9631m	1169.118m	GAS	
1231	2199813.2107m	4674386.7502m	1169.002m	GAS	
1232	2199813.6285m	4674387.5003m	1169.004m	GAS	
1233	2199819.4999m	4674386.0280m	1168.890m	ACCESO	
1234	2199822.3161m	4674385.4818m	1169.365m	ACCESO	
1235	2199821.0645m	4674390.8934m	1168.820m	ACCESO	
1236	2199823.7070m	4674389.2222m	1168.942m	ACCESO	
1237	2199821.1845m	4674391.1175m	1168.703m	LIND	
1238	2199822.8363m	4674402.5339m	1168.455m	LIND	
1239	2199820.7843m	4674402.6374m	1168.199m	BV	
1240	2199819.2722m	4674402.7559m	1168.161m	BV	
1241	2199817.5092m	4674402.8024m	1168.310m	BV	
1242	2199816.7442m	4674402.7772m	1168.533m	LIND	
1243	2199824.1463m	4674413.1693m	1168.101m	LIND	
1244	2199823.1162m	4674413.6120m	1167.793m	NVL	
1245	2199822.3822m	4674413.6758m	1167.235m	BV	
1246	2199821.1761m	4674414.0215m	1167.347m	BV	
1247	2199819.6759m	4674414.5310m	1167.403m	BV	
1248	2199818.6839m	4674414.6988m	1168.253m	LIND	
1249	2199829.4222m	4674424.3408m	1168.031m	LIND	
1250	2199828.2641m	4674424.6485m	1167.077m	NVL	
1251	2199826.2638m	4674425.6179m	1166.263m	BV	
1252	2199824.9026m	4674426.3275m	1166.373m	BV	
1253	2199823.4135m	4674426.8101m	1166.556m	BV	
1254	2199822.8284m	4674427.0229m	1166.810m	LIND	
1255	2199835.1057m	4674436.5724m	1166.690m	LIND	
1256	2199832.3203m	4674438.0416m	1165.857m	BV	
1257	2199831.0361m	4674438.8302m	1165.678m	BV	
1258	2199829.3459m	4674439.4978m	1165.668m	BV	
1259	2199827.8448m	4674439.9123m	1166.177m	LIND	
1260	2199841.2685m	4674448.0221m	1165.816m	LIND	
1261	2199841.8622m	4674449.0953m	1165.774m	ACCESO	
1262	2199843.1979m	4674453.9276m	1165.684m	ACCESO	
1263	2199840.0438m	4674457.8168m	1165.225m	LIND	
1264	2199838.9977m	4674458.2015m	1165.325m	BV	
1265	2199837.2396m	4674458.2940m	1165.251m	BV	
1266	2199835.0786m	4674458.4664m	1165.192m	BV	
1267	2199833.3624m	4674458.9999m	1165.119m	LIND	
1268	2199833.9226m	4674465.6470m	1164.606m	BOX	
1269	2199833.9550m	4674464.1121m	1164.530m	BOX	
1270	2199831.8392m	4674467.0695m	1164.203m	BOX	
1271	2199832.9573m	4674463.0678m	1164.212m	BOX	
1272	2199833.9637m	4674465.3251m	1162.752m	BOX	
1273	2199833.4705m	4674466.0549m	1165.379m	BOX	
1274	2199833.6330m	4674464.2810m	1164.681m	BOX	
1275	2199832.2129m	4674464.4626m	1164.789m	NVL	
1276	2199830.9315m	4674466.0602m	1165.034m	NVL	
1277	2199832.9891m	4674467.4868m	1166.512m	NVL	
1278	2199839.7422m	4674466.9697m	1165.463m	BOX	
1279	2199839.9485m	4674465.8407m	1162.903m	BOX	
1280	2199840.6134m	4674466.3709m	1162.918m	BOX	
1281	2199840.5154m	4674466.3249m	1164.344m	BOX	
1282	2199838.5220m	4674464.2743m	1163.215m	BOX	
1283	2199840.2623m	4674462.9998m	1162.679m	BOX	
1284	2199840.4493m	4674463.0809m	1161.859m	BOX	
1285	2199839.9958m	4674464.8847m	1161.541m	NVL	
1286	2199841.5301m	4674463.8622m	1161.914m	NVL	
1287	2199839.2766m	4674465.4295m	1161.982m	NVL	
1288	2199840.8432m	4674466.9770m	1163.266m	NVL	
1289	2199837.6472m	4674463.4121m	1164.221m	BV	
1290	2199837.5122m	4674466.9070m	1164.093m	BV	
1291	2199833.8352m	4674466.9120m	1164.087m	BV	
1292	2199833.8923m	4674463.2130m	1164.115m	BV	
1293	2199838.1599m	4674478.7032m	1164.797m	LIND	
1294	2199837.3100m	4674478.5250m	1164.735m	NVL	
1295	2199836.7240m	4674478.4258m	1164.322m	BV	
1296	2199834.7961m	4674478.0993m	1164.391m	BV	
1297	2199832.5011m	4674478.0976m	1164.436m	BV	
1298	2199831.1651m	4674478.1003m	1165.026m	LIND	
1299	2199830.3335m	4674491.0160m	1166.309m	LIND	
1300	2199831.8934m	4674491.3025m	1166.773m	NVL	
1301	2199832.9584m	4674491.3548m	1166.208m	BV	
1302	2199835.2484m	4674491.4224m	1166.288m	BV	
1303	2199837.1664m	4674491.1850m	1166.234m	BV	
1304	2199837.7244m	4674491.2261m	1166.538m	NVL	
1305	2199838.4834m	4674491.2573m	1166.607m	LIND	

1306	2199840.6790m	4674499.8459m	1168.701m	LIND	
1307	2199839.8229m	4674500.3067m	1168.447m	NVL	
1308	2199839.5098m	4674500.4376m	1168.132m	BV	
1309	2199837.8377m	4674500.8701m	1168.087m	BV	
1310	2199835.8966m	4674501.3546m	1168.123m	BV	
1311	2199831.2726m	4674501.2593m	1168.647m	LIND	
1312	2199845.5645m	4674508.6873m	1171.439m	LIND	
1313	2199844.8094m	4674509.1701m	1170.706m	NVL	
1314	2199844.2283m	4674509.5719m	1170.102m	BV	
1315	2199842.7961m	4674510.2675m	1169.969m	BV	
1316	2199841.3338m	4674511.0661m	1170.086m	BV	
1317	2199840.8408m	4674511.3850m	1170.592m	NVL	
1318	2199838.2314m	4674512.6063m	1173.646m	LIND	
1319	2199847.9146m	4674511.9150m	1171.281m	LIND	
1320	2199848.5053m	4674512.8631m	1171.312m	ACCESO	
1321	2199851.4890m	4674517.7200m	1171.880m	ACCESO	
1322	2199846.6260m	4674514.1426m	1170.976m	BV	
1323	2199849.7086m	4674518.9475m	1171.445m	BV	
1324	2199855.7820m	4674528.2002m	1173.236m	LIND	
1325	2199855.4090m	4674528.3861m	1172.955m	NVL	
1326	2199854.4699m	4674528.8158m	1172.174m	BV	
1327	2199853.0046m	4674529.6184m	1172.101m	BV	
1328	2199851.0074m	4674530.5188m	1172.266m	BV	
1329	2199849.4922m	4674531.0964m	1173.097m	NVL	
1330	2199848.5592m	4674531.1201m	1173.489m	LIND	
1331	2199852.4240m	4674539.0472m	1172.948m	LIND	
1332	2199850.0590m	4674542.4406m	1172.388m	LIND	
1333	2199849.7200m	4674542.5555m	1172.633m	ACCESO	
1334	2199851.3411m	4674545.8279m	1172.685m	ACCESO	
1335	2199851.7801m	4674545.9271m	1172.721m	LIND	
1336	2199856.3460m	4674546.1493m	1172.418m	LIND	
1337	2199855.8732m	4674541.8992m	1171.884m	BV	
1338	2199858.6291m	4674545.8190m	1171.688m	BV	
1339	2199860.5424m	4674544.7745m	1171.545m	BV	
1340	2199862.1926m	4674543.9940m	1171.596m	BV	
1341	2199863.7578m	4674543.3844m	1172.284m	LIND	
1342	2199861.6452m	4674555.9958m	1171.696m	LIND	
1343	2199863.4435m	4674555.0243m	1171.209m	BV	
1344	2199865.4098m	4674553.8959m	1171.184m	BV	
1345	2199867.3002m	4674552.7534m	1171.149m	BV	
1346	2199868.9153m	4674552.1499m	1171.691m	LIND	
1347	2199864.5450m	4674560.5096m	1171.438m	GAS	
1348	2199864.1182m	4674559.8985m	1171.280m	GAS	
1349	2199865.0168m	4674561.2748m	1171.448m	GAS	
1350	2199871.0713m	4674573.5265m	1171.132m	LIND	
1351	2199872.1495m	4674573.0518m	1170.850m	NVL	
1352	2199872.7326m	4674572.7409m	1170.596m	BV	
1353	2199874.3488m	4674572.0284m	1170.632m	BV	
1354	2199876.2090m	4674571.3029m	1170.599m	BV	
1355	2199878.3312m	4674570.4785m	1171.148m	LIND	
1356	2199877.6095m	4674587.0663m	1170.523m	LIND	
1357	2199878.4046m	4674586.7465m	1170.669m	NVL	
1358	2199879.0657m	4674586.3387m	1170.166m	BV	
1359	2199880.4920m	4674585.3991m	1170.104m	BV	
1360	2199881.8922m	4674584.6465m	1170.230m	BV	
1361	2199884.0684m	4674584.1231m	1170.858m	LIND	
1362	2199890.3793m	4674598.7559m	1170.060m	LIND	
1363	2199889.7522m	4674598.9827m	1169.591m	NVL	
1364	2199888.9931m	4674599.2155m	1169.267m	BV	
1365	2199887.6439m	4674600.0041m	1169.156m	BV	
1366	2199886.3207m	4674600.5727m	1169.247m	BV	
1367	2199885.1656m	4674601.0024m	1169.881m	LIND	
1368	2199891.7175m	4674615.7093m	1168.698m	LIND	
1369	2199892.2946m	4674615.4984m	1168.417m	NVL	
1370	2199892.8876m	4674615.2706m	1167.987m	BV	
1371	2199894.3148m	4674614.5970m	1167.870m	BV	
1372	2199895.6330m	4674613.7774m	1168.035m	BV	
1373	2199896.8452m	4674613.3527m	1169.045m	NVL	
1374	2199897.5491m	4674613.4159m	1169.359m	LIND	
1375	2199903.1719m	4674624.9385m	1168.620m	LIND	
1376	2199902.4458m	4674625.3833m	1167.792m	NVL	
1377	2199901.5707m	4674625.7550m	1167.232m	BV	
1378	2199900.1973m	4674627.0546m	1167.012m	BV	
1379	2199898.7672m	4674627.6402m	1166.948m	BV	
1380	2199898.0090m	4674628.2940m	1167.487m	NVL	
1381	2199897.3019m	4674628.7048m	1167.374m	LIND	

1382	2199904.5840m	4674631.8749m	1166.968m	ALC	
1383	2199905.1536m	4674633.0860m	1166.971m	ALC	
1384	2199905.6517m	4674632.6862m	1166.553m	ALC	
1385	2199906.2388m	4674632.4943m	1166.838m	ALC	
1386	2199905.1210m	4674631.7520m	1166.496m	ALC	
1387	2199905.7621m	4674631.3752m	1166.805m	ALC	
1388	2199905.0348m	4674632.4550m	1165.591m	BATEA TUBO	
1389	2199905.8356m	4674633.1112m	1166.826m	NVL	
1390	2199905.3092m	4674631.1051m	1166.946m	NVL	
1391	2199906.2880m	4674631.7393m	1166.861m	NVL	
1392	2199907.2257m	4674632.9626m	1168.096m	LIND	
1393	2199906.1253m	4674630.5973m	1168.155m	LIND	
1394	2199899.9775m	4674633.6716m	1166.943m	ALC	
1395	2199900.5661m	4674634.8797m	1166.876m	ALC	
1396	2199900.0743m	4674634.2766m	1165.465m	BATEA TUBO	
1397	2199899.9450m	4674635.4806m	1165.939m	NVL	
1398	2199899.2274m	4674634.0384m	1165.806m	NVL	
1399	2199899.1571m	4674634.8293m	1165.316m	NVL	
1400	2199917.8819m	4674635.7166m	1169.384m	LIND	
1401	2199916.9092m	4674638.3063m	1167.750m	ACCESO	
1402	2199915.9698m	4674643.3051m	1167.719m	ACCESO	
1403	2199913.8009m	4674646.3675m	1168.206m	LIND	
1404	2199908.3456m	4674640.4399m	1166.614m	BV	
1405	2199910.8509m	4674646.5186m	1166.351m	BV	
1406	2199913.2209m	4674646.4083m	1168.182m	NVL	
1407	2199909.0226m	4674647.3151m	1166.280m	BV	
1408	2199907.0455m	4674647.8406m	1166.420m	BV	
1409	2199905.7693m	4674648.4512m	1166.281m	LIND	
1410	2199906.6834m	4674648.0455m	1166.692m	NVL	
1411	2199912.0451m	4674663.4390m	1165.915m	LIND	
1412	2199912.6872m	4674663.2111m	1166.366m	NVL	
1413	2199913.3323m	4674662.9093m	1166.019m	BV	
1414	2199915.0784m	4674662.3428m	1165.985m	BV	
1415	2199916.7316m	4674661.6293m	1166.045m	BV	
1416	2199918.3488m	4674661.0757m	1167.398m	NVL	
1417	2199919.8380m	4674660.3751m	1168.137m	LIND	
1418	2199924.6648m	4674671.5375m	1167.665m	LIND	
1419	2199923.6798m	4674671.7252m	1167.221m	NVL	
1420	2199921.8924m	4674673.0137m	1165.946m	BV	
1421	2199920.1882m	4674673.8472m	1165.896m	BV	
1422	2199918.5369m	4674674.7648m	1165.807m	BV	
1423	2199917.4148m	4674675.1615m	1165.431m	LIND	
1424	2199918.0519m	4674674.9316m	1165.869m	NVL	
1425	2199926.2612m	4674680.8259m	1165.531m	ALC	
1426	2199925.7666m	4674679.5738m	1165.460m	ALC	
1427	2199926.8337m	4674679.0711m	1165.186m	ALC	
1428	2199927.3894m	4674680.2503m	1165.143m	ALC	
1429	2199926.1924m	4674680.2839m	1164.103m	BATEA TUBO	
1430	2199926.7757m	4674679.0391m	1166.001m	NVL	
1431	2199925.9528m	4674679.0119m	1165.496m	NVL	
1432	2199927.5692m	4674680.9413m	1166.165m	NVL	
1433	2199927.8695m	4674680.0014m	1166.599m	NVL	
1434	2199926.6795m	4674679.9461m	1164.176m	NVL	
1435	2199924.7954m	4674680.2265m	1165.892m	BV	
1436	2199923.3134m	4674680.4091m	1165.778m	BV	
1437	2199921.9900m	4674681.6027m	1165.665m	BV	
1438	2199921.1580m	4674681.7585m	1165.545m	ALC	
1439	2199921.7186m	4674682.9697m	1165.472m	ALC	
1440	2199921.4384m	4674683.8996m	1164.951m	ALC	
1441	2199920.3141m	4674681.4303m	1164.869m	ALC	
1442	2199921.5298m	4674682.3906m	1163.829m	BATEA TUBO	
1443	2199920.8498m	4674682.2914m	1163.947m	NVL	
1444	2199920.8866m	4674683.1844m	1164.476m	NVL	
1445	2199920.6130m	4674681.8264m	1164.353m	NVL	
1446	2199922.2604m	4674683.6978m	1165.593m	NVL	
1447	2199920.7663m	4674680.7924m	1165.608m	NVL	
1448	2199933.0774m	4674691.0249m	1166.813m	LIND	
1449	2199932.6374m	4674691.1427m	1166.676m	NVL	
1450	2199929.9762m	4674691.7980m	1165.769m	BV	
1451	2199928.2060m	4674692.3955m	1165.716m	BV	
1452	2199926.3569m	4674692.8040m	1165.661m	BV	
1453	2199925.7818m	4674693.0058m	1165.850m	NVL	
1454	2199925.1788m	4674693.1686m	1165.647m	LIND	
1455	2199934.6834m	4674701.6193m	1167.525m	LIND	
1456	2199933.8834m	4674701.6281m	1167.176m	NVL	
1457	2199932.1074m	4674701.8296m	1165.770m	BV	

1458	2199930.1832m	4674702.2190m	1165.718m	BV	
1459	2199928.4332m	4674702.5266m	1165.728m	BV	
1460	2199927.5591m	4674702.6513m	1165.894m	NVL	
1461	2199926.6601m	4674702.7951m	1165.732m	LIND	
1462	2199928.6678m	4674711.0806m	1166.291m	GAS	
1463	2199928.4900m	4674710.2836m	1166.263m	GAS	
1464	2199928.6956m	4674711.8126m	1166.348m	GAS	
1465	2199928.5701m	4674713.5716m	1166.478m	LIND	
1466	2199929.8651m	4674713.4080m	1166.069m	BV	
1467	2199931.3261m	4674713.3134m	1166.156m	BV	
1468	2199933.0332m	4674713.2098m	1166.193m	BV	
1469	2199935.1683m	4674712.8734m	1168.564m	NVL	
1470	2199936.2923m	4674712.6658m	1168.981m	LIND	
1471	2199937.7958m	4674725.1392m	1168.970m	LIND	
1472	2199936.6028m	4674725.1668m	1168.126m	NVL	
1473	2199934.5617m	4674725.5643m	1166.784m	BV	
1474	2199933.0517m	4674725.5949m	1166.741m	BV	
1475	2199931.3756m	4674725.8394m	1166.670m	BV	
1476	2199930.4546m	4674725.9101m	1166.881m	LIND	
1477	2199939.6226m	4674725.9647m	1168.551m	ACCESO	
1478	2199941.9741m	4674731.2754m	1168.355m	ACCESO	
1479	2199939.9540m	4674738.7608m	1169.050m	LIND	
1480	2199939.1330m	4674738.9266m	1168.737m	NVL	
1481	2199936.9439m	4674739.0229m	1166.486m	BV	
1482	2199935.1309m	4674739.1144m	1166.386m	BV	
1483	2199933.0859m	4674739.2669m	1166.344m	BV	
1484	2199932.3479m	4674739.2467m	1166.442m	LIND	
1485	2199941.8987m	4674750.3903m	1168.483m	LIND	
1486	2199940.4576m	4674750.7149m	1168.212m	NVL	
1487	2199938.0566m	4674750.8123m	1166.030m	BV	
1488	2199936.2286m	4674751.0537m	1165.979m	BV	
1489	2199934.6495m	4674751.1043m	1165.957m	BV	
1490	2199933.6685m	4674751.2000m	1165.841m	LIND	
1491	2199934.7154m	4674762.2073m	1165.715m	LIND	
1492	2199935.7575m	4674762.0966m	1165.612m	BV	
1493	2199937.3525m	4674761.9491m	1165.648m	BV	
1494	2199939.3815m	4674761.8656m	1165.654m	BV	
1495	2199941.7925m	4674761.7753m	1167.668m	NVL	
1496	2199943.2766m	4674761.5057m	1168.212m	LIND	
1497	2199944.7788m	4674771.4671m	1167.826m	LIND	
1498	2199943.2527m	4674771.7977m	1167.240m	NVL	
1499	2199940.6366m	4674772.3320m	1165.208m	BV	
1500	2199938.7745m	4674772.7685m	1165.184m	BV	
1501	2199936.9834m	4674773.1260m	1165.138m	BV	
1502	2199935.7023m	4674773.2446m	1165.380m	LIND	
1503	2199937.2171m	4674781.2710m	1165.052m	LIND	
1504	2199938.7232m	4674780.8664m	1164.880m	BV	
1505	2199940.5614m	4674780.2870m	1164.856m	BV	
1506	2199942.5155m	4674779.6035m	1164.757m	BV	
1507	2199944.5848m	4674778.8151m	1166.769m	NVL	
1508	2199945.8598m	4674778.6044m	1167.329m	LIND	
1509	2199946.4878m	4674782.1436m	1166.643m	NVL	
1510	2199947.4209m	4674781.7269m	1167.131m	LIND	
1511	2199948.6500m	4674785.2432m	1166.499m	NVL	
1512	2199949.6201m	4674784.6165m	1166.927m	LIND	
1513	2199953.0937m	4674789.7385m	1166.015m	NVL	
1514	2199953.9539m	4674788.9407m	1166.582m	LIND	
1515	2199951.3802m	4674791.4250m	1163.859m	BV	
1516	2199949.8618m	4674792.9586m	1163.967m	BV	
1517	2199948.2492m	4674795.0941m	1163.907m	BV	
1518	2199947.7100m	4674795.8750m	1164.024m	LIND	
1519	2199946.9136m	4674786.5347m	1164.328m	BV	
1520	2199944.9142m	4674787.8502m	1164.382m	BV	
1521	2199942.6497m	4674789.9175m	1164.544m	BV	
1522	2199941.0554m	4674790.7701m	1165.059m	LIND	
1523	2199944.7205m	4674783.2241m	1164.624m	BV	
1524	2199942.3663m	4674784.1955m	1164.642m	BV	
1525	2199939.9199m	4674785.3838m	1164.698m	BV	
1526	2199938.8118m	4674785.7965m	1164.932m	LIND	
1527	2199959.7373m	4674801.7643m	1162.920m	BV	
1528	2199960.5917m	4674800.2746m	1162.974m	BV	
1529	2199961.2302m	4674798.8028m	1163.184m	BV	
1530	2199960.8235m	4674797.4256m	1163.281m	ALC	
1531	2199961.9583m	4674798.1460m	1163.264m	ALC	
1532	2199962.1645m	4674797.5940m	1162.783m	ALC	
1533	2199962.6297m	4674796.9811m	1163.147m	ALC	

1534	2199961.4808m	4674796.3558m	1163.161m	ALC	
1535	2199961.0897m	4674797.0107m	1162.786m	ALC	
1536	2199961.4315m	4674797.6698m	1161.747m	BATEA TUBO	
1537	2199962.7044m	4674797.9532m	1163.446m	NVL	
1538	2199962.3808m	4674796.4681m	1163.990m	NVL	
1539	2199960.8938m	4674796.5757m	1163.274m	NVL	
1540	2199962.1301m	4674795.5290m	1165.436m	LIND	
1541	2199958.7593m	4674801.9051m	1163.280m	ALC	
1542	2199959.9881m	4674802.5134m	1163.269m	ALC	
1543	2199959.3182m	4674802.3882m	1161.323m	BATEA TUBO	
1544	2199959.0590m	4674802.9701m	1161.265m	NVL	
1545	2199959.4669m	4674803.2363m	1161.907m	NVL	
1546	2199958.1161m	4674802.5519m	1162.497m	NVL	
1547	2199958.1381m	4674802.5339m	1162.521m	NVL	
1548	2199971.5035m	4674808.1806m	1161.347m	LIND	
1549	2199971.6275m	4674808.3657m	1161.317m	BV	
1550	2199972.3119m	4674806.6899m	1161.343m	BV	
1551	2199973.4104m	4674804.9122m	1161.368m	BV	
1552	2199974.8512m	4674802.3026m	1163.519m	LIND	
1553	2199985.7367m	4674811.2126m	1158.902m	BV	
1554	2199985.1401m	4674813.2145m	1158.779m	BV	
1555	2199984.0246m	4674815.1602m	1158.842m	BV	
1556	2199983.6573m	4674816.1020m	1159.076m	LIND	
1557	2199988.3225m	4674808.4414m	1161.277m	LIND	
1558	2199993.8179m	4674821.3039m	1157.048m	LIND	
1559	2199994.4522m	4674820.0021m	1156.295m	BV	
1560	2199995.3728m	4674818.0443m	1156.354m	BV	
1561	2199996.2123m	4674816.2106m	1156.458m	BV	
1562	2199997.4360m	4674813.6879m	1159.097m	LIND	
1563	2200005.5233m	4674826.8642m	1154.604m	LIND	
1564	2200006.0728m	4674825.1383m	1154.063m	BV	
1565	2200006.8522m	4674823.4556m	1154.102m	BV	
1566	2200007.6698m	4674821.6218m	1154.136m	BV	
1567	2200008.4134m	4674819.3690m	1156.822m	LIND	
1568	2200019.3613m	4674823.3391m	1154.415m	LIND	
1569	2200018.9184m	4674826.3919m	1151.964m	BV	
1570	2200022.4159m	4674824.7359m	1151.698m	ACCESO	
1571	2200027.2486m	4674825.8803m	1151.816m	ACCESO	
1572	2200025.6895m	4674829.8068m	1150.433m	BV	
1573	2200029.0961m	4674831.1678m	1149.649m	BV	
1574	2200028.2956m	4674832.8136m	1149.652m	BV	
1575	2200027.3482m	4674834.2603m	1149.763m	BV	
1576	2200026.2517m	4674835.9910m	1150.388m	LIND	
1577	2200026.4128m	4674835.5820m	1150.166m	NVL	
1578	2200030.0098m	4674828.4850m	1151.913m	LIND	
1579	2200037.3984m	4674840.8091m	1148.356m	LIND	
1580	2200037.7295m	4674840.4772m	1147.929m	NVL	
1581	2200038.1347m	4674839.5093m	1147.539m	BV	
1582	2200038.7832m	4674837.9025m	1147.606m	BV	
1583	2200039.7716m	4674836.3588m	1147.613m	BV	
1584	2200040.9583m	4674834.0481m	1150.130m	LIND	
1585	2200040.4440m	4674835.0520m	1148.896m	NVL	
1586	2200045.8673m	4674844.7725m	1146.753m	ALC	
1587	2200047.0001m	4674845.4648m	1146.727m	ALC	
1588	2200046.1691m	4674845.3366m	1145.813m	LOMO TUBO	
1589	2200046.0320m	4674845.6905m	1145.861m	NVL	
1590	2200046.9029m	4674846.1568m	1146.159m	NVL	
1591	2200045.0721m	4674845.5533m	1146.277m	NVL	
1592	2200045.5988m	4674846.3434m	1146.095m	LIND	
1593	2200046.8854m	4674844.4238m	1146.124m	BV	
1594	2200047.8548m	4674842.7571m	1146.333m	BV	
1595	2200048.9632m	4674841.3804m	1146.698m	BV	
1596	2200049.1612m	4674841.3584m	1146.951m	ALC	
1597	2200048.0904m	4674840.8201m	1146.841m	ALC	
1598	2200049.8976m	4674840.1306m	1146.656m	ALC	
1599	2200048.9337m	4674839.6134m	1146.813m	ALC	
1600	2200050.4566m	4674840.1208m	1147.440m	NVL	
1601	2200048.8899m	4674839.0513m	1147.634m	NVL	
1602	2200048.7154m	4674840.8453m	1145.562m	BATEA TUBO	
1603	2200056.0155m	4674847.4883m	1145.119m	BV	
1604	2200057.9697m	4674846.9569m	1146.197m	LIND	
1605	2200054.0283m	4674848.2488m	1145.108m	BV	
1606	2200052.1719m	4674849.5113m	1145.050m	BV	
1607	2200050.9667m	4674850.4109m	1145.384m	NVL	
1608	2200050.4166m	4674850.7378m	1145.462m	LIND	
1609	2200064.5167m	4674861.0077m	1144.567m	LIND	

1610	2200062.6887m	4674861.1872m	1143.278m	BV	
1611	2200060.4854m	4674862.3166m	1143.259m	BV	
1612	2200057.9481m	4674863.0499m	1143.251m	BV	
1613	2200057.0721m	4674863.2786m	1143.716m	NVL	
1614	2200056.6541m	4674863.3245m	1143.723m	LIND	
1615	2200067.3524m	4674865.8815m	1143.326m	LIND	
1616	2200070.6411m	4674866.6214m	1142.116m	ACCESO	
1617	2200074.5261m	4674870.3195m	1141.977m	ACCESO	
1618	2200075.1899m	4674871.2357m	1142.142m	LIND	
1619	2200073.2944m	4674872.6922m	1142.031m	LIND	
1620	2200072.2194m	4674876.4179m	1141.767m	LIND	
1621	2200066.6117m	4674871.9323m	1141.876m	BV	
1622	2200070.4290m	4674881.2554m	1140.828m	BV	
1623	2200072.8511m	4674881.1011m	1141.672m	LIND	
1624	2200072.1420m	4674881.2469m	1141.496m	NVL	
1625	2200068.1688m	4674882.0267m	1140.749m	BV	
1626	2200066.1116m	4674882.8132m	1140.863m	BV	
1627	2200063.9206m	4674882.9976m	1141.624m	LIND	
1628	2200062.8359m	4674878.2563m	1141.844m	GAS	
1629	2200062.3303m	4674876.8771m	1142.096m	GAS	
1630	2200062.1686m	4674875.8681m	1142.142m	GAS	
1631	2200065.9180m	4674885.0941m	1140.887m	ALC	
1632	2200066.4545m	4674886.6983m	1140.853m	ALC	
1633	2200065.7104m	4674887.2191m	1140.263m	NVL	
1634	2200066.1443m	4674887.5642m	1141.026m	NVL	
1635	2200064.9800m	4674884.8319m	1140.797m	NVL	
1636	2200065.4120m	4674885.0760m	1139.841m	NVL	
1637	2200065.9438m	4674885.7921m	1139.422m	BATEA TUBO	
1638	2200065.5917m	4674886.0540m	1139.257m	NVL	
1639	2200064.6736m	4674886.5578m	1139.312m	LIND	
1640	2200072.8673m	4674883.9051m	1140.734m	ALC	
1641	2200072.6227m	4674882.6400m	1140.761m	ALC	
1642	2200071.3255m	4674883.1676m	1140.765m	ALC	
1643	2200071.8271m	4674884.4658m	1140.840m	ALC	
1644	2200072.3402m	4674884.1689m	1140.453m	ALC	
1645	2200071.9595m	4674883.0538m	1140.453m	ALC	
1646	2200071.7683m	4674883.7578m	1139.403m	BATEA TUBO	
1647	2200072.3014m	4674883.5469m	1139.407m	NVL	
1648	2200073.0391m	4674884.5461m	1140.852m	NVL	
1649	2200072.3828m	4674882.2669m	1141.119m	NVL	
1650	2200073.4314m	4674883.4542m	1141.136m	LIND	
1651	2200070.4592m	4674884.2144m	1140.460m	BV	
1652	2200068.9350m	4674884.9460m	1140.459m	BV	
1653	2200067.3059m	4674885.4475m	1140.692m	BV	
1654	2200072.5695m	4674901.1780m	1138.839m	BV	
1655	2200071.6074m	4674901.4237m	1139.229m	NVL	
1656	2200070.6334m	4674901.4504m	1139.330m	LIND	
1657	2200074.5246m	4674900.7275m	1138.977m	BV	
1658	2200076.4487m	4674900.3481m	1138.962m	BV	
1659	2200077.6827m	4674900.2564m	1139.402m	LIND	
1660	2200074.5986m	4674915.0226m	1137.619m	BV	
1661	2200073.3955m	4674915.1952m	1138.528m	LIND	
1662	2200077.0127m	4674914.7332m	1137.643m	BV	
1663	2200079.6138m	4674914.2640m	1137.633m	BV	
1664	2200080.8299m	4674914.0113m	1138.409m	NVL	
1665	2200081.6788m	4674914.1785m	1138.690m	LIND	

10. REGISTRO FOTOGRAFICO

10.1 REGISTRO FOTOGRAFICO-SECTOR EL GUASQUIAN-TRAMO 1



IMAGEN 1-TRAMO 1-SECTOR GUASQUIAN



IMAGEN 2-TRAMO 1-SECTOR GUASQUIAN



IMAGEN 3-TRAMO 1-SECTOR GUASQUIAN



IMAGEN 4-TRAMO 1-SECTOR GUASQUIAN



IMAGEN 5-TRAMO 1-SECTOR GUASQUIAN

10.2 REGISTRO FOTOGRAFICO-SECTOR LA CLARA-TRAMO 2



IMAGEN 6-TRAMO 2-SECTOR LA CLARA



IMAGEN 7-TRAMO 2-SECTOR LA CLARA

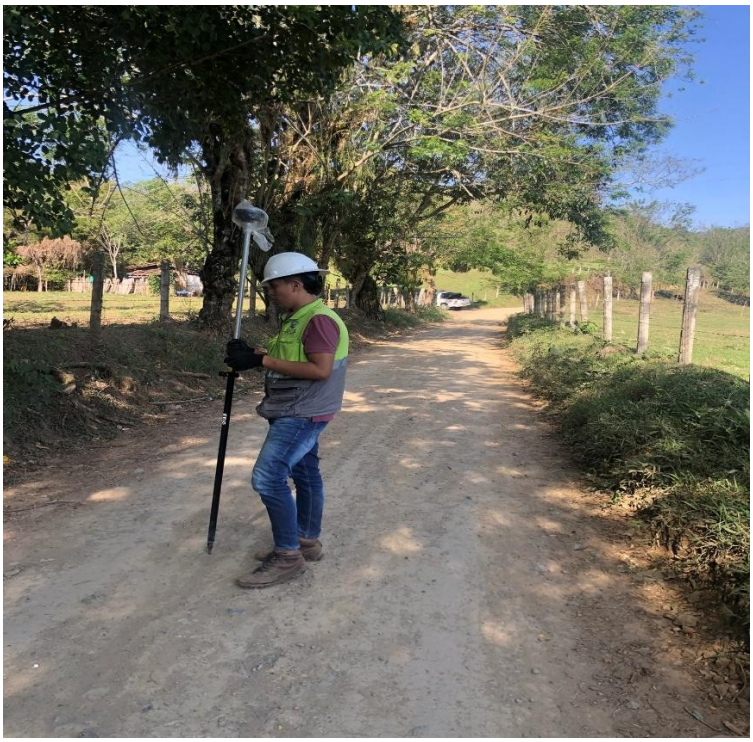


IMAGEN 8-TRAMO 2-SECTOR LA CLARA

10.3 REGISTRO FOTOGRAFICO-SECTOR VILLA DEL LAGO-TRAMO 3



IMAGEN 9-TRAMO 3-SECTOR VILLA DEL LAGO



IMAGEN 10-TRAMO 3-SECTOR VILLA DEL LAGO



IMAGEN 11-TRAMO 3-SECTOR VILLA DEL LAGO



IMAGEN 12-TRAMO 3-SECTOR VILLA DEL LAGO

11. DOCUMENTOS DEL PROFESIONAL ACARGO

11.1 LICENCIA PROFESIONAL TOPOGRAFO





11.2 CERTICADO DE LICENCIA

República de Colombia

CONSEJO PROFESIONAL NACIONAL DE TOPOGRAFÍA

Ley 70 / 79

CERTIFICADO DE VIGENCIA No: 392203/2023

EL DIRECTOR EJECUTIVO DEL CONSEJO PROFESIONAL NACIONAL DE TOPOGRAFÍA

HACE CONSTAR

Que el(la) Señor(a) **JAVIER IGNACIO SANCHEZ MURCIA** , identificado(a) con cédula de ciudadanía **No. 1049605830** , se encuentra inscrito(a) en el Registro Único de Topógrafos RUTOPO del CPNT como **TECNÓLOGO EN TOPOGRAFÍA** de la Institución de Educación Superior **UNIVERSIDAD DISTRITAL FRANCISCO JOSE DE CALDAS**, bajo la Licencia Profesional **No. 01-13990** con fecha de expedición del **15 de Noviembre de 2012.**

Que el(la) Señor(a) **JAVIER IGNACIO SANCHEZ MURCIA**, tiene vigente su Licencia Profesional No. **01-13990** y a la fecha **NO REGISTRA ANTECEDENTES DISCIPLINARIOS** , que lo (la) inhabiliten en el ejercicio de su profesión.

Dada en Bogotá, D.C. a los **21 días del mes de Junio de 2023.**

LUIS ALEJANDRO ZAFRA JARAMILLO
Director Ejecutivo

***Firma del profesional**

*La firma del profesional es requerida para comprobar la anuencia de su participación en procesos contractuales. La falta de la firma del profesional NO invalida el certificado.

Notas 1- El anterior certificado no suple la Licencia Profesional para ejercer un cargo.
2- La validez del documento se puede verificar en la página web www.cpnt.gov.co a través del número de certificado de Vigencia.
3- Este certificado digital tiene plena validez de conformidad con lo establecido en el Art. 2 de la Ley 527 de 1999, decreto 1747 de 2000 y Art. 6 Parágrafo 3 de la Ley 962 de 2005.

Calle 42 No. 8A- 69 Oficina 601 Teléfono: 288 14 90 - 245 1694 - Bogotá, D.C.
www.cpnt.gov.co - Email: info@cpnt.gov.co - presidencia@cpnt.gov.co

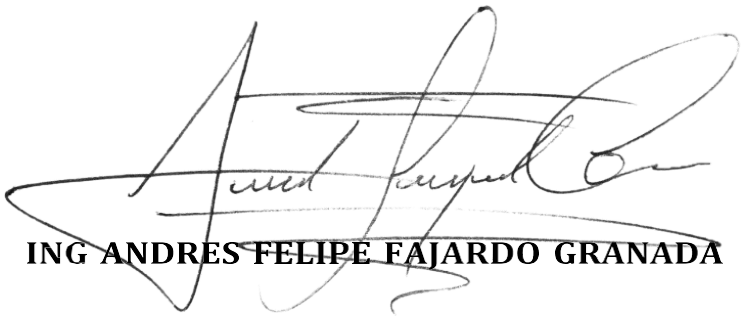
ELABORO



TOPOFRAFO. JAVIER IGNACIO SANCHEZ MURCIA

Licencia Profesional 01-13990 Tecnólogo en Topografía

REVISO



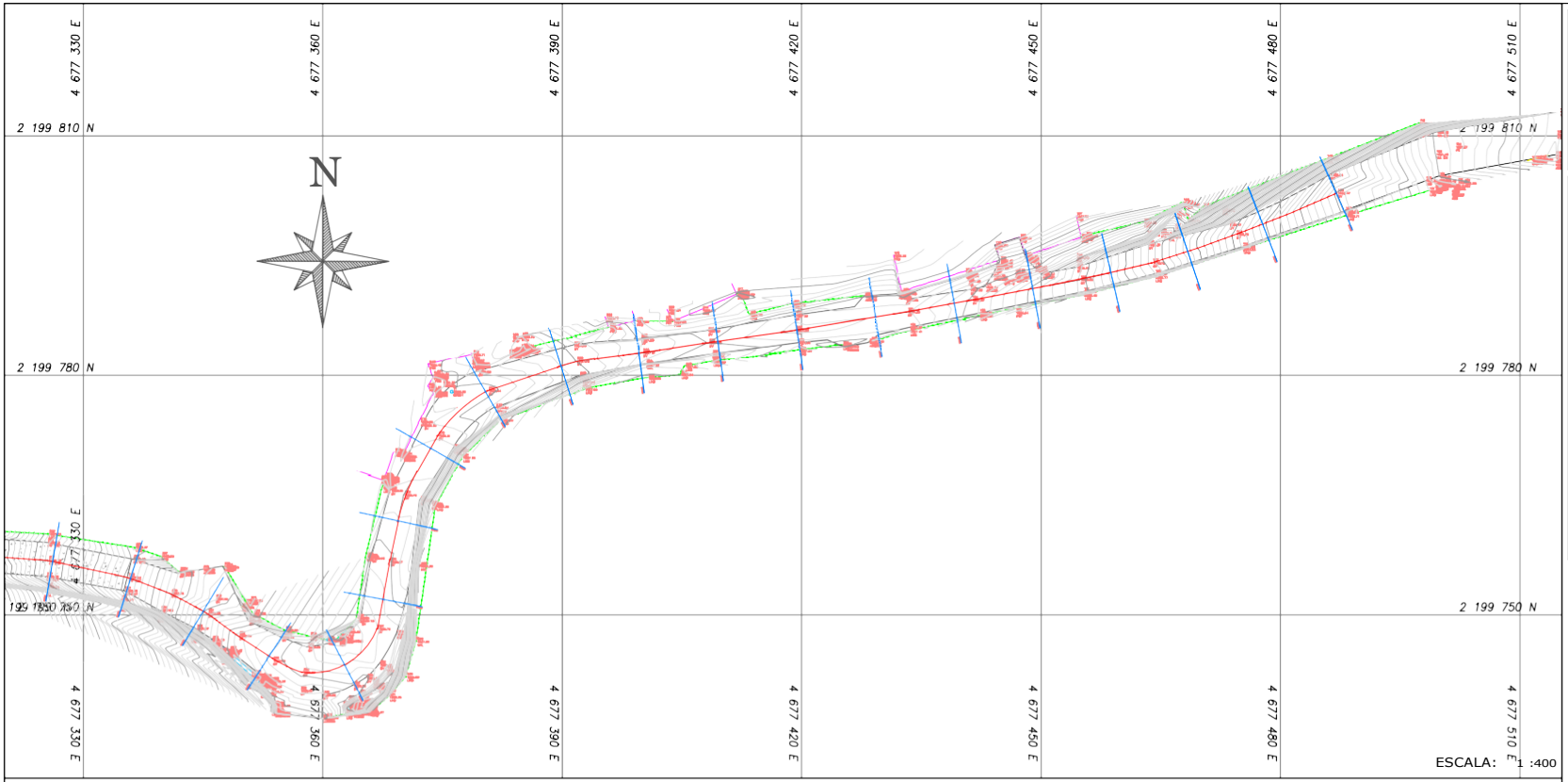
ING ANDRES FELIPE FAJARDO GRANADA

Ingeniero civil – Especialista en Gerencia

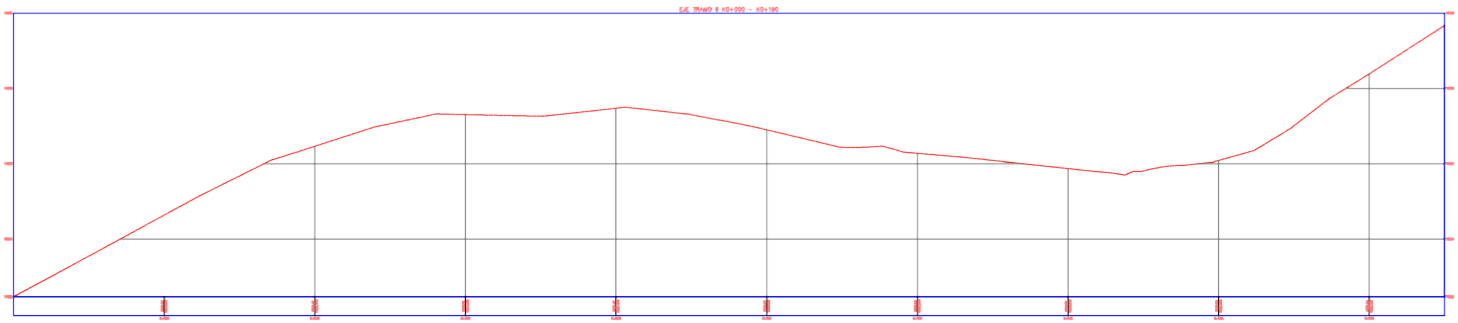
Gerente

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ESCALA: 1 :400



ESCALA: 1 : 450

LEVANTAMIENTO TOPOGRAFICO

TRAMO 1
KO+000.00 - KO+190.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

BM-1
NORTE: 2199777.941
ESTE: 4677376.163
ALTURA: 1026.461

BM-2
NORTE: 2199791.915
ESTE: 4677445.312
ALTURA: 1027.253

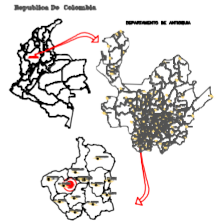
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 340.67 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	1 DE 4
ESCALA:	COMO INDICA

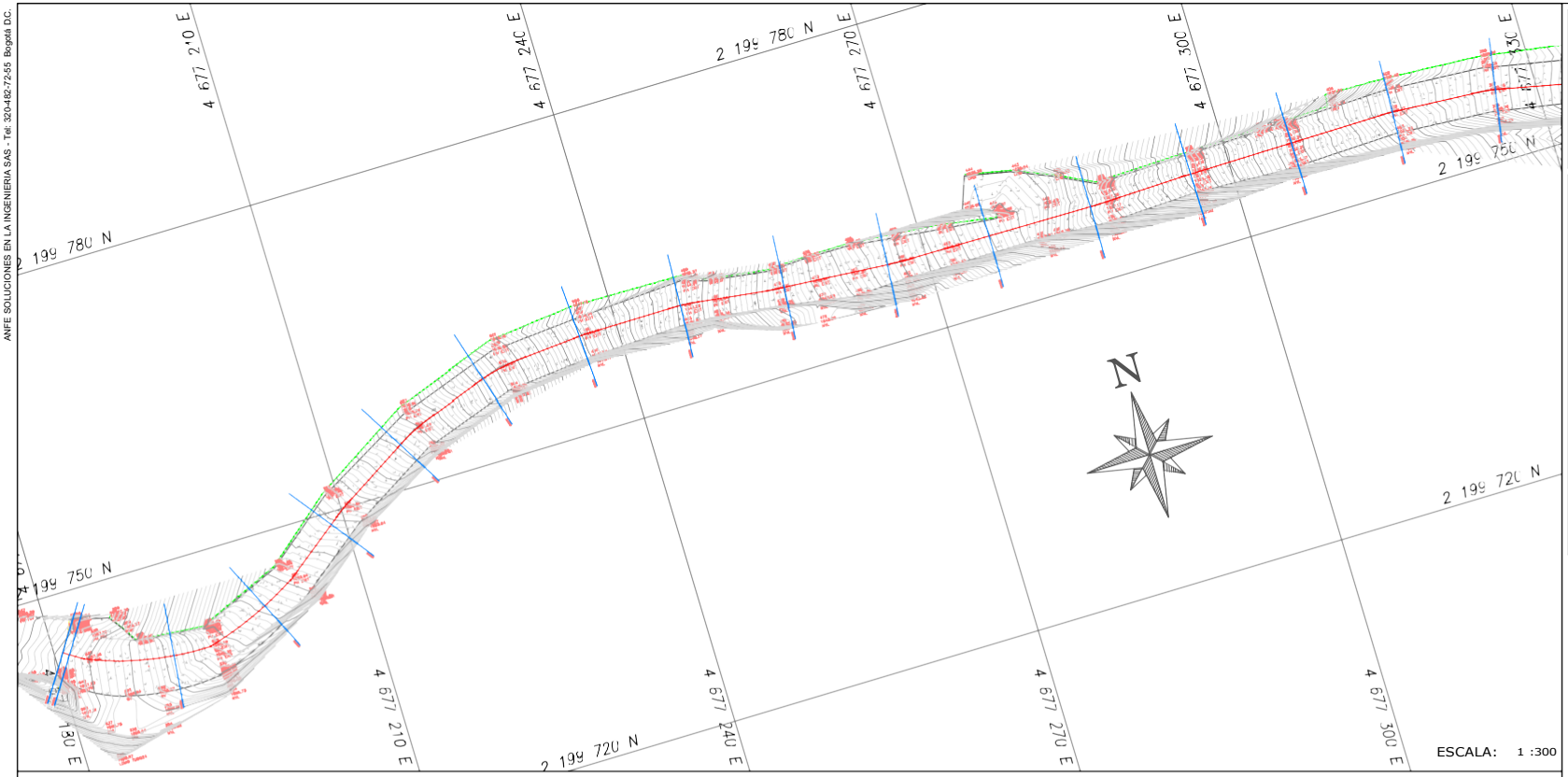
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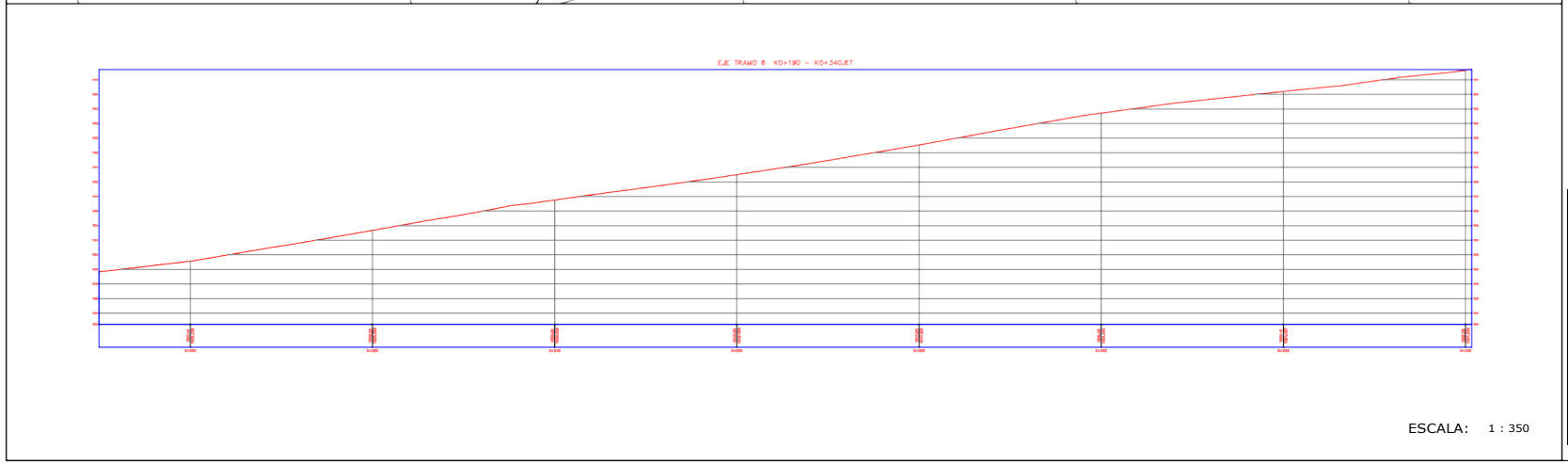
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ESCALA: 1 :300



ESCALA: 1 : 350

LEVANTAMIENTO TOPOGRAFICO

BM-2
NORTE: 2199791.915
ESTE: 4677445.312
ALTURA: 1027.253

BM-1
NORTE: 2199777.941
ESTE: 4677376.163
ALTURA: 1026.461

TRAMO 1
K0+190.00 - K0+340.67
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

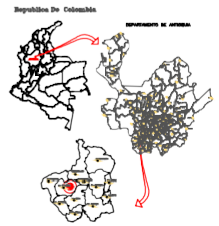
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 340.67 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	2 DE 4
ESCALA:	COMO INDICA

10/03/2024 11:35:10 p. m.

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LEVANTAMIENTO TOPOGRAFICO

BM-1
NORTE: 2199777.941
ESTE: 4677376.163
ALTURA: 1026.461

BM-2
NORTE: 2199791.915
ESTE: 4677445.312
ALTURA: 1027.253

TRAMO 1
K0+000.00 - K0+230.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

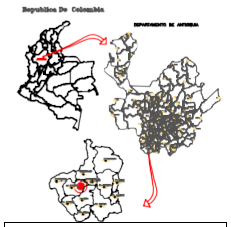
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 340.67 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO: JAVIER SANCHEZ MURCIA

FECHA: 15/02/2024

PLANO: 3 DE 4

ESCALA: 1:150

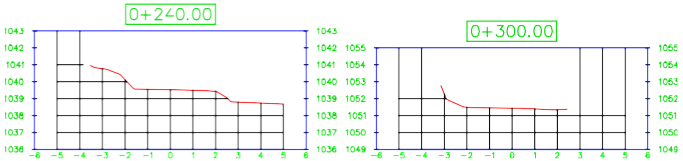
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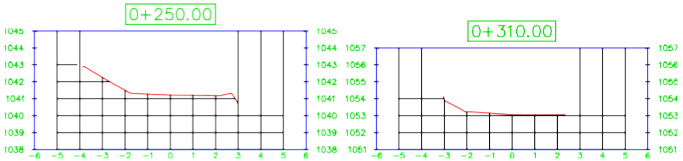
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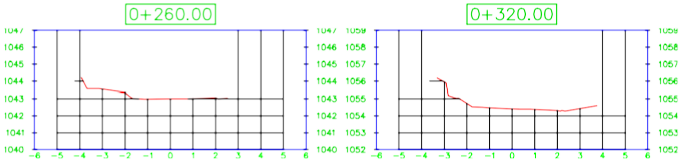
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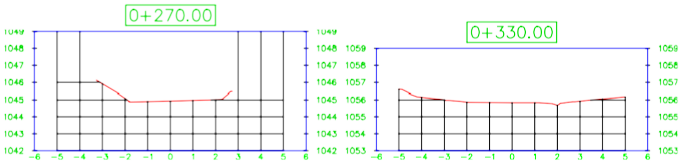
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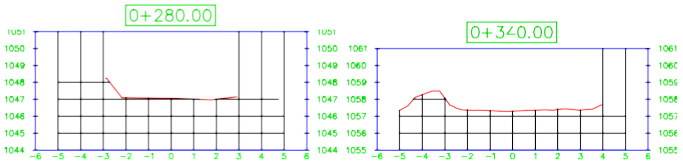
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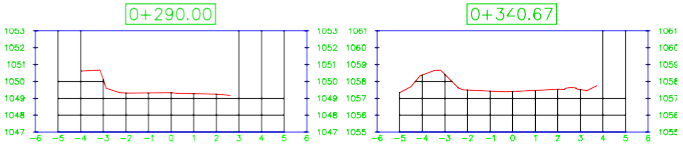












LEVANTAMIENTO TOPOGRAFICO

BM-1
NORTE: 2199777.941
ESTE: 4677376.163
ALTURA: 1026.461

BM-2
NORTE: 2199791.915
ESTE: 4677445.312
ALTURA: 1027.253

TRAMO 1
K0+000.00 - K0+230.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

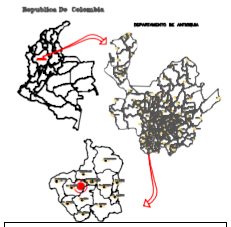
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 340.67 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	4 DE 4
ESCALA:	1:150

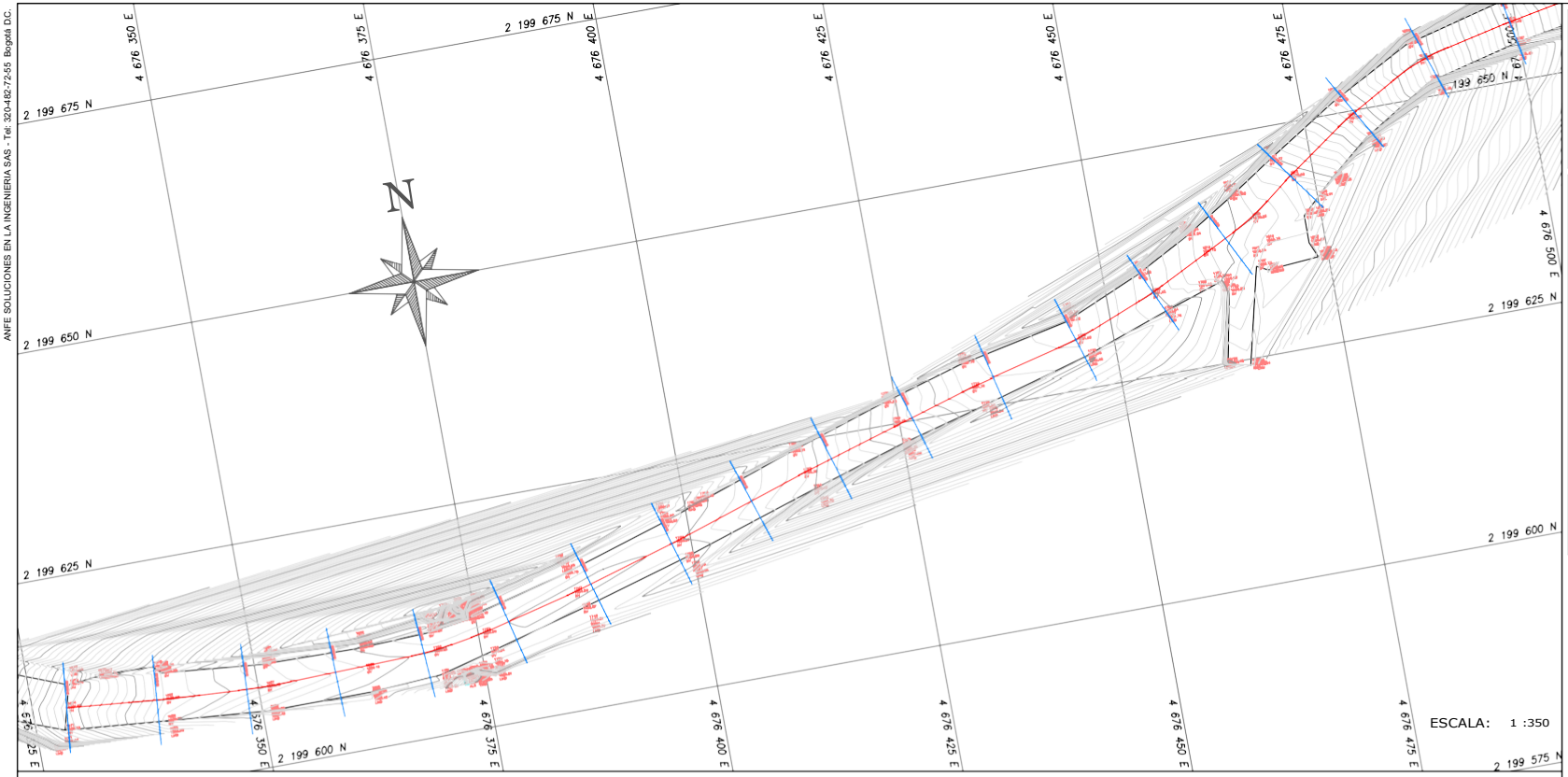
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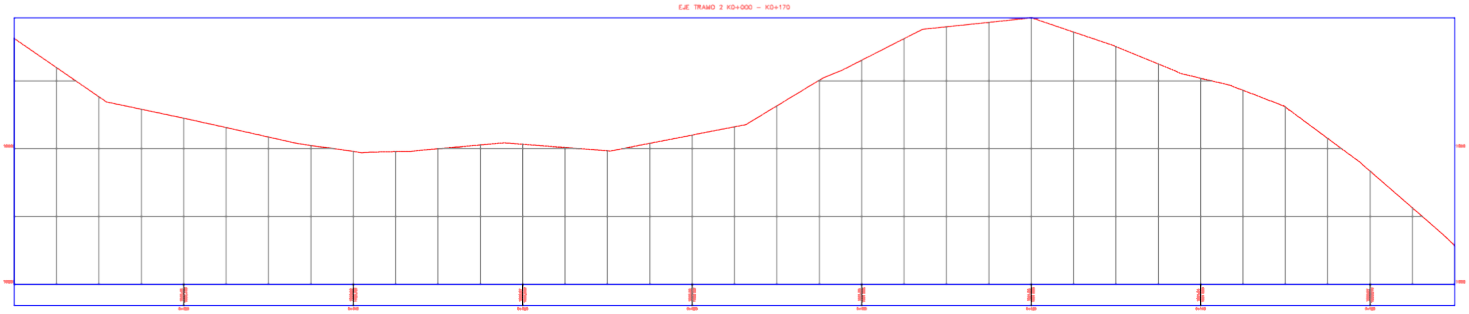
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LEVANTAMIENTO TOPOGRAFICO

TRAMO 2
K0+000.00 - K0+170.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

AUX-1
NORTE: 2199708.162
ESTE: 4676694.760
ALTURA: 1036.996

AUX-2
NORTE: 2199737.967
ESTE: 4676787.086
ALTURA: 1030.530

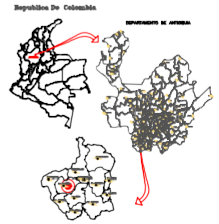
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 378.59 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	1 DE 5
ESCALA:	COMO INDICA

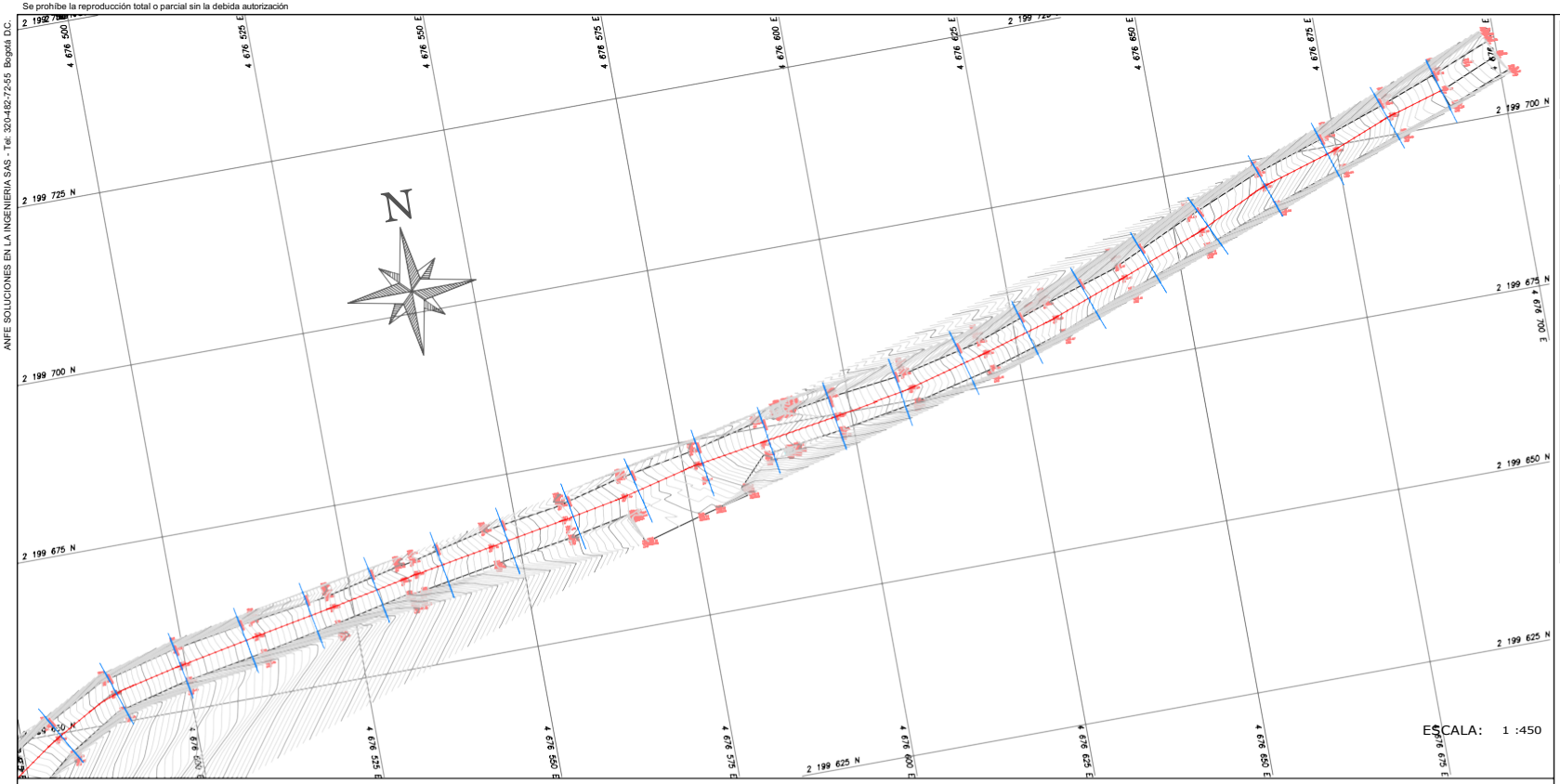
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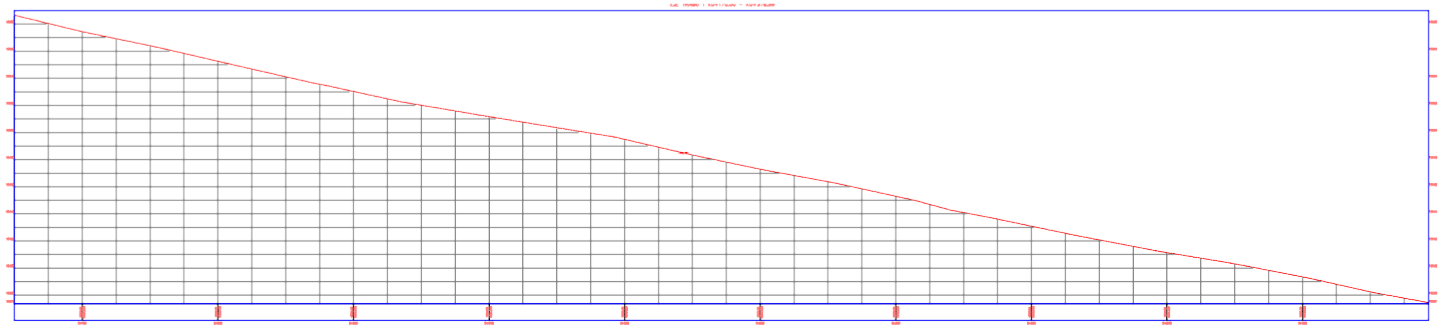
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ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.





LEVANTAMIENTO TOPOGRAFICO

AUX 1
NORTE: 2199708.162
ESTE: 4676694.760
ALTURA: 1036.996

AUX 2
NORTE: 2199737.967
ESTE: 4676787.086
ALTURA: 1030.530

TRAMO 2
K0+170.00 - K0+378.59
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

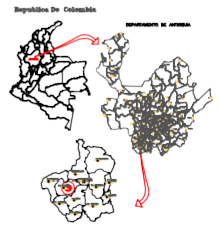
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 378.59 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	2 DE 5
ESCALA:	COMO INDICA

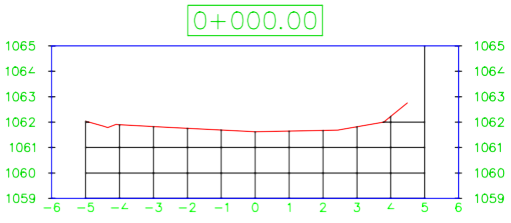
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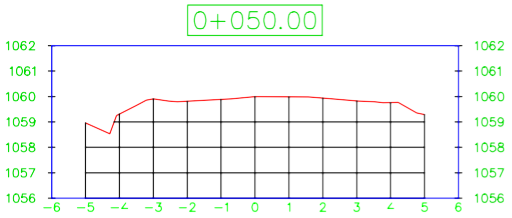
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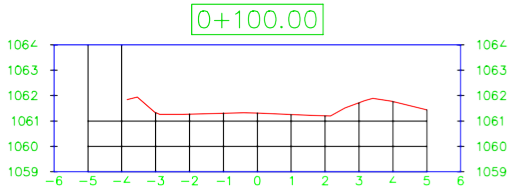
ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.

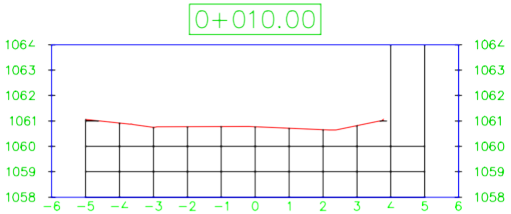
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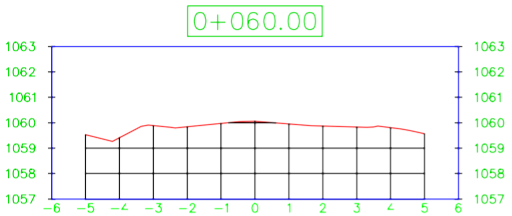
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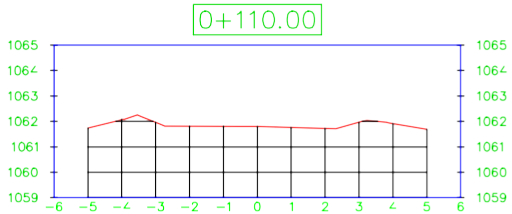


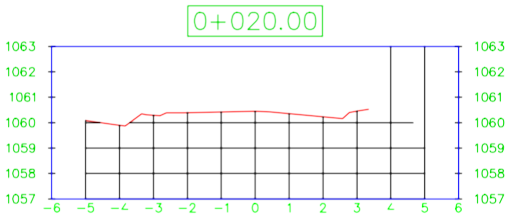


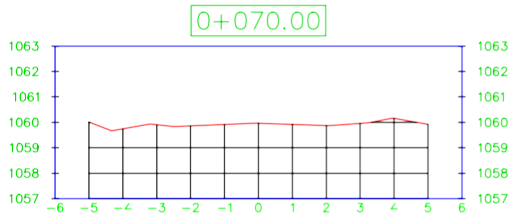


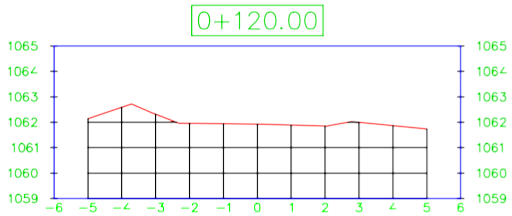


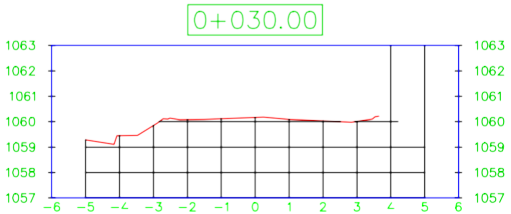


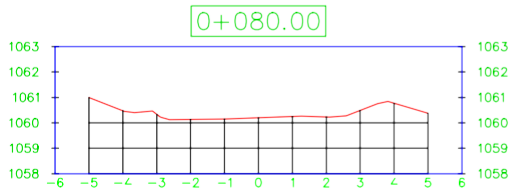


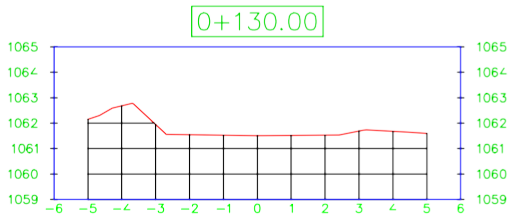


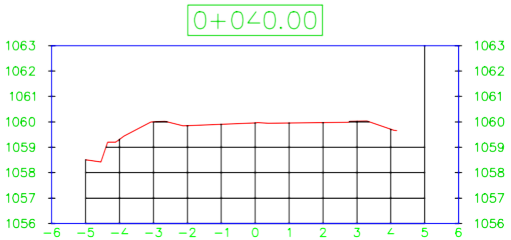


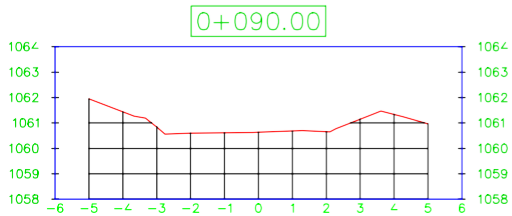


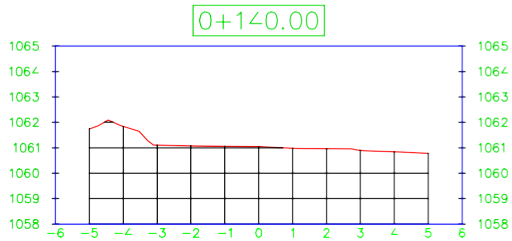












LEVANTAMIENTO TOPOGRAFICO

AUX-1
NORTE: 2199708.162
ESTE: 467694.760
ALTURA: 1036.996

AUX-2
NORTE: 2199737.967
ESTE: 467687.086
ALTURA: 1030.530

TRAMO 2
K0+000.00 - K0+140.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

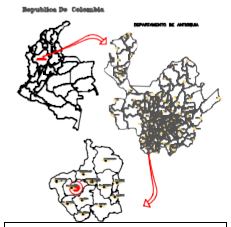
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 378.59 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO: JAVIER SANCHEZ MURCIA
FECHA: 15/02/2024
PLANO: 3 DE 5
ESCALA: 1:100

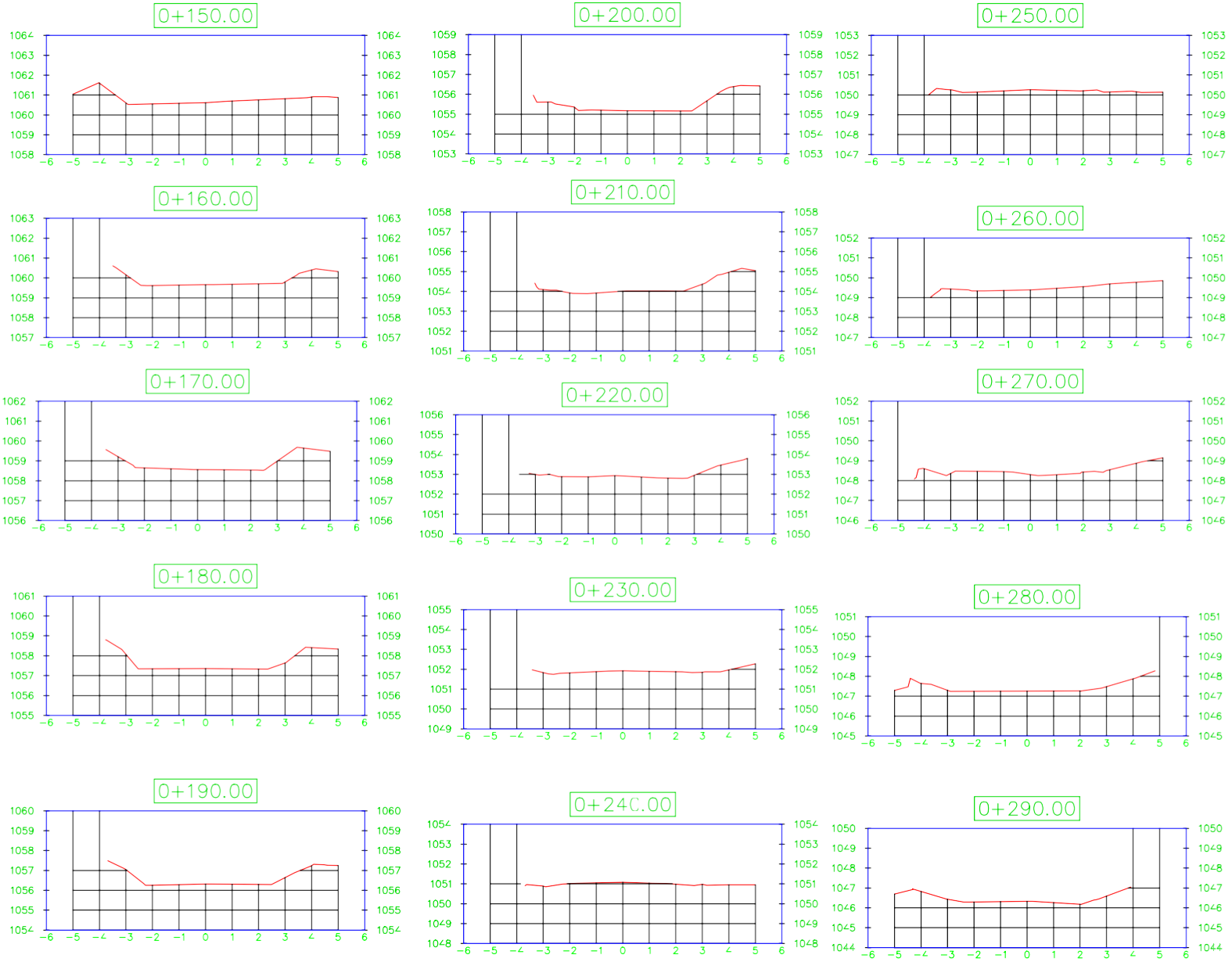
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LEVANTAMIENTO TOPOGRAFICO

AUX-1
NORTE: 2199708.162
ESTE: 467694.760
ALTURA: 1036.996

AUX-2
NORTE: 2199737.967
ESTE: 467687.086
ALTURA: 1030.530

TRAMO 2
K0+150.00 - K0+290.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

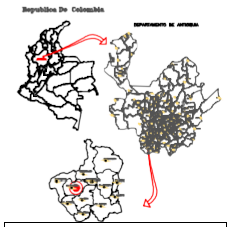
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 378.59 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	4 DE 5
ESCALA:	1:100

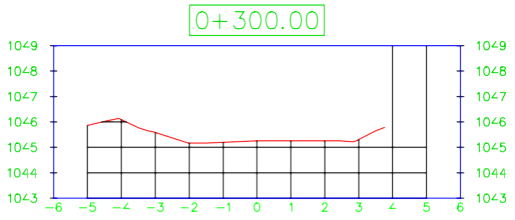
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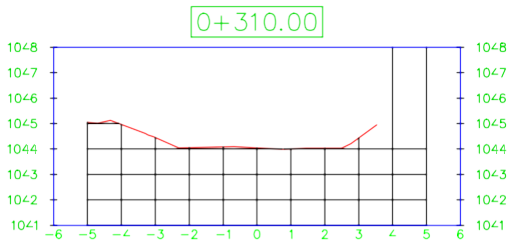
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Se prohíbe la reproducción total o parcial sin la debida autorización

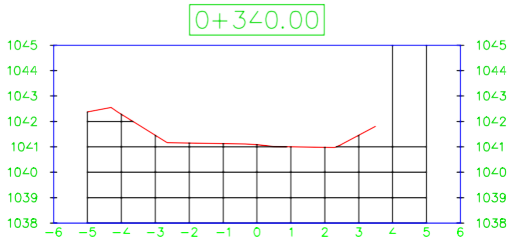
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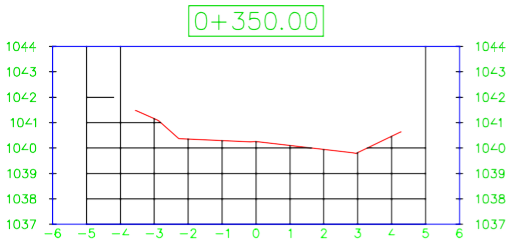


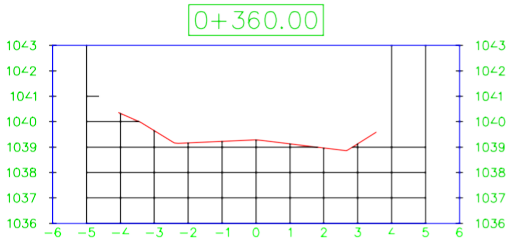




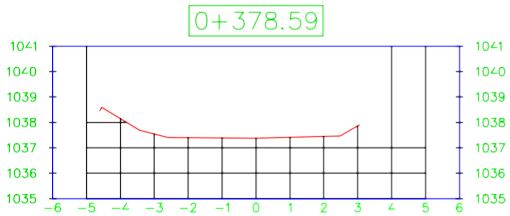












LEVANTAMIENTO TOPOGRÁFICO

AUX-1
NORTE: 2199708.162
ESTE: 467694.760
ALTURA: 1036.996

AUX-2
NORTE: 2199737.967
ESTE: 467687.086
ALTURA: 1030.530

TRAMO 2
K0+300.00 - K0+378.59
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

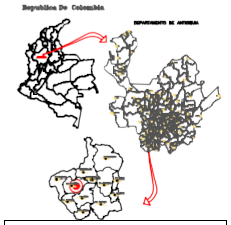
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 378.59 M

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MERCIA
FECHA:	15/02/2024
PLANO:	5 DE 5
ESCALA:	1:100

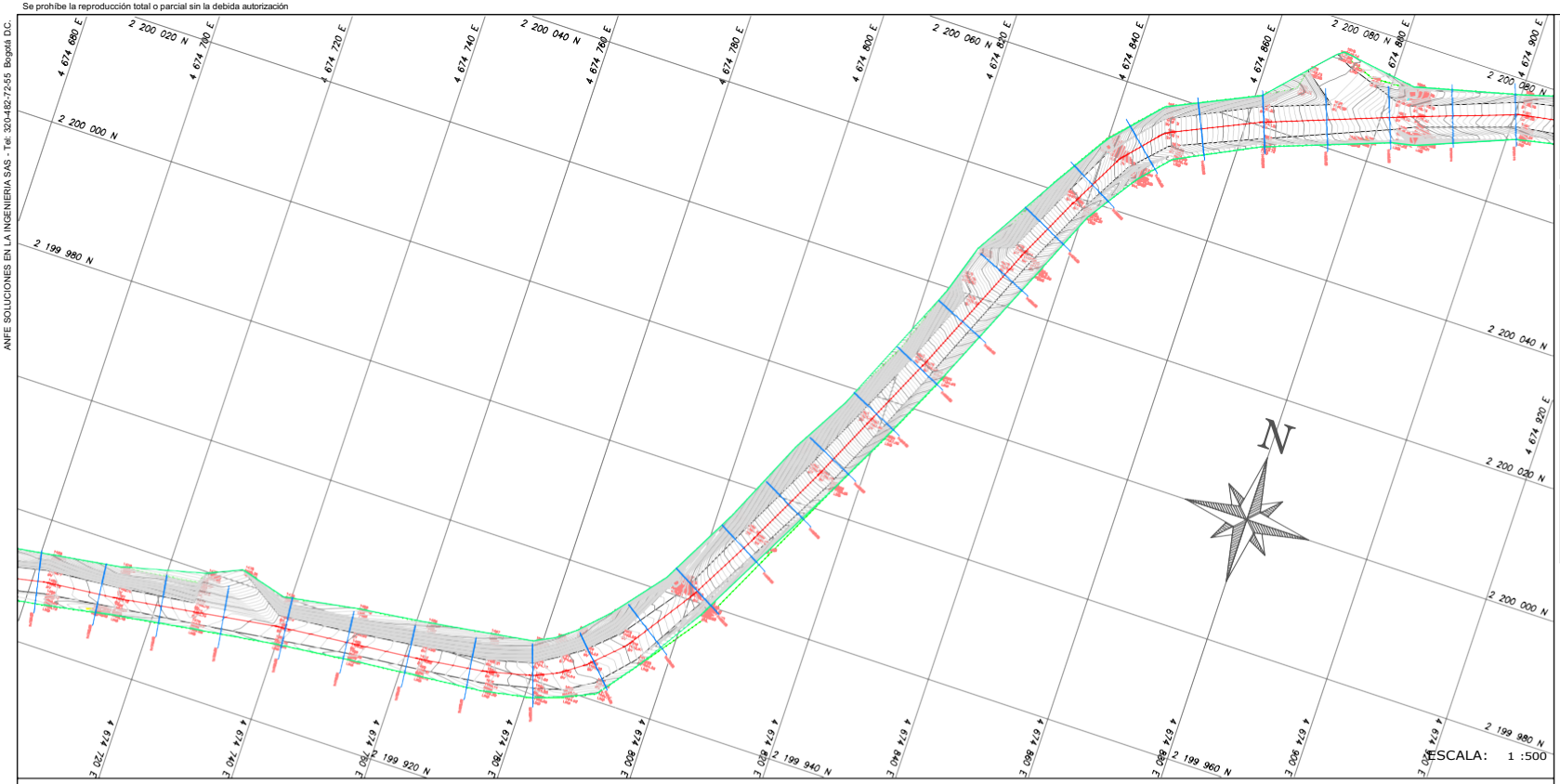
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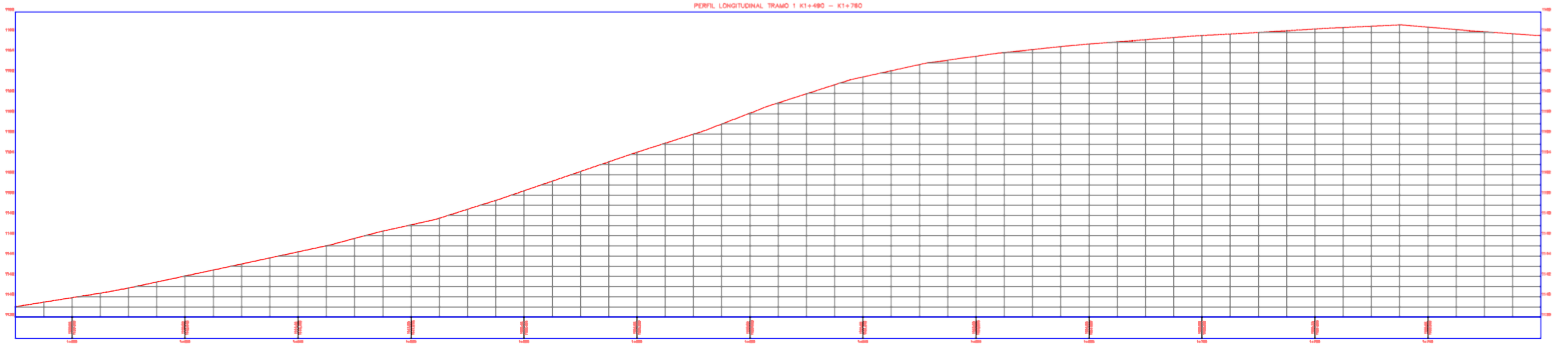
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ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.



ESCALA: 1 :500



ESCALA: 1 : 600

LEVANTAMIENTO TOPOGRÁFICO

BM 1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM 2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K1+490.00 - K1+760.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

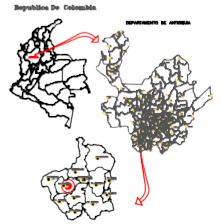
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	7 DE 23
ESCALA:	COMO INDICA

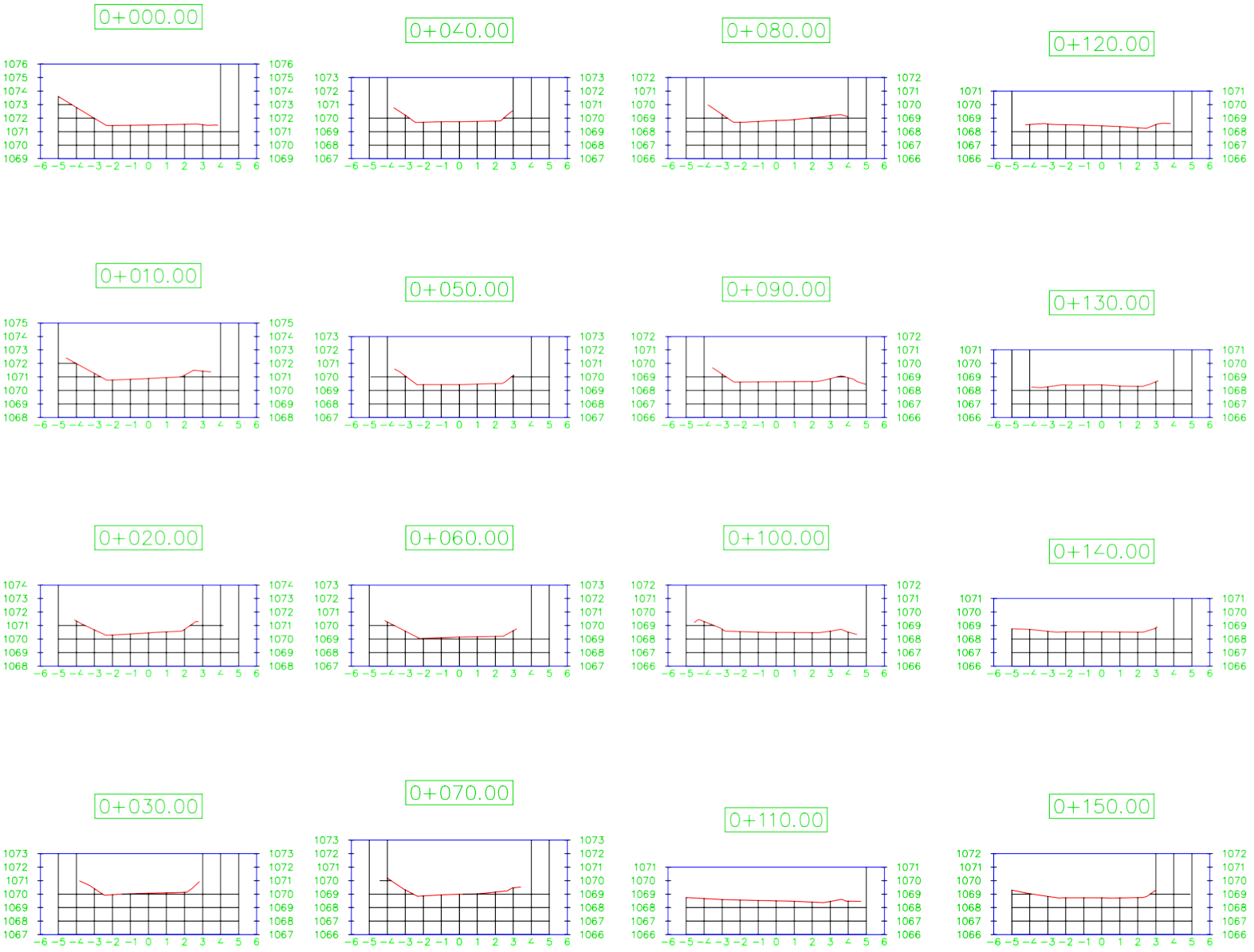
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ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.



LEVANTAMIENTO TOPOGRAFICO

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+000.00 - K0+150.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

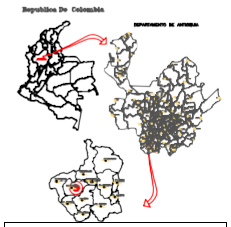
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	10 DE 23
ESCALA:	1:150

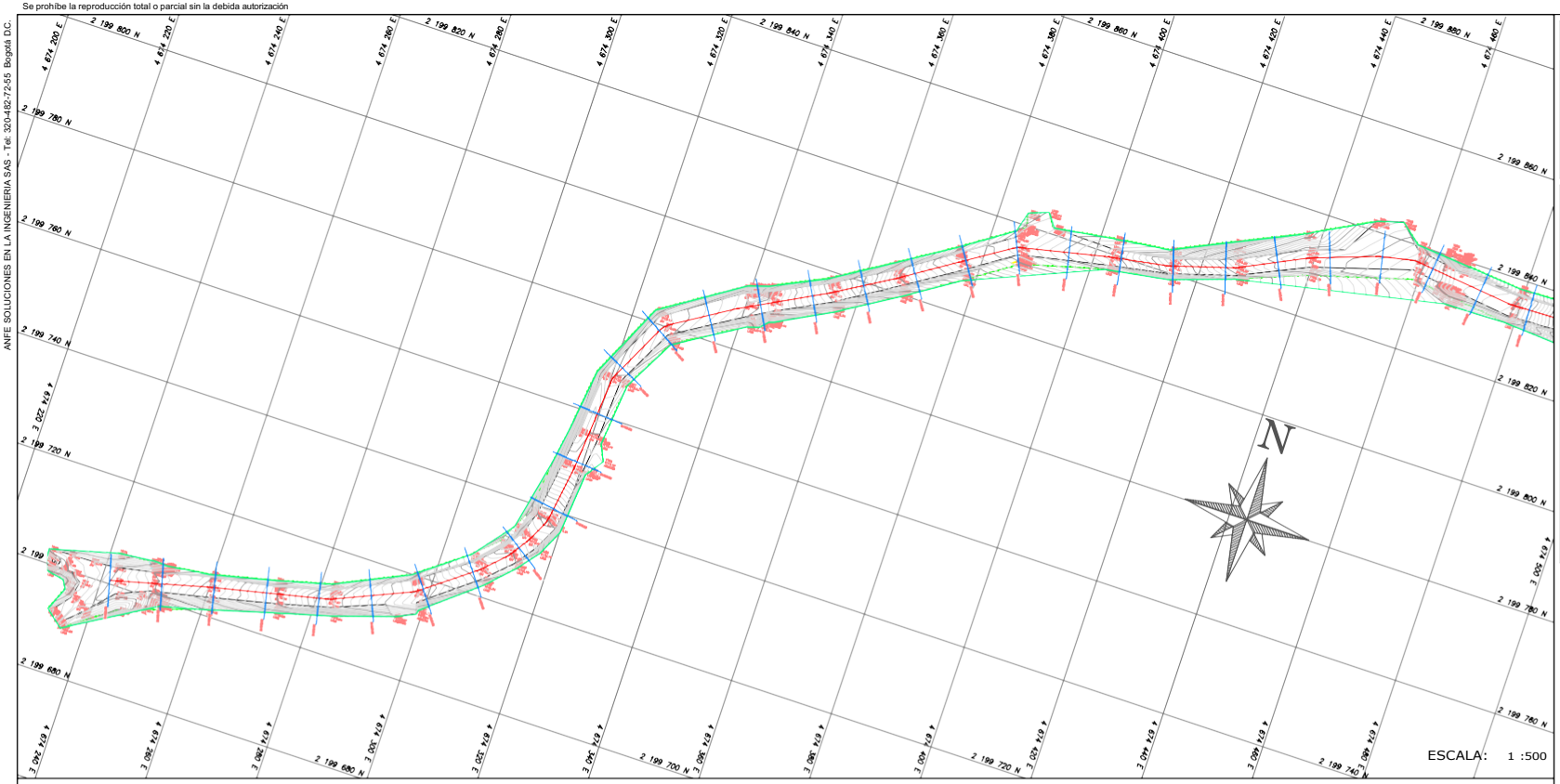
10/03/2024 11:35:10 p. m.

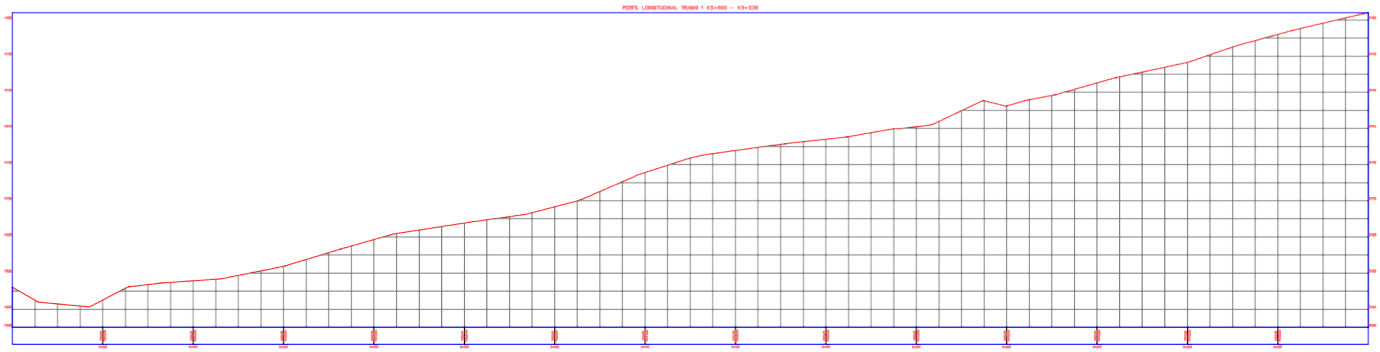
Se prohíbe la reproducción total o parcial sin la debida autorización

ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.

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ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.





LEVANTAMIENTO TOPOGRÁFICO

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K2+000.00 - K2+230.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

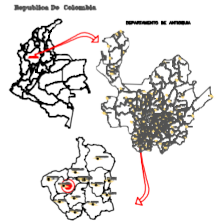
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	9 DE 23
ESCALA:	COMO INDICA

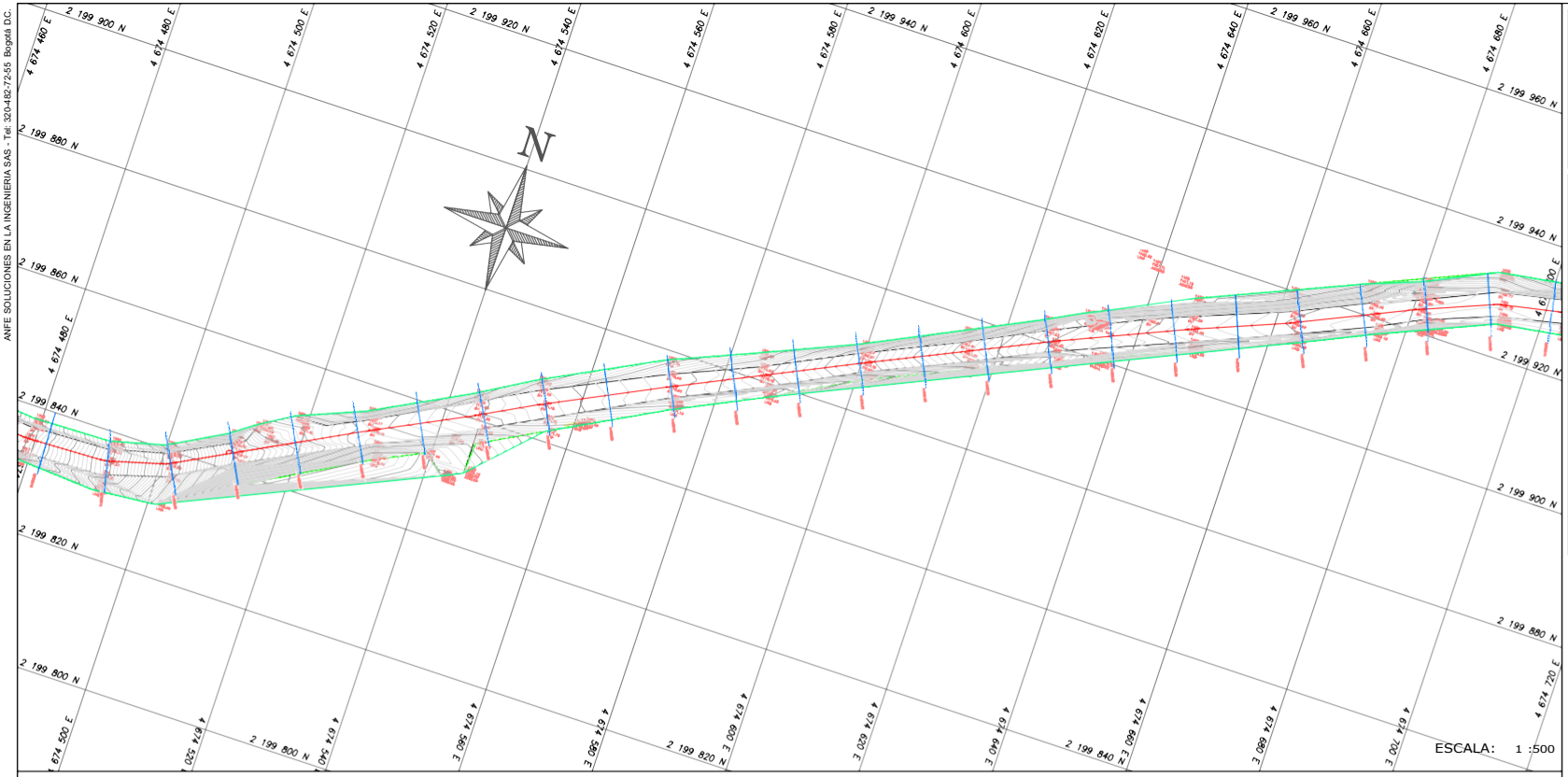
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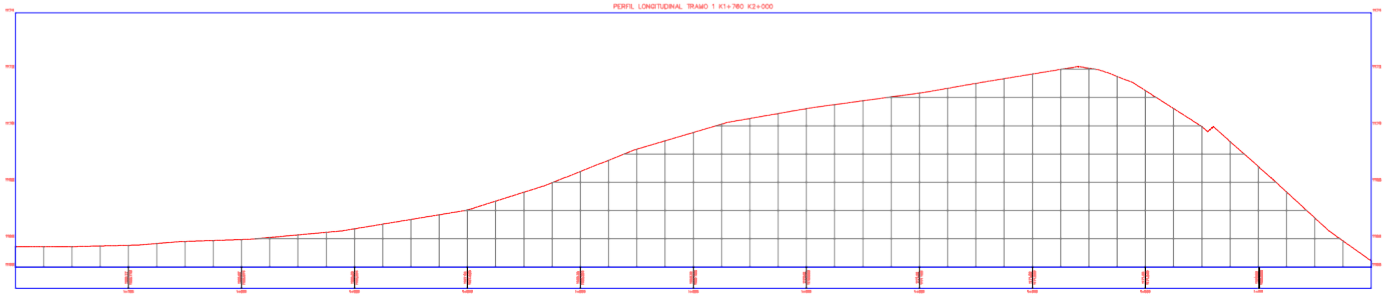
ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.

Se prohíbe la reproducción total o parcial sin la debida autorización

ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.



ESCALA: 1 :500



ESCALA: 1 : 600

LEVANTAMIENTO TOPOGRÁFICO

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K1+760.00 - K2+000.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

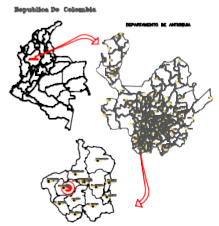
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	8 DE 23
ESCALA:	COMO INDICA

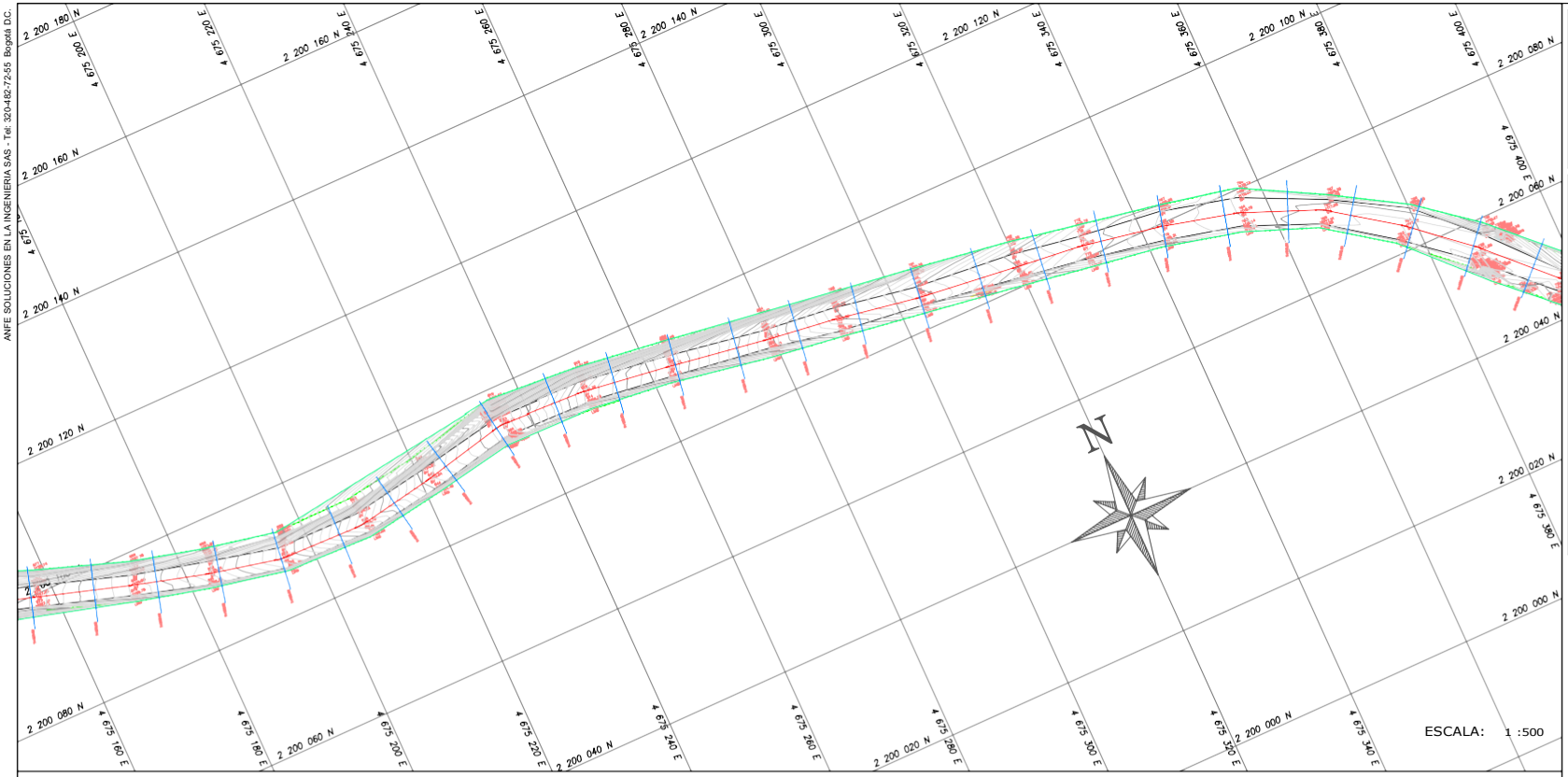
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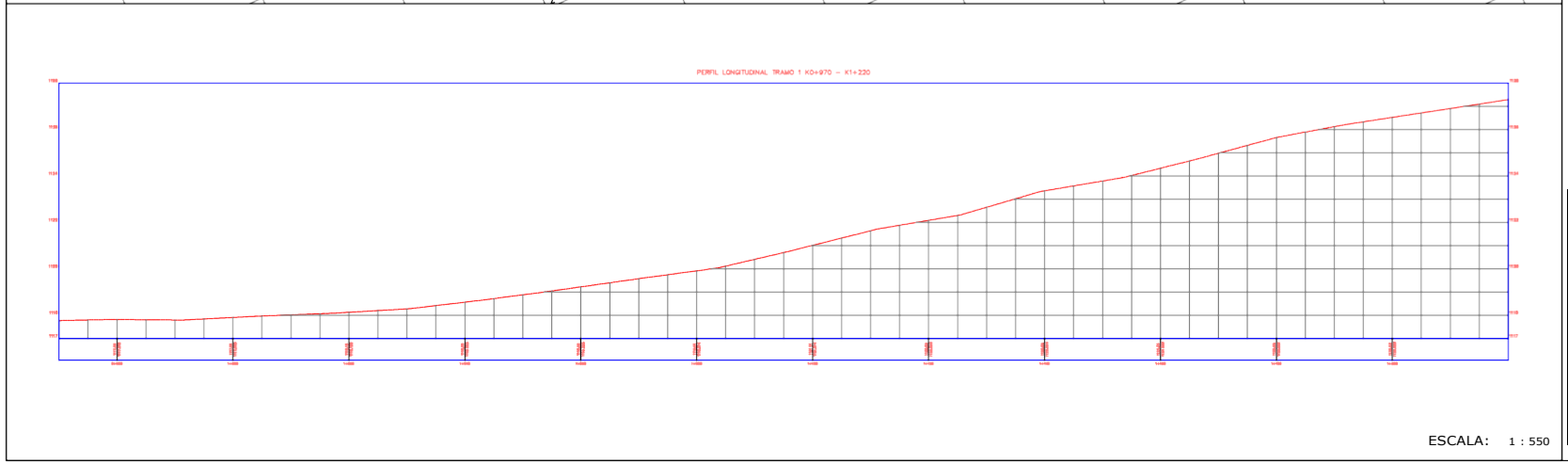
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LEVANTAMIENTO TOPOGRAFICO

BM 1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM 2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+970.00 - K1+220.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

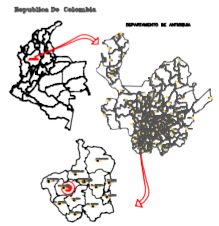
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	5 DE 23
ESCALA:	COMO INDICA

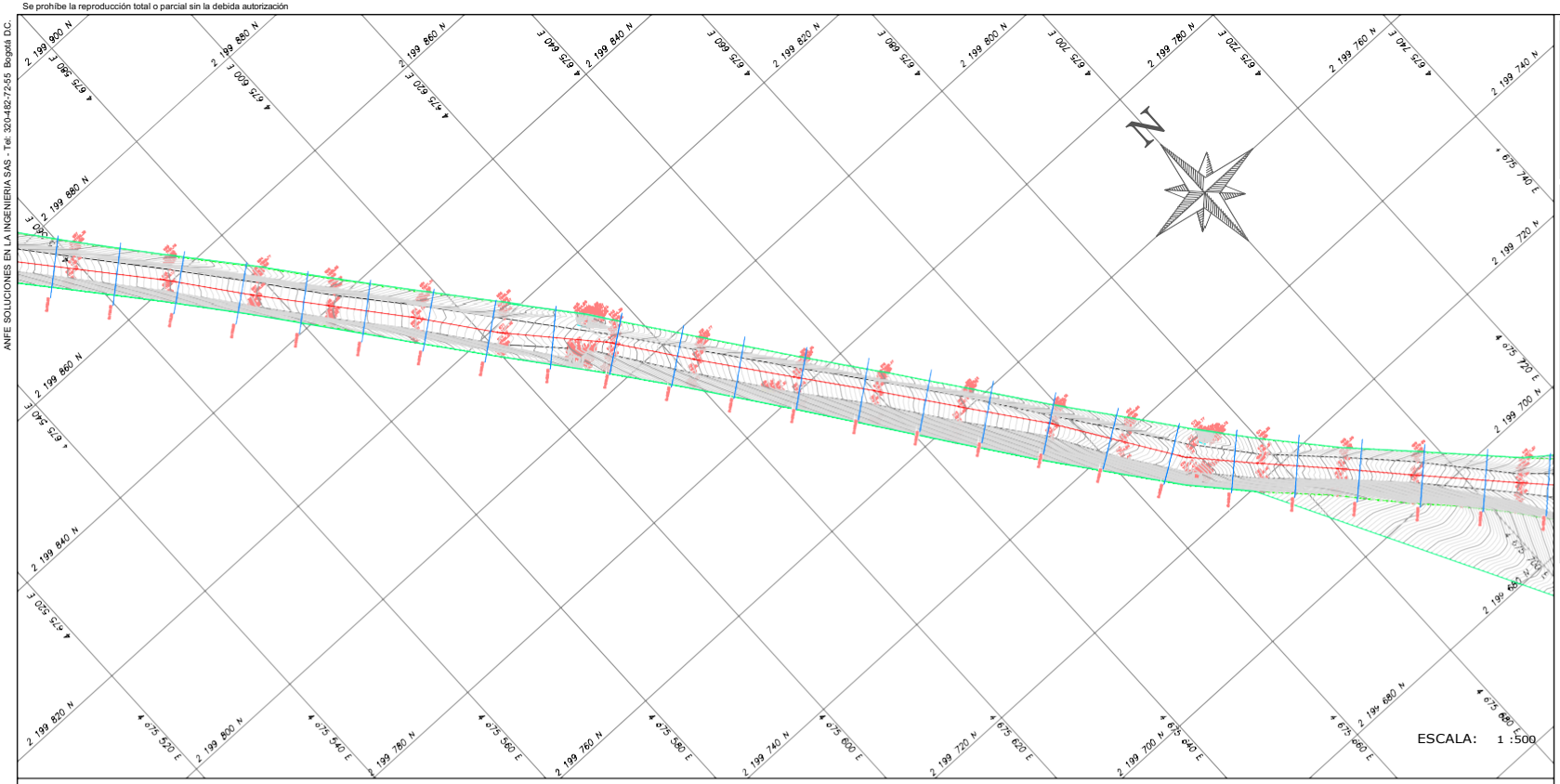
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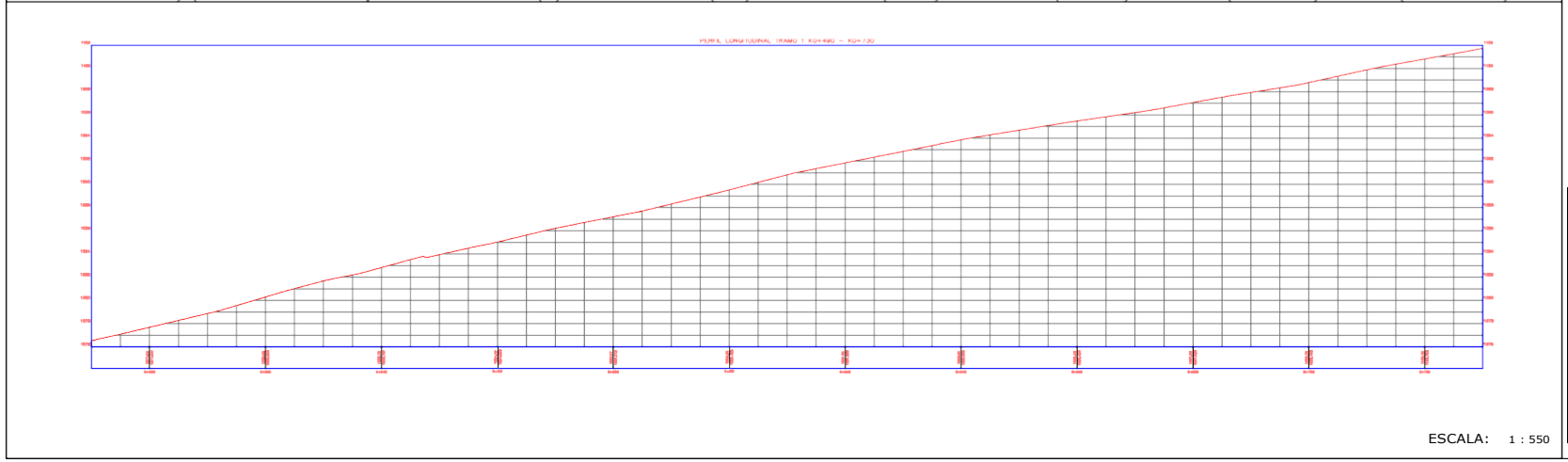
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LEVANTAMIENTO TOPOGRAFICO

BM 1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM 2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 1
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VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

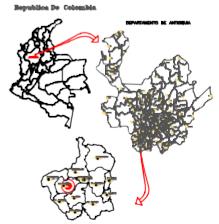
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO: JAVIER SANCHEZ MURCIA

FECHA: 15/02/2024

PLANO: 3 DE 23

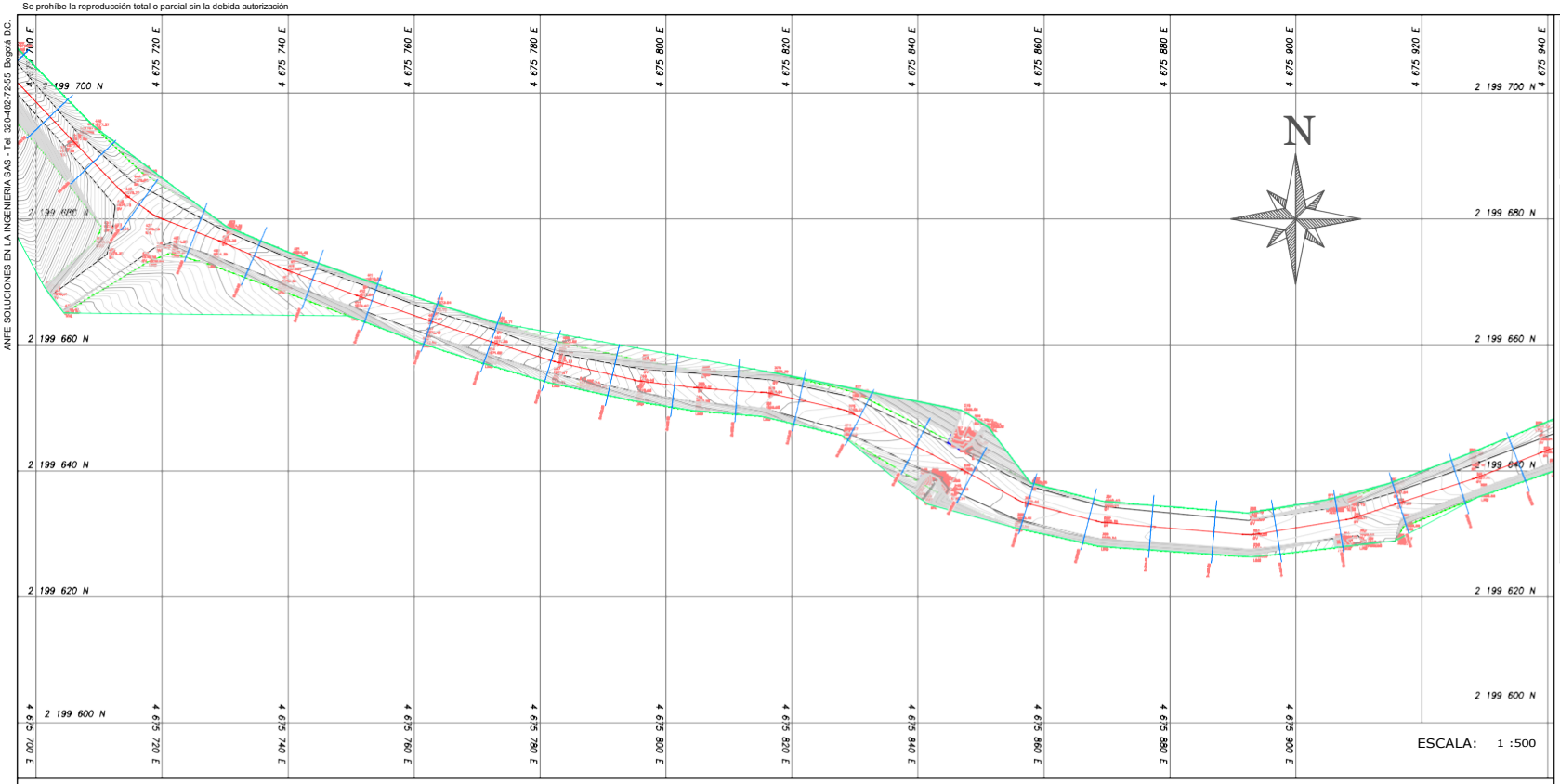
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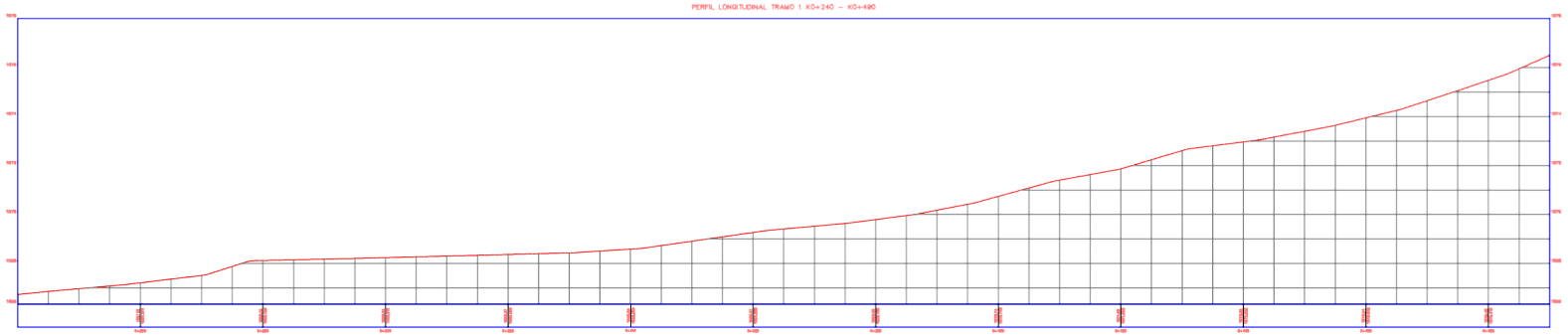
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LEVANTAMIENTO TOPOGRAFICO

TRAMO 3
K0+240.00 - K0+490.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

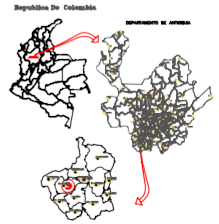
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	2 DE 23
ESCALA:	COMO INDICA

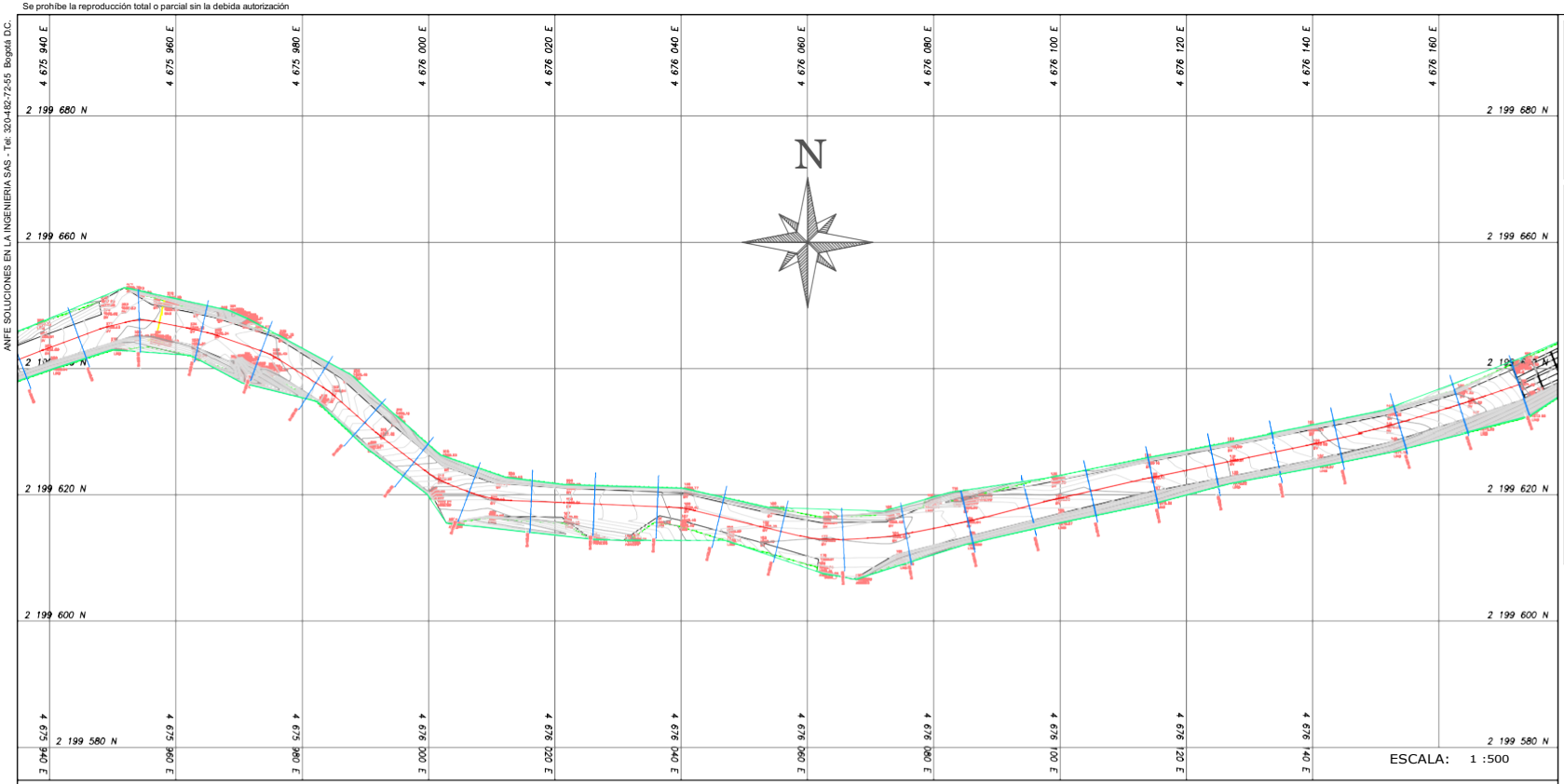
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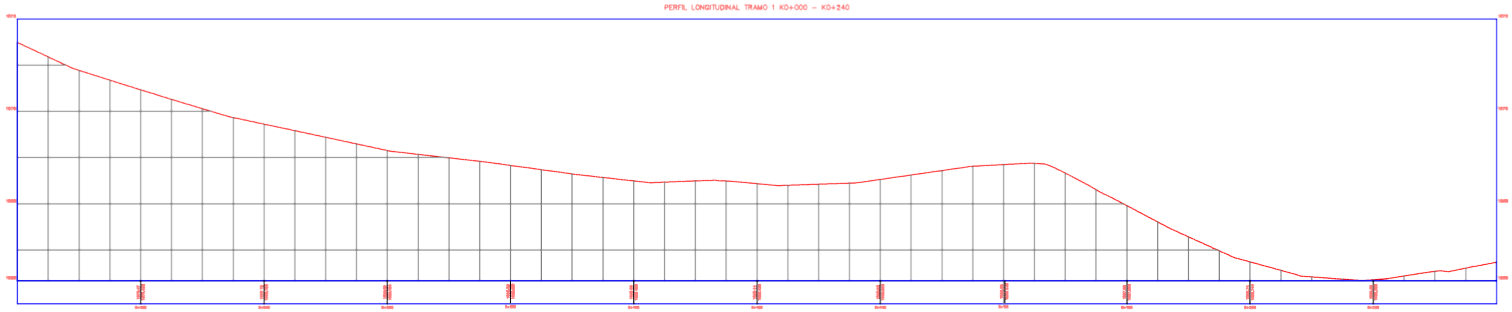
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ESCALA: 1 :500



ESCALA: 1 : 550

LEVANTAMIENTO TOPOGRAFICO

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+000.00 - K0+240.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

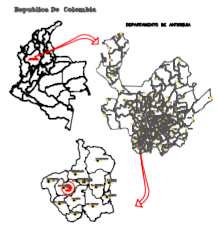
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	1 DE 23
ESCALA:	COMO INDICA

10/03/2024 11:35:10 p. m.

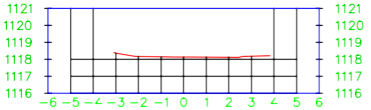
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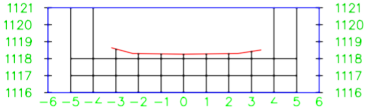
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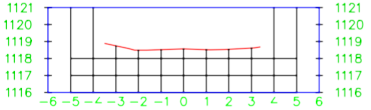
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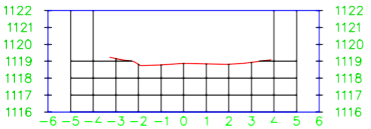
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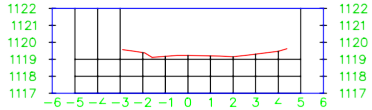
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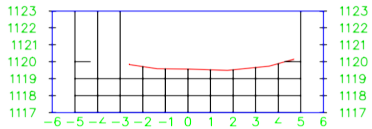
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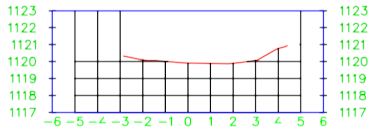
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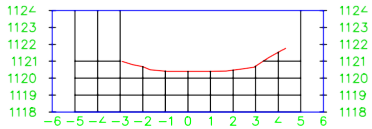
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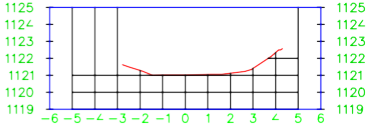
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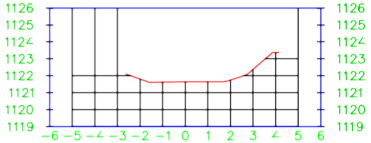
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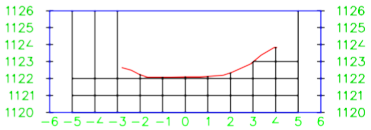
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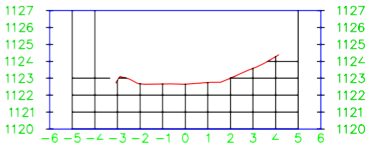
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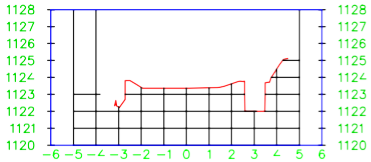
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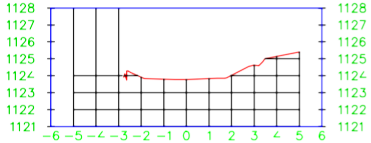
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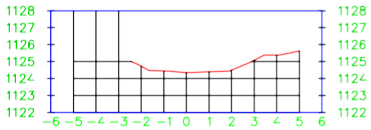
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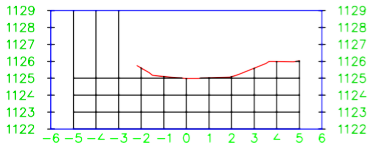
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1+160.00



1+170.00



LEVANTAMIENTO TOPOGRAFICO

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K1+020.00 - K1+170.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

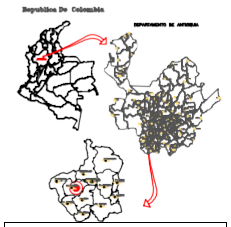
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	16 DE 23
ESCALA:	1:150

10/03/2024 11:35:10 p. m.

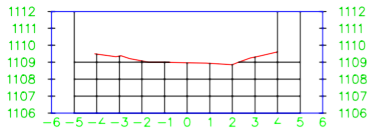
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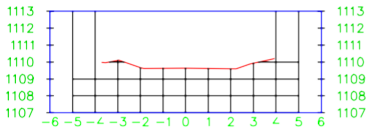
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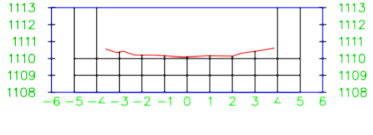
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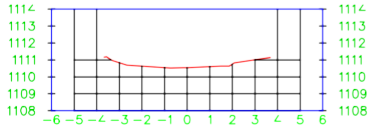
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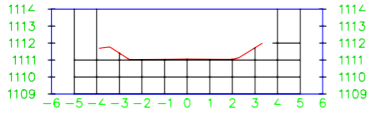
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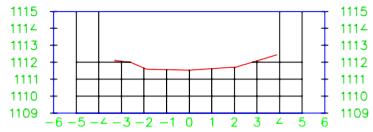
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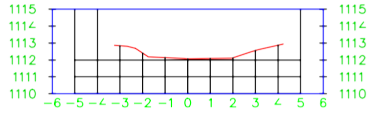
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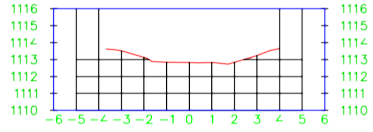
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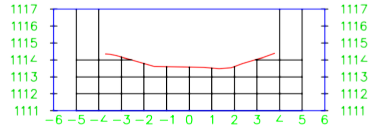
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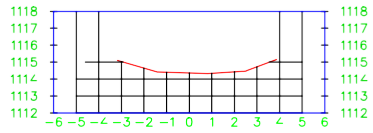
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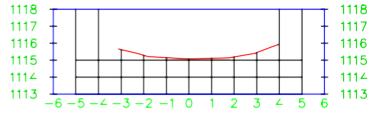
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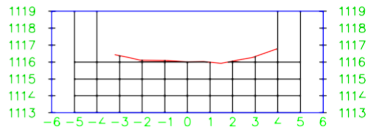
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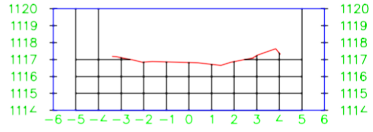
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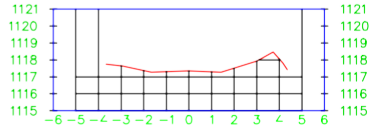
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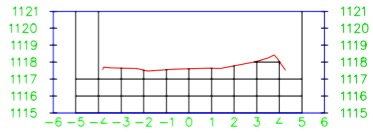
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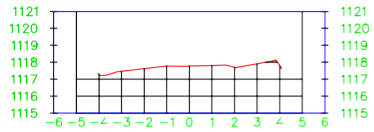
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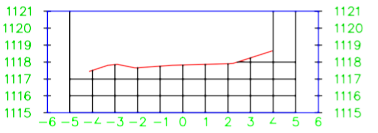
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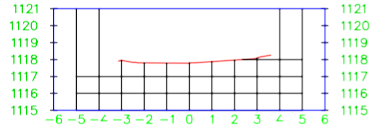
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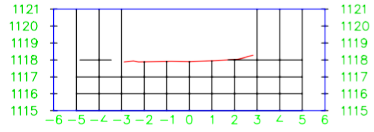
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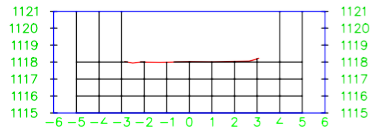
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1+010.00



LEVANTAMIENTO TOPOGRAFICO

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+820.00 - K1+010.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

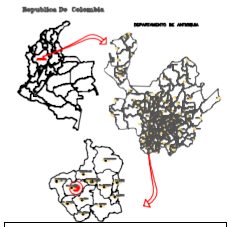
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MARCIA
FECHA:	15/02/2024
PLANO:	15 DE 23
ESCALA:	1:150

10/03/2024 11:35:10 p. m.

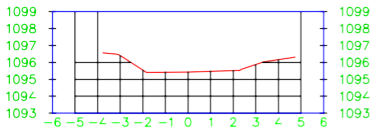
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ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.

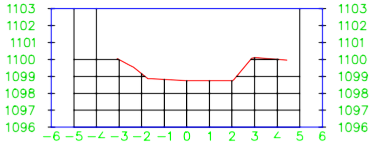
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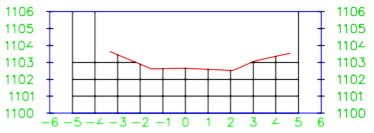
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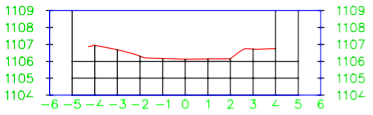
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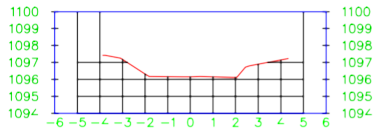
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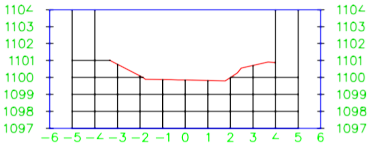
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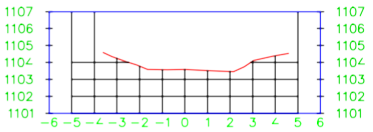
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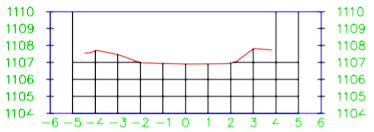
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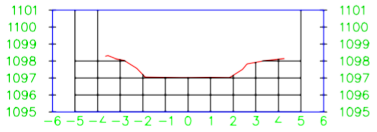
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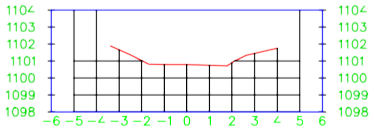
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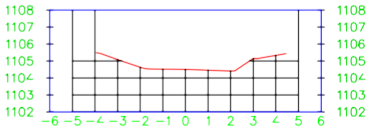
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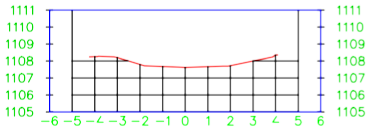
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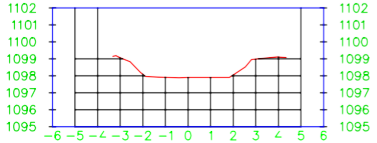
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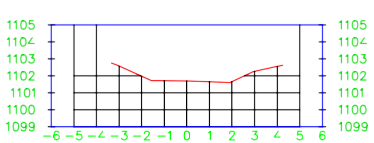
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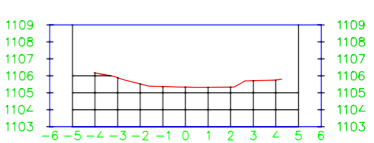
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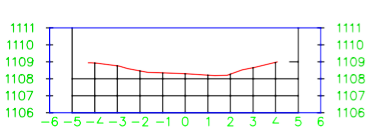
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0+770.00



0+810.00



LEVANTAMIENTO TOPOGRAFICO

BM1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+660.00 - K0+810.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

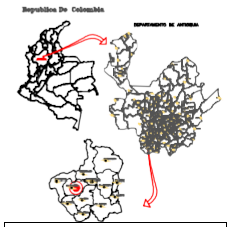
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	14 DE 23
ESCALA:	1:150

10/03/2024 11:35:10 p. m.

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LEVANTAMIENTO TOPOGRAFICO

BM-1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+320.00 - K0+490.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

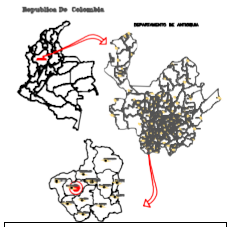
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2,000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MARCIA
FECHA:	15/02/2024
PLANO:	12 DE 23
ESCALA:	1:150

10/03/2024 11:35:10 p. m.

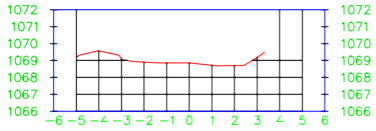
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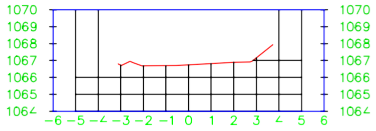
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ANFE SOLUCIONES EN LA INGENIERIA SAS - Tel: 320-482-72-55 Bogotá D.C.

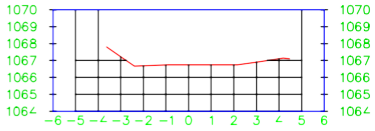
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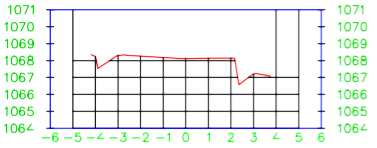
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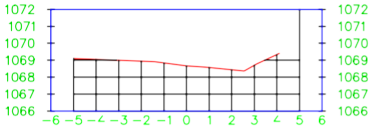
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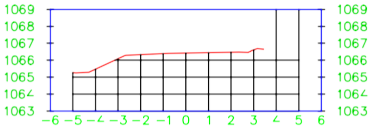
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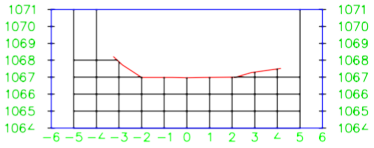
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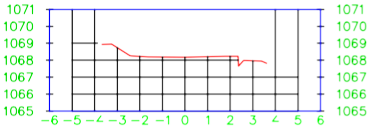
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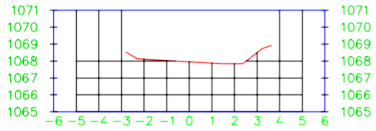
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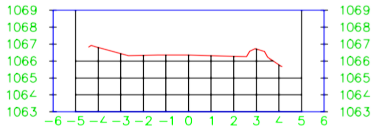
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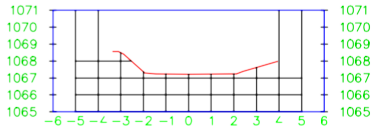
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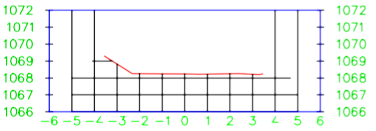
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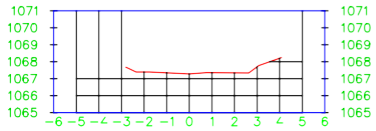
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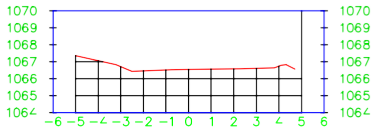
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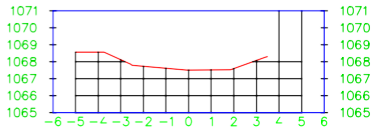
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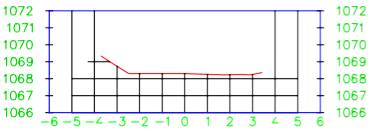
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0+270.00



0+310.00



LEVANTAMIENTO TOPOGRAFICO

BM-1
ESTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM-2
ESTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+160.00 - K0+310.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE SECCIONES TRANSVERSALES

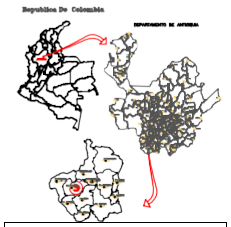
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO:	JAVIER SANCHEZ MURCIA
FECHA:	15/02/2024
PLANO:	11 DE 23
ESCALA:	1:150

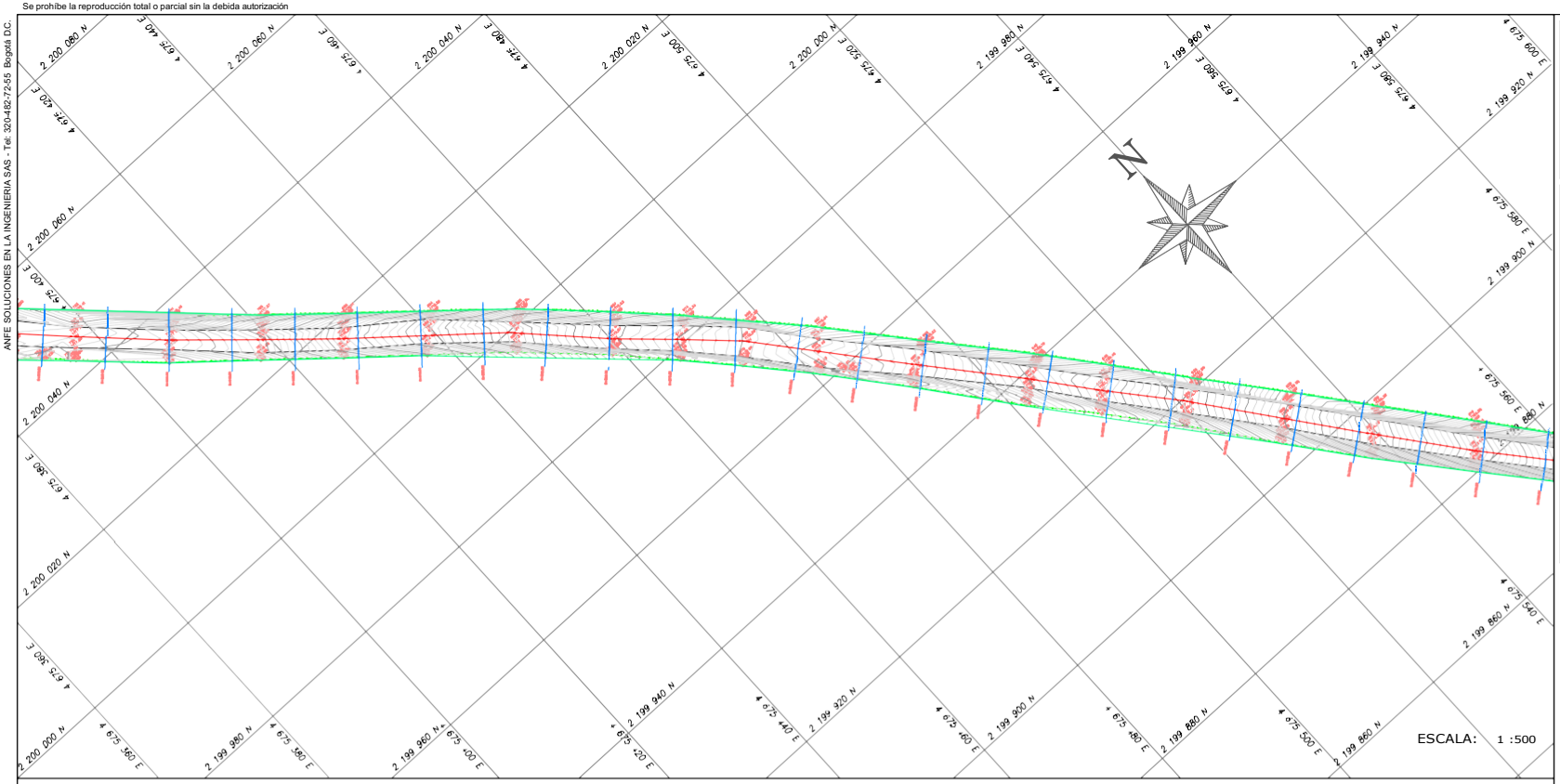
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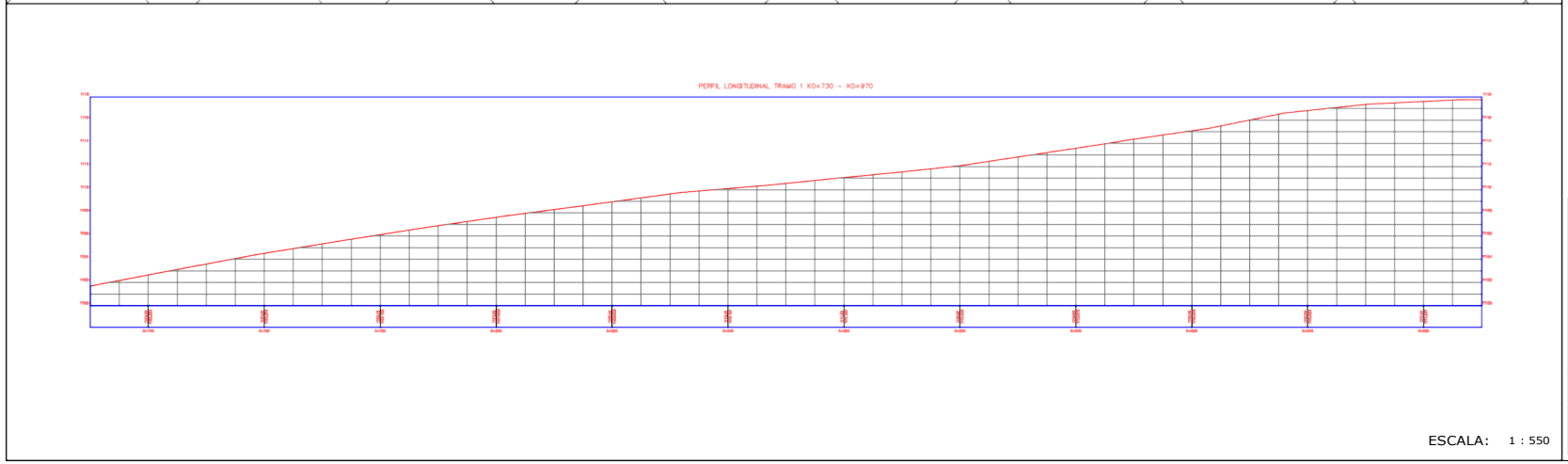
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LEVANTAMIENTO TOPOGRAFICO

BM 1
NORTE: 2199607.467
ESTE: 4676062.375
ALTURA: 1068.818

BM 2
NORTE: 2199653.278
ESTE: 4676201.388
ALTURA: 1072.942

TRAMO 3
K0+730.00 - K0+970.00
VEREDA LA PALMIRA - HISPANIA
PLANO DE PLANTA Y PERFIL

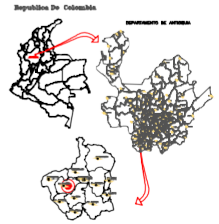
DATUM GEODÉSICO
MAGNA SIRGAS

PROYECCIÓN
TRANSVERSAL DE MERCATOR

ORIGEN DE PROYECCIÓN
ORIGEN NACIONAL
FALSO NORTE / 2.000.000
FALSO ESTE / 5.000.000

MEDIDAS
LONGITUD VIA ESTUDIADA: 2300 METROS

LOCALIZACIÓN:



CONVENCIONES:
- CORREDOR
- EJE DE VIA
- PH EXISTENTE
- ALCANTARILLA EXISTENTE
- BOX CULVERT EXISTENTE
- RED DE GAS NATURAL
- CURVA DE NIVEL MAYOR
- CURVA DE NIVEL MENOR

TOPOGRAFO: JAVIER SANCHEZ MURCIA
FECHA: 15/02/2024
PLANO: 4 DE 23
ESCALA: COMO INDICA

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10/03/2024 11:35:10 p. m.

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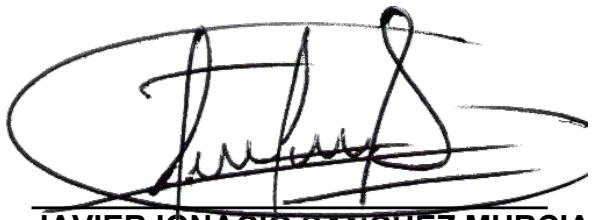
MEMORIAL DE RESPONSABILIDAD

INFORME TOPOGRAFICO.

JAVIER IGNACIO SANCHEZ MURCIA identificado con la cédula de ciudadanía Nro. 71.389382, en mi calidad de Tecnólogo en Topografía con Licencia Profesional 01-13990, CERTIFICO que realicé el Informe Topográfico del proyecto **"PAVIMENTACIÓN MEDIANTE EL SISTEMA CONSTRUCTIVO PLACA HUELLA VÍA TERCIARIA SAN JOAQUIN VEREDA LA PALMIRA DEL MUNICIPIO DE HISPANIA ANTIOQUIA"**

Declaro que toda la información suministrada está acorde a las Normas Técnicas colombianas aplicables y vigentes.

Atentamente;



JAVIER IGNACIO SANCHEZ MURCIA
TECNOLOGO TOPOGRAFO.
Licencia Profesional 01