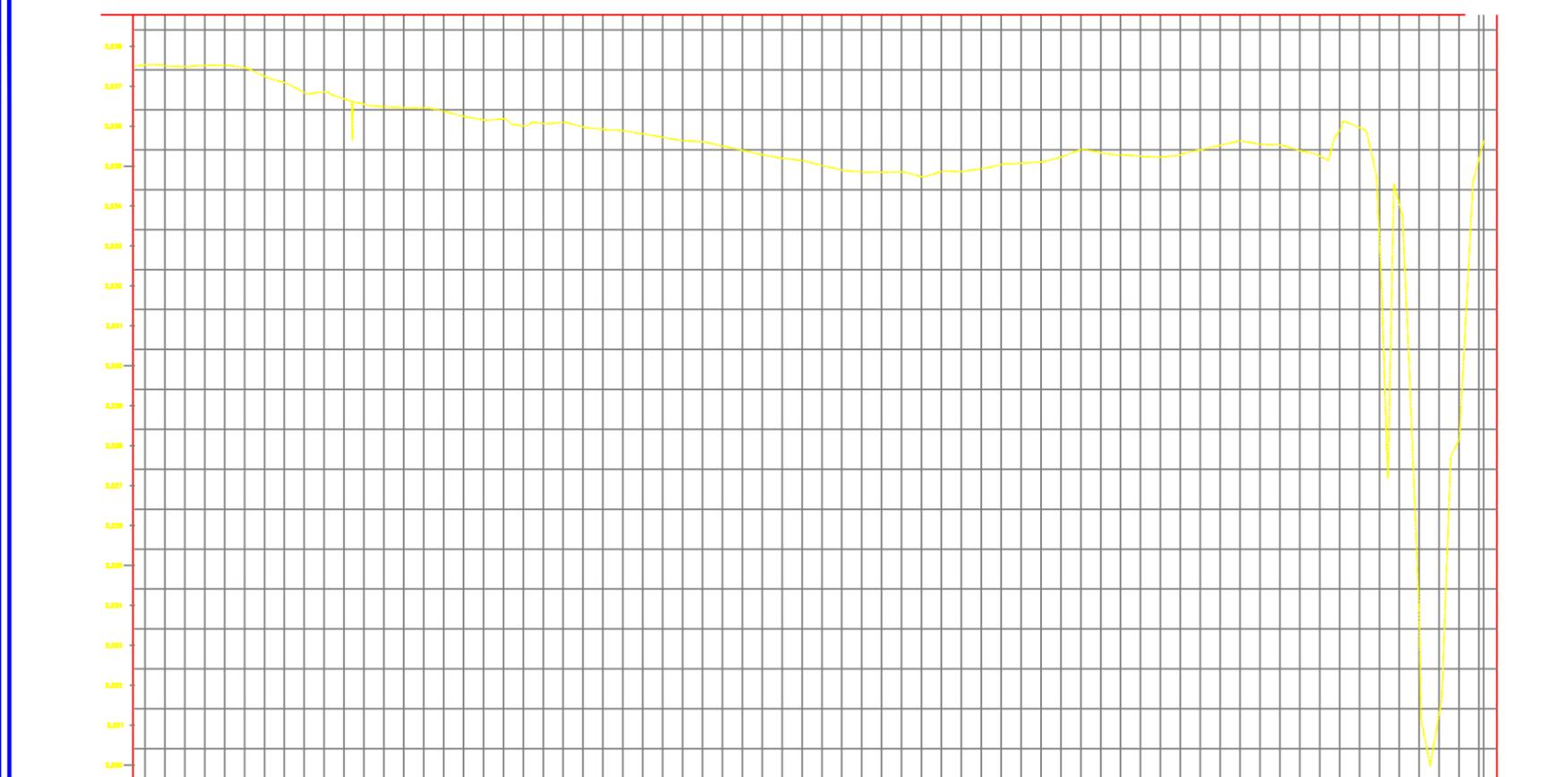


PLANTA LEVANTAMIENTO TOPOGRAFICO COLECTOR MELCHOR OCAMPO LOCALIDAD DE MELCHOR OCAMPO, VISITACION Y TENOPALCO SECCION 5



PERFIL LEVANTAMIENTO TOPOGRAFICO COLECTOR MELCHOR OCAMPO LOCALIDAD DE MELCHOR OCAMPO, VISITACION Y TENOPALCO SECCION 5

CUADRO DE CONSTRUCCION
COLECTOR SEMIPROFUNDO A GRAN CANAL MELCHOR OCAMPO-TENOPALCO-VITACION

| LADO | EST | PV | RUMBO | DISTANCIA | V | COORDENADAS | |
|------|-----|-----|-----------------|-----------|-----|----------------|--------------|
| | | | | | | X | Y |
| | 0 | 1 | N 89°29'08.87\" | 130.280 | 0 | 2,178,020.0418 | 484,213.8484 |
| | 1 | 2 | N 89°29'08.12\" | 130.080 | 2 | 2,178,063.7817 | 484,257.0251 |
| | 2 | 3 | N 89°29'12.57\" | 94.883 | 3 | 2,178,067.3008 | 484,272.6338 |
| | 3 | 4 | S 89°29'12.57\" | 66.482 | 4 | 2,178,025.5885 | 484,264.0547 |
| | 4 | 5 | N 20°19'04.97\" | 8.288 | 5 | 2,178,033.4603 | 484,274.7448 |
| | 5 | 6 | N 70°11'12.87\" | 102.239 | 6 | 2,178,082.4902 | 484,170.0234 |
| | 6 | 7 | N 89°29'08.12\" | 20.839 | 7 | 2,178,098.5388 | 484,158.4845 |
| | 7 | 8 | N 89°29'07.38\" | 20.212 | 8 | 2,178,078.4337 | 484,099.8893 |
| | 8 | 9 | N 89°29'08.12\" | 18.774 | 9 | 2,178,088.2111 | 484,081.8912 |
| | 9 | 10 | N 12°19'02.27\" | 48.840 | 10 | 2,178,086.1387 | 484,111.8250 |
| | 10 | 11 | N 89°29'08.12\" | 171.818 | 11 | 2,178,028.8789 | 484,143.4238 |
| | 11 | 12 | N 30°29'12.18\" | 87.228 | 12 | 2,178,008.8700 | 484,071.6287 |
| | 12 | 13 | N 42°42'06.18\" | 63.104 | 13 | 2,178,077.4897 | 484,030.8418 |
| | 13 | 14 | N 89°29'08.12\" | 114.038 | 14 | 2,178,081.3838 | 483,864.0118 |
| | 14 | 15 | N 89°29'08.12\" | 112.708 | 15 | 2,178,184.1133 | 483,837.6335 |
| | 15 | 16 | N 89°29'08.12\" | 103.882 | 16 | 2,178,276.4902 | 483,865.0140 |
| | 16 | 17 | N 89°29'08.12\" | 98.848 | 17 | 2,178,328.4488 | 483,811.8918 |
| | 17 | 18 | N 31°09'06.12\" | 54.817 | 18 | 2,178,322.0207 | 483,826.1838 |
| | 18 | 19 | N 18°29'04.38\" | 127.897 | 19 | 2,178,443.0058 | 483,638.3883 |
| | 19 | 20 | N 18°02'02.88\" | 140.088 | 20 | 2,178,679.4381 | 483,777.0874 |
| | 20 | 21 | N 18°02'02.88\" | 138.740 | 21 | 2,178,713.8724 | 483,819.8716 |
| | 21 | 22 | N 18°02'02.88\" | 66.108 | 22 | 2,178,770.7650 | 483,838.2854 |
| | 22 | 23 | N 18°02'02.88\" | 100.688 | 23 | 2,178,867.7218 | 483,890.0888 |
| | 23 | 24 | N 11°01'03.72\" | 118.887 | 24 | 2,178,888.4883 | 483,833.0333 |
| | 24 | 25 | N 18°02'02.88\" | 116.738 | 25 | 2,180,094.5372 | 484,033.8845 |
| | 25 | 26 | N 89°29'08.12\" | 11.814 | 26 | 2,180,101.4088 | 484,013.7038 |
| | 26 | 27 | S 89°29'08.12\" | 191.881 | 27 | 2,180,287.3388 | 484,033.7385 |
| | 27 | 28 | S 89°29'08.12\" | 97.858 | 28 | 2,180,081.8122 | 484,201.4522 |
| | 28 | 29 | N 89°29'08.12\" | 20.287 | 29 | 2,180,089.8178 | 484,281.2428 |
| | 29 | 30 | N 72°14'02.72\" | 102.888 | 30 | 2,180,114.7207 | 484,211.8818 |
| | 30 | 31 | N 89°29'08.12\" | 84.800 | 31 | 2,180,121.8238 | 484,176.0783 |
| | 31 | 32 | S 78°29'08.12\" | 65.483 | 32 | 2,180,112.0080 | 484,077.8881 |
| | 32 | 33 | S 89°29'08.12\" | 85.021 | 33 | 2,180,075.0788 | 484,081.8100 |
| | 33 | 34 | S 74°09'08.12\" | 36.633 | 34 | 2,180,084.3033 | 484,018.1475 |
| | 34 | 35 | S 89°29'08.12\" | 20.287 | 35 | 2,180,089.8178 | 484,033.8845 |
| | 35 | 36 | S 89°29'08.12\" | 32.020 | 36 | 2,180,082.0880 | 484,080.8847 |
| | 36 | 37 | N 89°29'08.12\" | 84.372 | 37 | 2,180,089.8178 | 484,176.0783 |
| | 37 | 38 | N 89°29'08.12\" | 44.123 | 38 | 2,180,078.0781 | 484,188.0780 |
| | 38 | 39 | N 77°29'08.12\" | 103.880 | 39 | 2,180,111.8077 | 484,088.4881 |
| | 39 | 40 | N 89°29'08.12\" | 76.288 | 40 | 2,180,138.7322 | 484,028.0428 |
| | 40 | 41 | N 89°29'08.12\" | 66.482 | 41 | 2,180,183.4522 | 484,008.0427 |
| | 41 | 42 | N 71°29'08.12\" | 147.218 | 42 | 2,180,230.0288 | 483,231.8838 |
| | 42 | 43 | N 38°09'06.12\" | 78.017 | 43 | 2,180,200.0238 | 484,288.8438 |
| | 43 | 44 | N 89°29'08.12\" | 20.880 | 44 | 2,180,200.8878 | 484,288.8878 |
| | 44 | 45 | N 12°29'08.12\" | 87.807 | 45 | 2,180,458.4488 | 484,278.8878 |
| | 45 | 46 | N 89°29'08.12\" | 178.738 | 46 | 2,180,877.8878 | 484,288.8878 |
| | 46 | 47 | N 89°29'08.12\" | 188.738 | 47 | 2,180,788.8878 | 484,288.8878 |
| | 47 | 48 | S 89°29'08.12\" | 184.407 | 48 | 2,180,788.8878 | 484,288.8878 |
| | 48 | 49 | S 89°29'08.12\" | 81.847 | 49 | 2,180,788.1742 | 484,288.8878 |
| | 49 | 50 | S 89°29'08.12\" | 188.288 | 50 | 2,180,748.8188 | 484,288.8878 |
| | 50 | 51 | S 89°29'08.12\" | 178.738 | 51 | 2,180,748.8188 | 484,288.8878 |
| | 51 | 52 | N 89°29'08.12\" | 188.738 | 52 | 2,180,788.8188 | 484,288.8878 |
| | 52 | 53 | N 89°29'08.12\" | 188.738 | 53 | 2,180,888.8188 | 484,288.8878 |
| | 53 | 54 | N 78°29'08.12\" | 71.288 | 54 | 2,180,888.8188 | 484,288.8878 |
| | 54 | 55 | N 89°29'08.12\" | 118.880 | 55 | 2,180,888.4881 | 484,288.8878 |
| | 55 | 56 | S 89°29'08.12\" | 80.244 | 56 | 2,180,888.7878 | 484,288.8878 |
| | 56 | 57 | S 89°29'08.12\" | 188.288 | 57 | 2,180,888.7878 | 484,288.8878 |
| | 57 | 58 | S 89°29'08.12\" | 188.288 | 58 | 2,180,888.7878 | 484,288.8878 |
| | 58 | 59 | N 89°29'08.12\" | 188.288 | 59 | 2,180,888.7878 | 484,288.8878 |
| | 59 | 60 | S 89°29'08.12\" | 188.288 | 60 | 2,180,888.7878 | 484,288.8878 |
| | 60 | 61 | S 89°29'08.12\" | 188.288 | 61 | 2,180,888.7878 | 484,288.8878 |
| | 61 | 62 | S 89°29'08.12\" | 188.288 | 62 | 2,180,888.7878 | 484,288.8878 |
| | 62 | 63 | S 89°29'08.12\" | 188.288 | 63 | 2,180,888.7878 | 484,288.8878 |
| | 63 | 64 | S 89°29'08.12\" | 188.288 | 64 | 2,180,888.7878 | 484,288.8878 |
| | 64 | 65 | S 89°29'08.12\" | 188.288 | 65 | 2,180,888.7878 | 484,288.8878 |
| | 65 | 66 | S 89°29'08.12\" | 188.288 | 66 | 2,180,888.7878 | 484,288.8878 |
| | 66 | 67 | S 89°29'08.12\" | 188.288 | 67 | 2,180,888.7878 | 484,288.8878 |
| | 67 | 68 | S 89°29'08.12\" | 188.288 | 68 | 2,180,888.7878 | 484,288.8878 |
| | 68 | 69 | S 89°29'08.12\" | 188.288 | 69 | 2,180,888.7878 | 484,288.8878 |
| | 69 | 70 | S 89°29'08.12\" | 188.288 | 70 | 2,180,888.7878 | 484,288.8878 |
| | 70 | 71 | N 89°29'08.12\" | 118.211 | 71 | 2,180,888.7878 | 484,288.8878 |
| | 71 | 72 | N 89°29'08.12\" | 118.211 | 72 | 2,180,888.7878 | 484,288.8878 |
| | 72 | 73 | S 89°29'08.12\" | 86.783 | 73 | 2,180,888.7878 | 484,288.8878 |
| | 73 | 74 | S 89°29'08.12\" | 104.088 | 74 | 2,180,888.7878 | 484,288.8878 |
| | 74 | 75 | S 89°29'08.12\" | 101.800 | 75 | 2,180,888.7878 | 484,288.8878 |
| | 75 | 76 | S 89°29'08.12\" | 188.288 | 76 | 2,180,888.7878 | 484,288.8878 |
| | 76 | 77 | S 89°29'08.12\" | 188.288 | 77 | 2,180,888.7878 | 484,288.8878 |
| | 77 | 78 | S 89°29'08.12\" | 188.288 | 78 | 2,180,888.7878 | 484,288.8878 |
| | 78 | 79 | S 89°29'08.12\" | 188.288 | 79 | 2,180,888.7878 | 484,288.8878 |
| | 79 | 80 | S 89°29'08.12\" | 188.288 | 80 | 2,180,888.7878 | 484,288.8878 |
| | 80 | 81 | S 89°29'08.12\" | 188.288 | 81 | 2,180,888.7878 | 484,288.8878 |
| | 81 | 82 | S 89°29'08.12\" | 188.288 | 82 | 2,180,888.7878 | 484,288.8878 |
| | 82 | 83 | S 89°29'08.12\" | 188.288 | 83 | 2,180,888.7878 | 484,288.8878 |
| | 83 | 84 | S 89°29'08.12\" | 188.288 | 84 | 2,180,888.7878 | 484,288.8878 |
| | 84 | 85 | S 89°29'08.12\" | 188.288 | 85 | 2,180,888.7878 | 484,288.8878 |
| | 85 | 86 | S 89°29'08.12\" | 188.288 | 86 | 2,180,888.7878 | 484,288.8878 |
| | 86 | 87 | S 89°29'08.12\" | 188.288 | 87 | 2,180,888.7878 | 484,288.8878 |
| | 87 | 88 | S 89°29'08.12\" | 188.288 | 88 | 2,180,888.7878 | 484,288.8878 |
| | 88 | 89 | S 89°29'08.12\" | 188.288 | 89 | 2,180,888.7878 | 484,288.8878 |
| | 89 | 90 | S 89°29'08.12\" | 188.288 | 90 | 2,180,888.7878 | 484,288.8878 |
| | 90 | 91 | S 89°29'08.12\" | 188.288 | 91 | 2,180,888.7878 | 484,288.8878 |
| | 91 | 92 | S 89°29'08.12\" | 188.288 | 92 | 2,180,888.7878 | 484,288.8878 |
| | 92 | 93 | S 89°29'08.12\" | 188.288 | 93 | 2,180,888.7878 | 484,288.8878 |
| | 93 | 94 | S 89°29'08.12\" | 188.288 | 94 | 2,180,888.7878 | 484,288.8878 |
| | 94 | 95 | S 89°29'08.12\" | 188.288 | 95 | 2,180,888.7878 | 484,288.8878 |
| | 95 | 96 | S 89°29'08.12\" | 188.288 | 96 | 2,180,888.7878 | 484,288.8878 |
| | 96 | 97 | S 89°29'08.12\" | 188.288 | 97 | 2,180,888.7878 | 484,288.8878 |
| | 97 | 98 | S 89°29'08.12\" | 188.288 | 98 | 2,180,888.7878 | 484,288.8878 |
| | 98 | 99 | S 89°29'08.12\" | 188.288 | 99 | 2,180,888.7878 | 484,288.8878 |
| | 99 | 100 | S 89°29'08.12\" | 188.288 | 100 | 2,180,888.7878 | 484,288.8878 |

LONGITUD = 10888.20 m

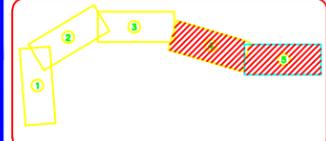
CROQUIS DE LOCALIZACION



SIMBOLOGIA



INDICE DE PLANOS



NOTAS

1. EL NORTE INDICADO ES ASTRONÓMICO.
2. EL LEVANTAMIENTO TOPOGRÁFICO FUE REALIZADO POR ROMÁN PROYECTOS Y CONSTRUCCIONES S.A. DE C.V. EN ENERO-2009
3. LAS DISTANCIAS Y PROFUNDIDADES ESTÁN DADAS EN METROS (M), LAS ELEVACIONES ESTÁN DADAS EN METROS SOBRE EL NIVEL DEL MAR (M.S.N.M.)
4. LAS DISTANCIAS INDICADAS EN PLANTA Y CUADRO DE CONSTRUCCIÓN SON HORIZONTALES
5. LOS CADMIAMIENTOS DEL PERFL ESTÁN INDICADOS CON DISTANCIAS INCLINADAS.
6. ESTE LEVANTAMIENTO SE ELABORÓ CON BASE EN LAS ESPECIFICACIONES DEL CADR.
7. LOS DATOS AQUÍ PRESENTADOS SON RESPECTO A LA DECORADA EXISTENTE CON TUBERIA DE CONCRETO DE 1.53 BAO LA CARRETERA DEL CIRCUITO MEDIOCENTE SE CINTURO HAVELANDO Y CREDENCIADO DESDE EL INTERIOR DEL MESAJ.

UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO
FACULTAD DE INGENIERÍA

TESIS

CRUZ RANGEL ISAAC
ROJAS GARIBAY JOSÉ ARMANDO
TORRES ARREDONDO AGUSTÍN

"PROYECTO EJECUTIVO DE UN COLECTOR COMBINADO EN LA ZONA NOROCCIDENTAL DEL ESTADO DE MÉXICO".

MUNICIPIO DE MELCHOR OCAMPO
LEVANTAMIENTO TOPOGRAFICO COLECTOR MELCHOR OCAMPO
PLANTA, PERFL Y CUADRO CONSTRUCTIVO

FECHA: ABRIL-2009 PLANO: 18 DE 18 CLAVE: ANEXO "A"