APÉNDICE 1 Figuras

Figura 1 Localización en Mapa Regional y Barrios de Puerto Rico

Figura 2 Localización en Mapa Topográfico

Figura 3 Localización en Fotografía Aérea del DRNA 2007

Figura 4 Mapa de Suelos

Figura 5 Mapa Geológico

Figura 6 Mapa de Cuerpos de Agua Cercanos

Figura 7 Ilustración de Pozos Cercanos al Área de Estudio

Figura 8 Mapa de Zonas Susceptibles a Inundación

Figura 9 Vías Principales y Rutas de Acarreo

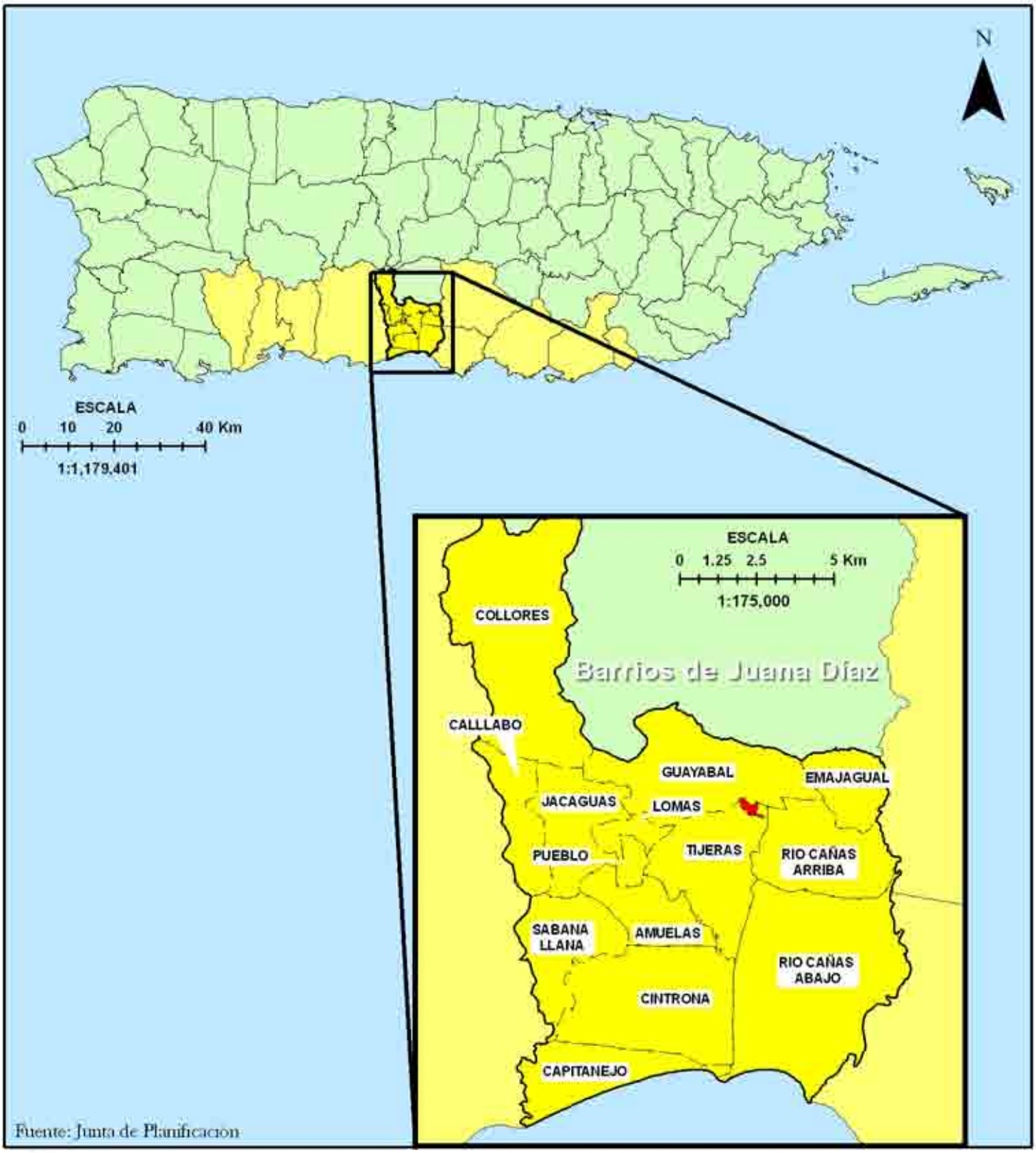
Figura 10 Zonas de Tranquilidad

Figura 11 Mapa de Zonificación

Figura 12 Mapa de los Recursos Sensitivos

Figura 13 Plano Conceptual de las Instalaciones

Figura 1 Localización en mapa regional y barrios de Puerto Rico



Fuente: Junta de Planificacion

Barrios del municipio JuanaDiaz

Municipio de Juana-Diaz

Región Sur de Puerto Rico (segun la JP)

Municipios de Puerto Rico

Cantera Naranjo

Declaración de Impacto Ambiental Preliminar Actualizada

Cantera Naranjo

Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Diaz, Puerto Rico

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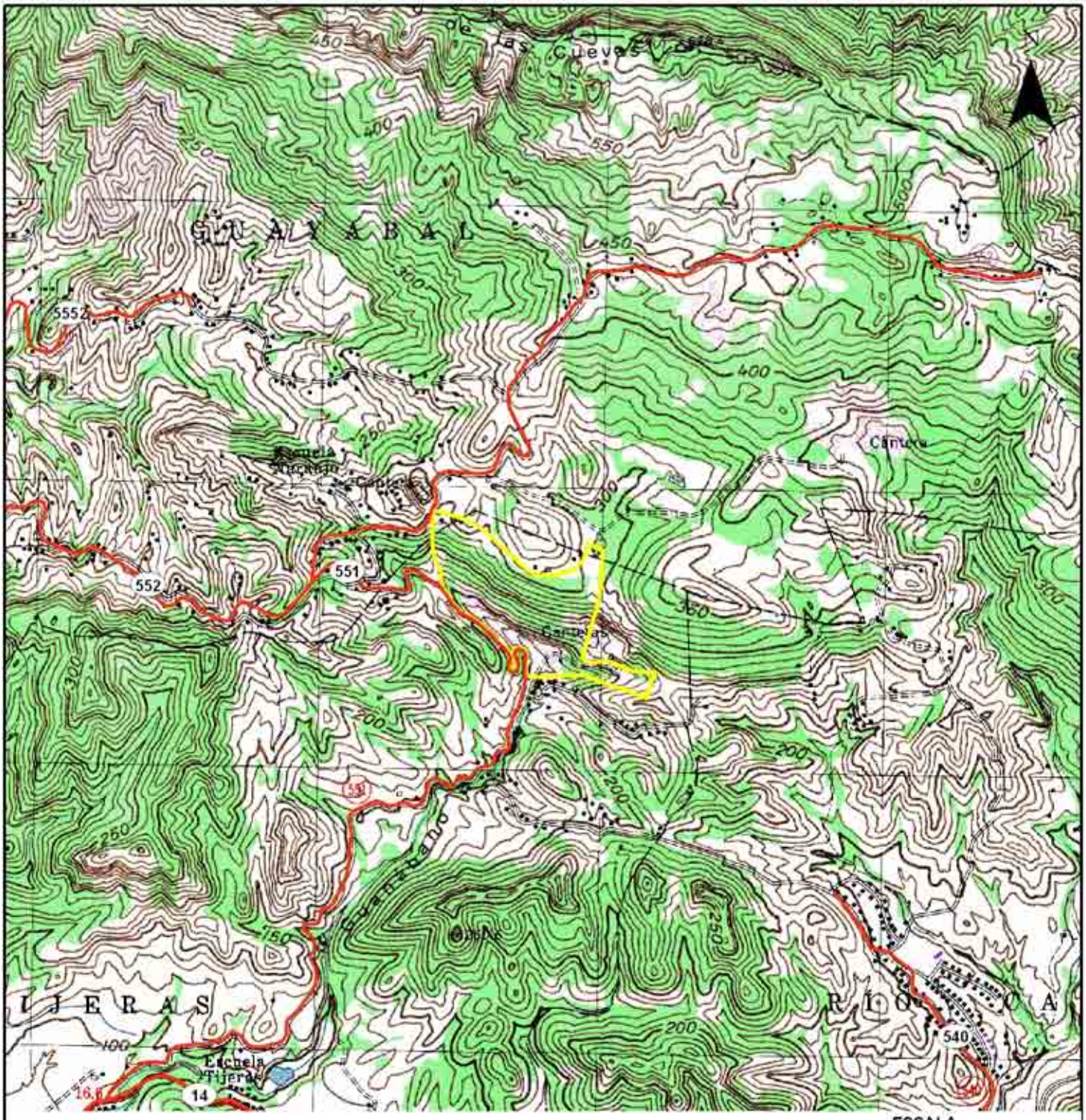
Figura 2 Localización en mapa topográfico



Fuente: USGS (1982) mapa topográfico del cuadrángulo Río Descalabrado

Carreteras

Cantera Naranjo

Declaración de Impacto Ambiental Preliminar Actualizada

Cantera Naranjo

Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Díaz, Puerto Rico

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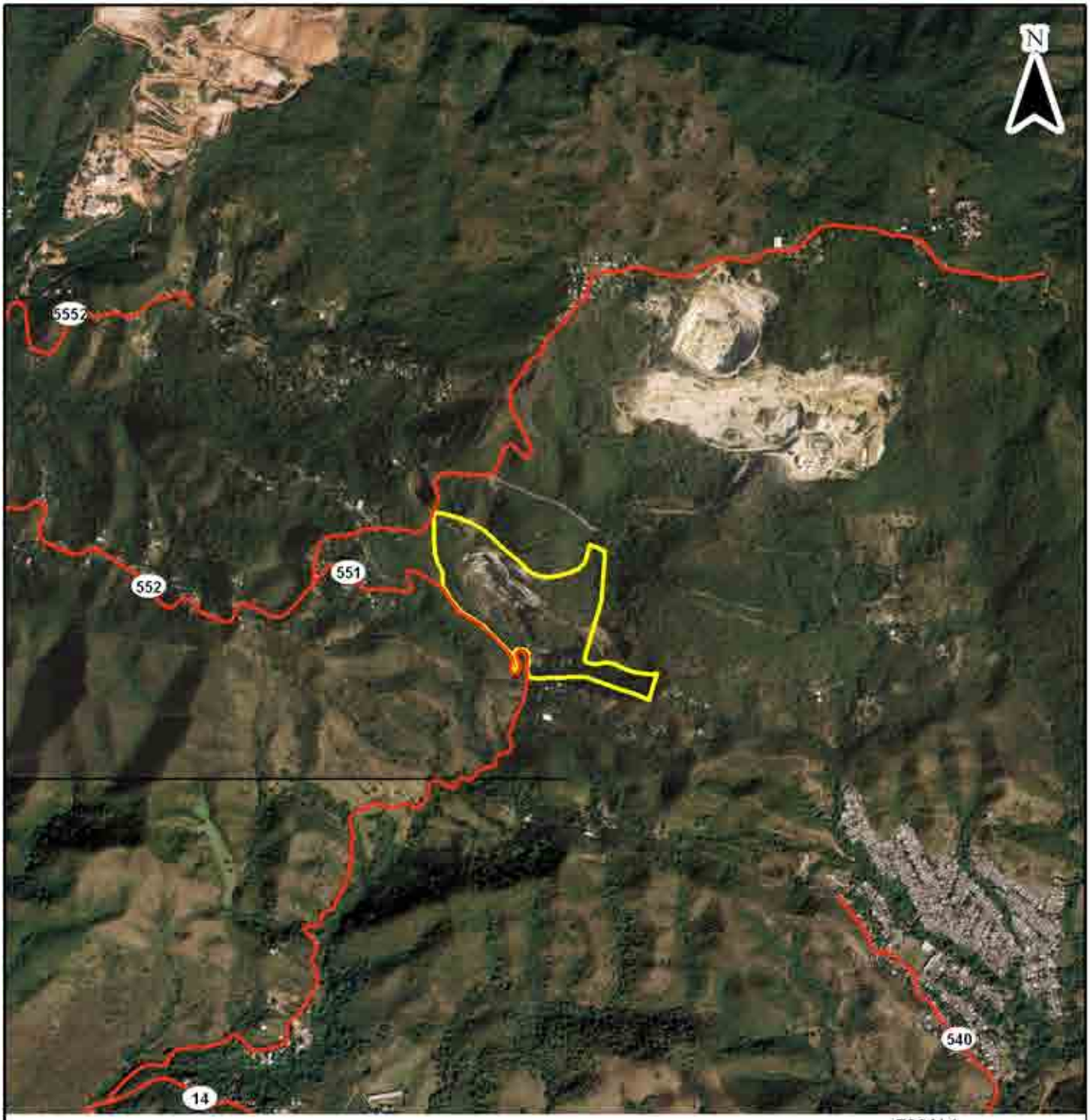
Figura 3 Localización en ortofoto del 2007



Fuente: DRNA ortofotos digitales del 2007

Carreteras

Cantera Naranjo

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Cantera Naranjo

Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Diaz, Puerto Rico

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Figura 4 Mapa de tipos de suelo

Fuente: USDA, SCS. (1979) Soil Survey of Ponce Area of Southern Puerto Rico

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Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Diaz, Puerto Rico

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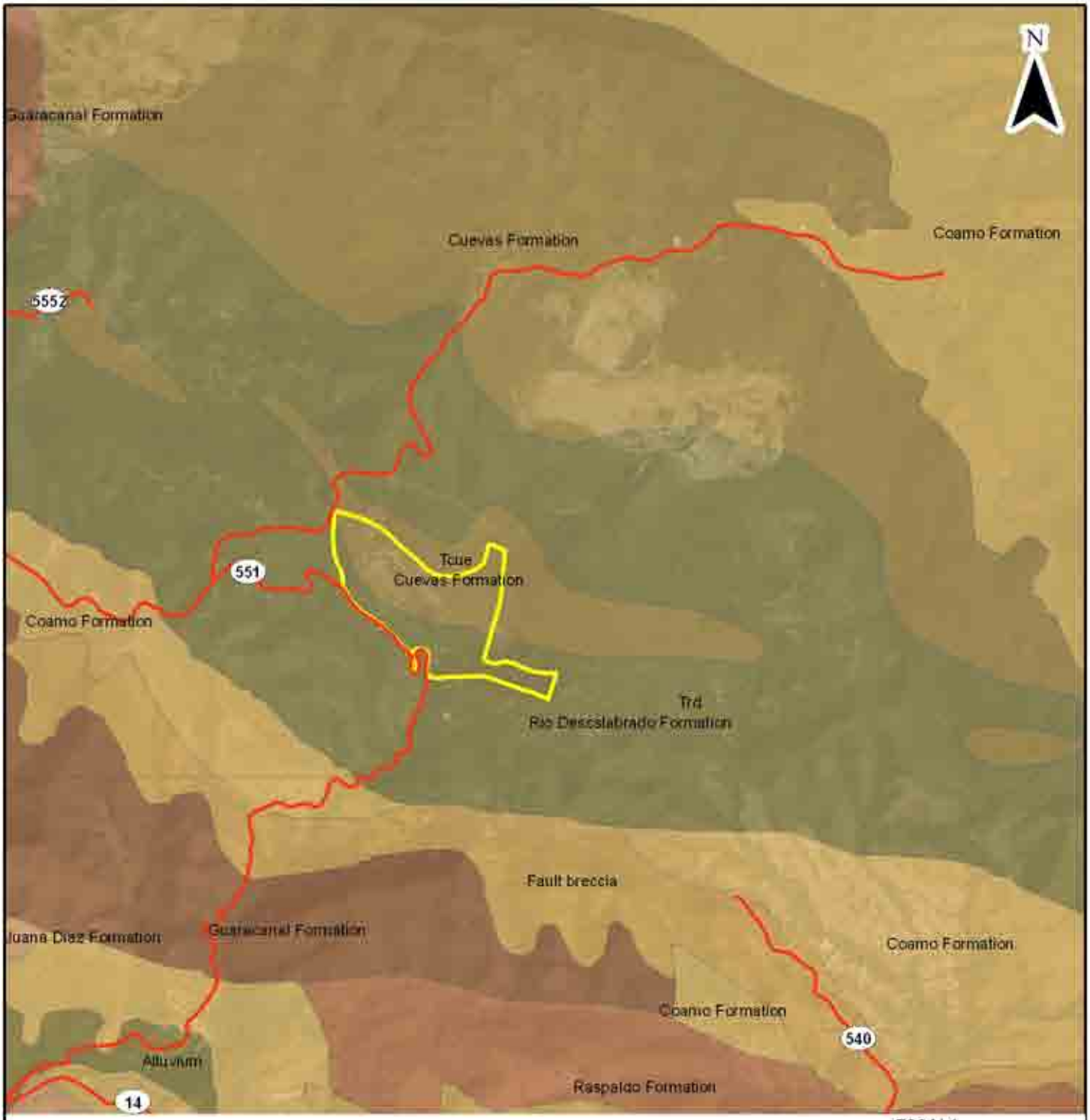
Figura 5 Mapa geológico



Fuente: USGS (1973) Geologic map of the Rio Descalabrado quadrangle, Puerto Rico.

Cantera Naranjo

Carreteras

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Juana Diaz, Puerto Rico

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Figura 6 Mapa de cuerpos de agua cercanos

Fuente: Junta de Planificación

Carreteras

Cantera Naranjo

Radio de 400 m

ríos y quebradas

Declaración de Impacto Ambiental Preliminar Actualizada

Cantera Naranjo

Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Diaz, Puerto Rico

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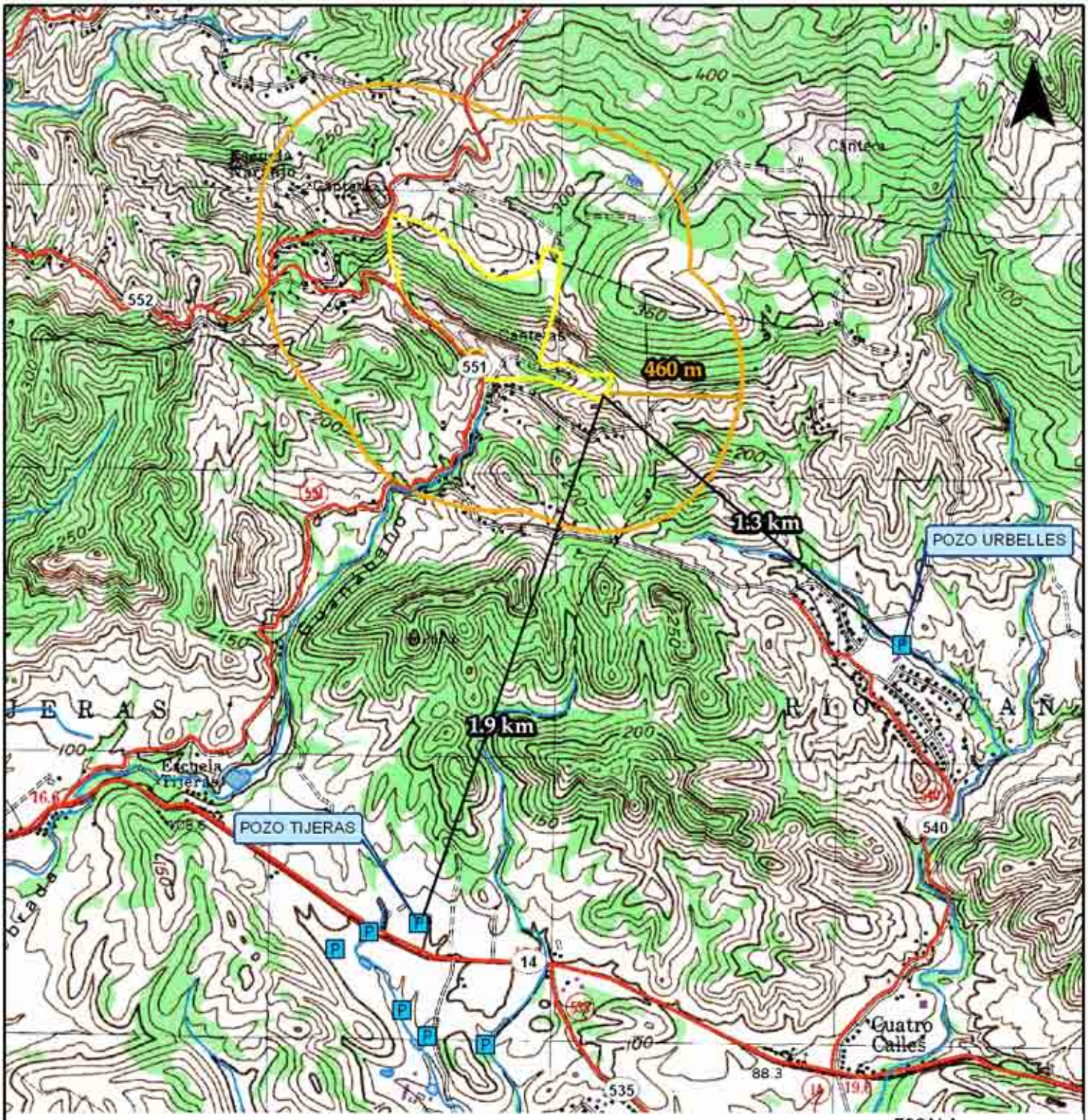
Figura 7 Pozos cercanos al área de estudio



Fuente: USGS

Cantera Naranjo

Radio de 460 m

rios y quebradas

pozos

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Barrio Tijeras, Sector Naranjo
Juana Díaz, Puerto Rico

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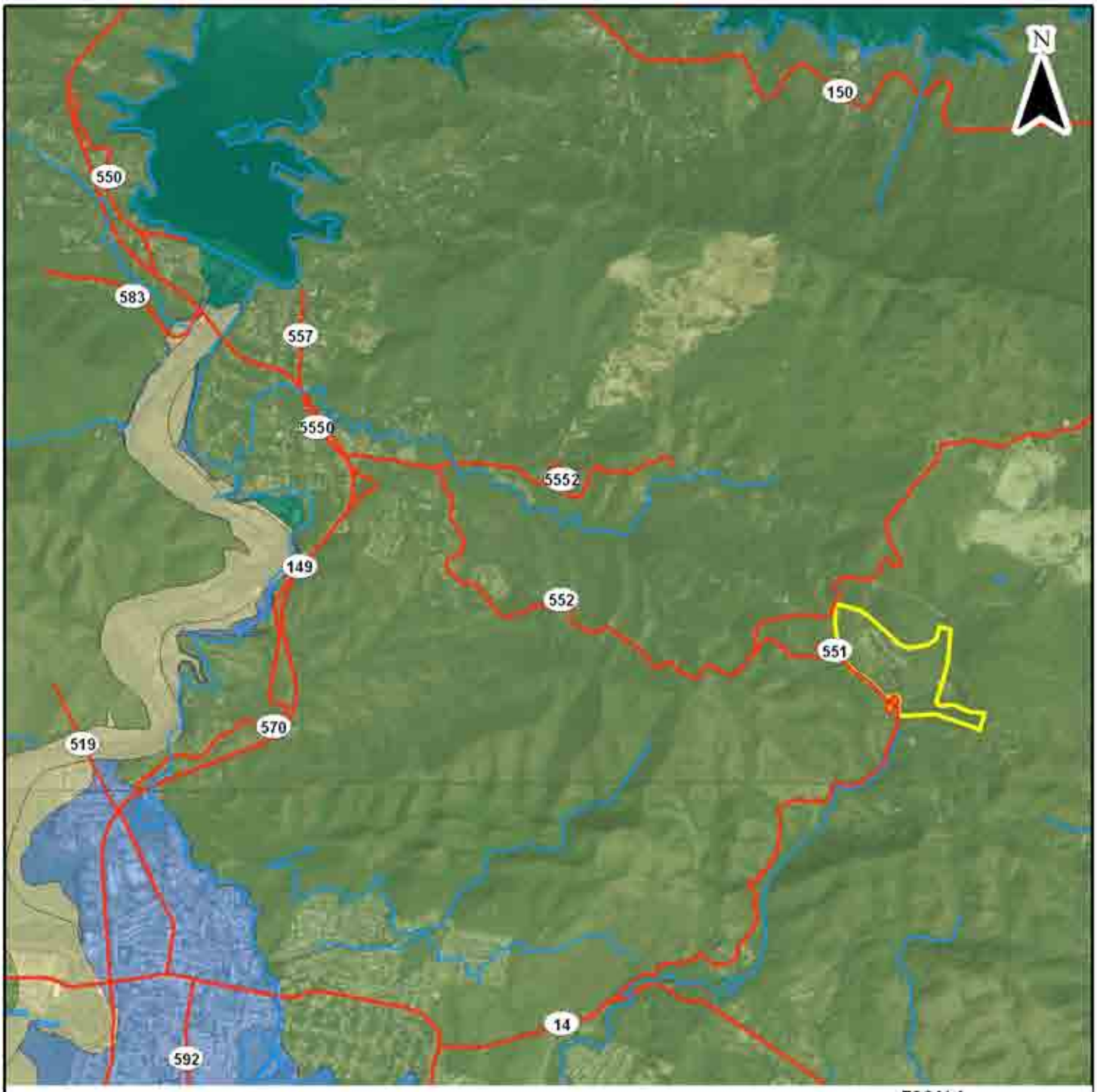
Figura 8 Zonas susceptibles a inundación



Fuente: FEMA (2005), FIRM sheet #18066A41

Cantera Naranjo
Carreteras
Rios y quebradas
0.2 PCT ANNUAL CHANCE FLOOD HAZARD
A
AE
X (Área determinada fuera de la inundación de la tormenta de 500 años)

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Juana Diaz, Puerto Rico

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Figura 9 Vías principales y rutas de acarreo

Fuente: ACT (2006).

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Cantera Naranjo

Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Díaz, Puerto Rico

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Figura 10 Zonas de tranquilidad

Fuente: Junta de Planificación.

Cantera Naranjo

H Hospitales

Centros educativos

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Cantera Naranjo

Carretera PR-551, Km. 2.7
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Juana Diaz, Puerto Rico

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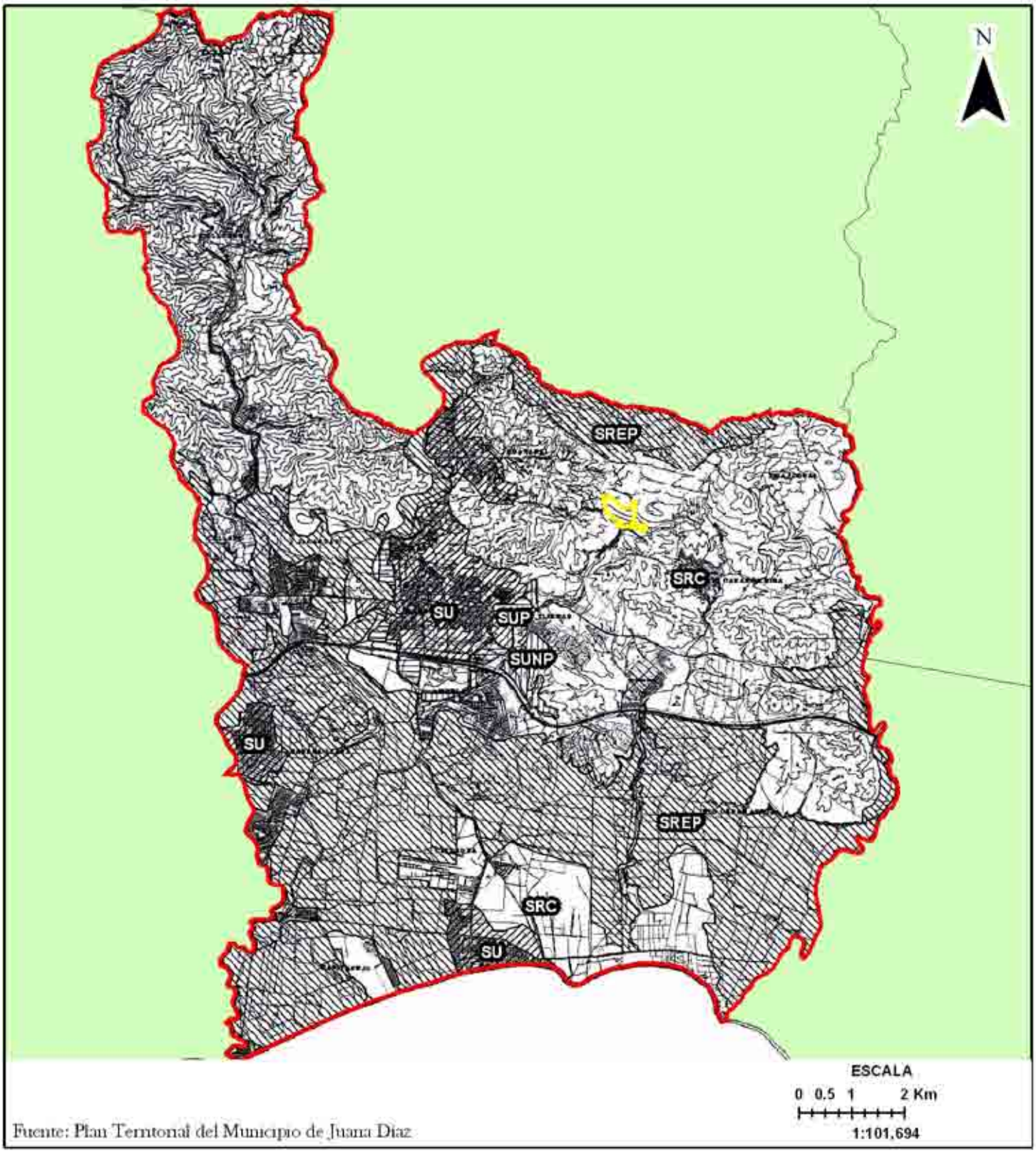
Figura 11 Clasificación del suelo de Juana Díaz



Fuente: Plan Territorial del Municipio de Juana Diaz

Cantera Naranjo

Declaración de Impacto Ambiental Preliminar Actualizada
Cantera Naranjo
Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Diaz, Puerto Rico

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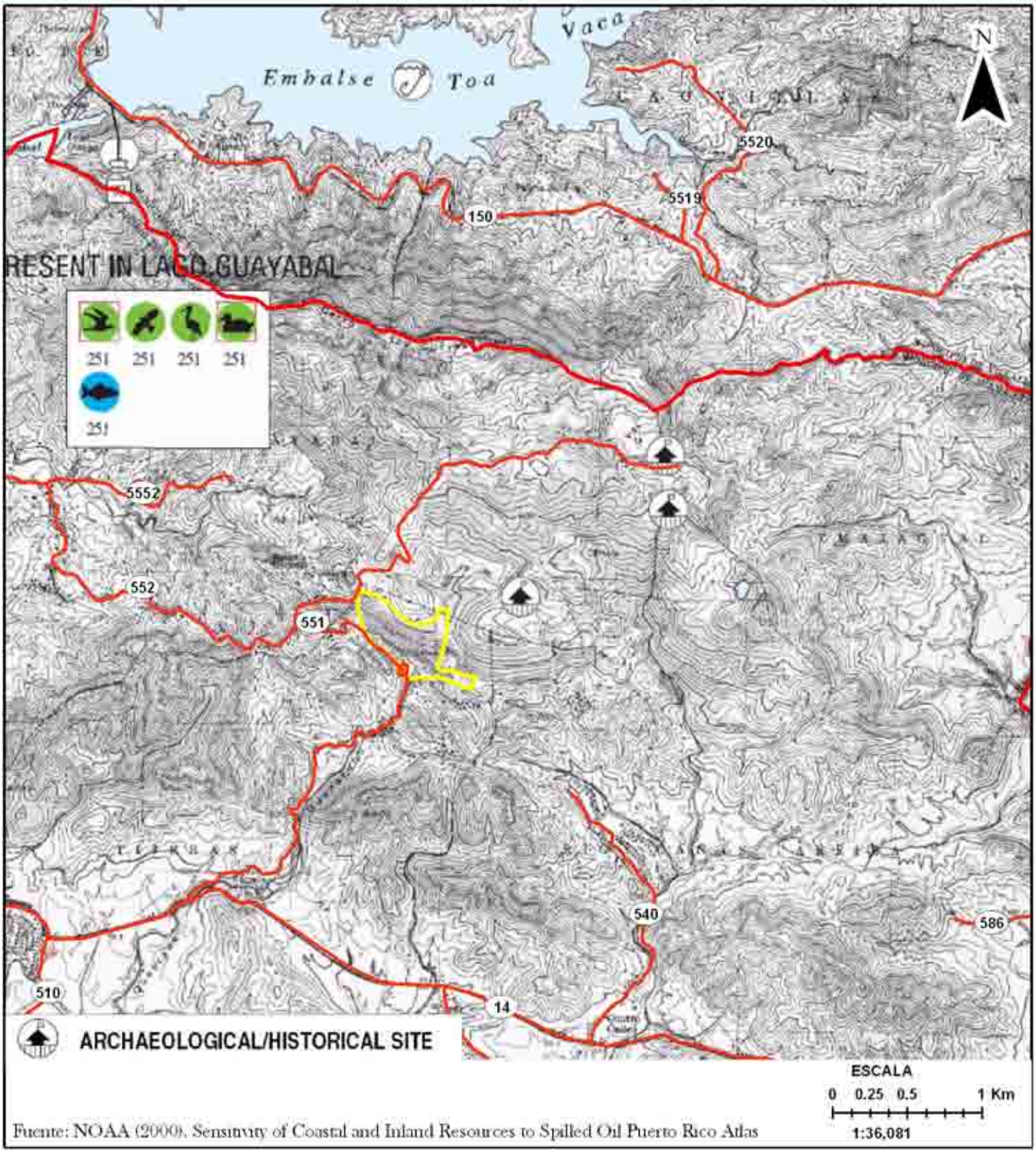
Figura 12 Mapa de los recursos sensitivos



Fuente: NOAA (2000). Sensitivity of Coastal and Inland Resources to Spilled Oil Puerto Rico Atlas

Carreteras

Cantera Naranjo

Declaración de Impacto Ambiental Preliminar Actualizada

Cantera Naranjo

Carretera PR-551, Km. 2.7
Barrio Tijeras, Sector Naranjo
Juana Diaz, Puerto Rico

SPECCA ENVIRONMENTAL

SUCN. DALECCIO

NORTH

SCALE 1:1500

PLANO DE LOCALIZACION

DALECCIO

ZONA DE AMORTIGUAMIENTO

ZONA DE AMORTIGUAMIENTO

10.00 MTS

CAMINO MUNICIPAL

FELIX H. THILLET
AGRIMENSOR LIC. NUM. 9383
EMPRESAS TITO CASTRO, INC.
PONCE, P.R.

FECHA

FELIX H. THILLET
AGRIMENSOR
LICENCIADO
LIC # 9383
PUERTO RICO

1 OF 1

SHEET NUMBER

ETC

FILE NAME

MENSURA

SHEET TITTLE
CANTERA NARANJO
JUANA DIAZ, PUERTO RICO
PROJECT NAME

DWG. NO.

SHEET TITTLE
REFERENCES

DALECCIO

NO.	DATE:	REMARKS	BY:
		REVISIONS	

EMPRESAS TITO CASTRO
ENGINEERS AND CONTRACTORS
P.O. Box 330589
Ponce, Puerto Rico 00733-0589

SUCN. DALECCIO

NORTH

SCALE 1:1500

PLANO DE LOCALIZACION

DALECCIO

ZONA DE AMORTIGUAMIENTO

ZONA DE AMORTIGUAMIENTO

10.00 MTS

CAMINO MUNICIPAL

FELIX H. THILLET
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REFERENCES

DALECCIO

NO.	DATE:	REMARKS	BY:
		REVISIONS	

EMPRESAS TITO CASTRO
ENGINEERS AND CONTRACTORS
P.O. Box 330589
Ponce, Puerto Rico 00733-0589

DESCRIPCION GEOMETRICA CANTERA NARANJO

PUNTO	COORDENADAS Y	COORDENADAS X	RUMBO GRAD-MIN-SEG	DISTANCIA METROS	DESCRIPCION
296	804.5417	1309.5109			PORTON
295	805.6468	1304.3310	N 77 57 25 O	5.297	PORTON
410	846.0620	1299.9297	N 6 12 54 O	40.654	
411	855.2772	1297.2629	N 16 8 24 O	9.593	
412	863.3939	1291.3612	N 36 1 16 O	10.035	
413	868.5108	1284.6577	N 52 38 42 O	8.433	
414	872.2150	1274.6819	N 69 37 45 O	10.641	
415	871.1440	1265.0047	S 83 41 5 O	9.736	
416	865.6268	1256.7432	S 56 15 51 O	9.934	
417	855.9377	1252.1001	S 25 36 15 O	10.744	
418	847.7222	1250.5928	S 10 23 47 O	8.353	
419	840.6163	1255.0299	S 31 58 54 E	8.377	
420	819.8709	1270.4049	S 36 32 35 E	25.822	
421	810.5228	1273.7992	S 19 57 22 E	9.945	
422	801.7624	1274.4333	S 4 8 24 E	8.783	
423	794.8839	1279.0560	S 33 54 11 E	8.288	
424	789.0699	1269.6237	S 58 21 2 O	11.080	
425	785.8968	1265.2146	S 54 15 31 O	5.432	
426	786.0863	1258.6863	N 88 29 36 O	8.531	
427	787.8960	1254.9224	N 64 6 7 O	4.184	
428	795.3565	1249.9161	N 33 51 48 O	8.985	
429	802.3217	1248.8893	N 8 23 10 O	7.040	
430	814.4176	1249.8550	N 4 33 53 E	12.134	
431	827.0014	1249.0852	N 3 30 2 O	12.607	
432	838.2608	1243.6908	N 25 35 57 O	12.485	POSTE
433	851.7152	1227.0552	N 50 59 54 O	21.411	POSTE
434	863.4736	1206.8914	N 59 48 11 O	23.330	POSTE
435	884.6372	1169.6204	N 60 24 39 O	42.861	POSTE
436	896.2587	1148.8239	N 60 48 10 O	23.823	POSTE
437	909.7051	1125.1887	N 60 21 50 O	27.192	
438	924.1514	1093.4978	N 65 29 39 O	34.828	POSTE
439	926.2437	1087.3606	N 71 10 29 O	6.484	
440	929.2798	1078.4071	N 71 16 6 O	9.454	
441	931.1622	1071.8057	N 74 5 4 O	6.865	
442	932.7397	1064.6349	N 77 35 35 O	7.342	
443	936.0475	1050.2521	N 77 2 53 O	14.758	
444	939.2304	1039.4026	N 73 39 0 O	11.307	
445	945.3886	1028.4569	N 66 10 28 O	15.245	
446	952.2785	1012.1016	N 62 42 40 O	15.028	POSTE
447	956.9669	1004.5788	N 58 4 4 O	8.864	
448	972.2757	984.8130	N 52 14 31 O	25.001	
449	977.9942	977.7286	N 51 5 23 O	9.104	POSTE
450	983.9319	970.4440	N 50 48 59 O	9.398	
451	995.5968	960.3851	N 40 46 19 O	15.403	
452	1001.1254	954.3878	N 47 19 43 O	8.157	
453	1005.9831	948.6880	N 49 33 38 O	7.489	
32	1009.1429	944.7328	N 51 22 43 O	5.062	POSTE
33	1011.0957	941.5719	N 58 17 34 O	3.715	TEL
34	1014.7504	932.1579	N 68 46 59 O	10.099	ORILLA
1061	1019.7692	921.7401	N 64 16 38 O	11.564	VARILLA
1068	1047.9922	893.8906	N 44 37 6 O	39.650	
1076	1070.6088	883.8284	N 23 59 4 O	24.754	PUNTO
1077	1082.3009	879.7169	N 19 22 27 O	12.394	PUNTO
1078	1088.0333	877.7053	N 19 20 12 O	6.075	PUNTO
1079	1093.8939	875.5381	N 20 17 40 O	6.248	HUCAR
1080	1097.7450	873.8361	N 23 50 33 O	4.211	HUCAR
1081	1107.9676	870.5293	N 17 55 31 O	10.744	HUCAR
1082	1112.5330	868.7482	N 21 18 46 O	4.901	HUCAR
1084	1120.8806	865.8948	N 18 52 18 O	8.822	HUCAR
1100	1126.0602	863.8293	N 21 44 25 O	5.576	ARBOLILLO
1101	1138.3265	859.6845	N 18 40 13 O	12.948	ALAMBRE HUCAR
1102	1146.0405	857.2926	N 17 13 37 O	8.076	HUCAR
1103	1142.7458	857.4887	S 3 24 22 E	3.301	STA.IRIS
1104	1155.4959	854.2535	N 14 14 16 O	13.154	STA.JOE
1105	1158.9110	854.5773	N 5 25 1 E	3.430	HUCAR RISCO GRANDE
1106	1166.7855	851.3877	N 22 3 3 O	8.496	STA.KITY
1107	1161.4664	854.7642	S 32 24 25 E	6.300	COTEJO 1105
1108	1171.1865	852.3288	N 14 3 58 O	10.021	QUENEPO
1109	1173.4052	851.9591	N 9 27 31 O	2.249	PIEDRA
1111	1194.4374	855.5557	N 9 42 14 E	21.338	HUCAR GRANDE
1112	1203.6495	852.1278	N 20 24 40 O	9.829	ESPEQUE
1113	1216.1139	852.8698	N 3 24 25 E	12.486	JAGUEY
1114	1217.0399	853.1182	N 15 0 55 E	0.959	ALMACIGO
1124	1236.0755	849.4527	N 10 53 59 O	19.385	VARILLA SEGUN GENTE
1127	1249.6145	841.3440	N 30 55 5 O	15.781	POSTE
1135	1254.5329	846.2730	N 45 3 41 E	6.963	VIA
1136	1261.5160	843.7860	N 19 36 12 O	7.413	BAJAR 18 PULGADAS
1195	1260.6780	868.7940	S 88 4 51 E	25.022	ESPEQUE
1193	1260.5353	883.7426	S 89 27 11 E	14.949	TUBO
1192	1261.1079	895.2082	N 87 8 27 E	11.480	TUBO
1164	1259.7818	912.9237	S 85 43 9 E	17.765	TUBO
1163	1259.2394	918.5980	S 84 32 23 E	5.700	VERJA
1159	1258.5994	931.6697	S 87 11 49 E	13.087	ESPEQUE
1157	1255.5286	954.4984	S 82 20 19 E	23.034	VERJA
1156	1250.2211	968.8882	S 69 45 15 E	15.337	VERJA
1261	1246.4222	978.7240	S 68 52 55 E	10.544	ESPEQUE
1262	1241.7415	990.6822	S 68 37 25 E	12.842	ESPEQUE
1163	1259.2394	918.5980	N 76 21 21 O	74.178	VERJA
1223	1234.8719	1007.4851	S 74 40 10 E	92.167	LI ESPEQUE PORTON-VER
1224	1233.7035	1011.5726	S 74 2 51 E	4.251	LD ESPEQUE PORTON
1270	1230.3536	1022.3266	S 72 41 52 E	11.264	ESPEQUE
1271	1221.6499	1040.3152	S 64 10 49 E	19.984	ARBOL
1272	1216.5819	1047.0650	S 53 5 58 E	8.441	ARBOL
1273	1210.4136	1058.9060	S 62 29 2 E	13.351	ESPEQUE MADERA
1276	1197.5646	1085.7513	S 64 25 21 E	29.762	VARILLA TUBO
1277	1193.6097	1095.3282	S 67 33 41 E	10.361	ALMACIGO
1278	1188.1866	1106.3632	S 65 0 36 E	12.337	ARBOLITO
1279	1177.3581	1131.6649	S 66 19 43 E	26.971	ALMACIGO
1280	1170.8810	1143.8251	S 61 57 29 E	13.778	TUBO
1281	1162.8699	1160.0489	S 63 43 13 E	18.094	ESPEQUE
1311	1158.4410	1167.9329	S 60 40 28 E	9.043	EXPLOSION LI
1312	1155.4595	1175.2606	S 67 51 35 E	7.911	ESPEQUE LI
1313	1154.4693	1178.8836	S 74 42 49 E	3.756	ARBOL EI
1314	1151.2890	1196.1808	S 79 34 55 E	17.587	LI
1322	1155.0287	1209.5711	N 74 23 46 E	13.903	ARBOL
1323	1155.7115	1214.8373	N 82 36 43 E	5.310	ARBOL
1332	1158.8633	1227.3591	N 75 52 19 E	12.912	ESPEQUE
1333	1161.5844	1234.5445	N 69 15 29 E	7.683	ESPEQUE PORTON
1334	1162.2292	1236.1676	N 68 20 1 E	1.747	ESPEQUE
1335	1170.8600	1256.0218	N 66 30 18 E	21.649	ARBOL
1348	1176.1310	1266.4734	N 63 14 14 E	11.706	GRANDE JAGUEY
1349	1179.0865	1273.1188	N 66 14 21 E	7.261	GRANDE JAGUEY
1350	1186.0856	1288.8007	N 65 51 24 E	17.185	GRANDE JAGUEY
1351	1188.8693	1295.1473	N 66 19 0 E	6.930	GRANDE JAGUEY
1352	1194.4071	1307.4611	N 65 47 8 E	13.502	GRANDE JAGUEY
1353	1197.8127	1315.3510	N 66 39 10 E	8.593	GRANDE JAGUEY
1355	1201.9037	1321.2024	N 55 2 27 E	7.140	JAGUEY
1359	1211.2112	1331.5996	N 48 9 56 E	13.955	PIEDRA ARBOL
1363	1217.9107	1338.7464	N 46 51 2 E	9.796	HABIA UN JAGUEY
1366	1247.1224	1355.2140	N 29 24 41 E	33.534	JAGUEY
1367	1257.7583	1357.2502	N 10 50 16 E	10.829	CINTA A 3.00 MARCADO
1451	1275.1471	1359.2187	N 6 27 31 E	17.500	PALO BLANCO
1452	1276.3047	1361.1493	N 59 3 14 E	2.251	PINDRA
1375	1275.9547	1370.6718	S 87 53 44 E	9.529	CINTA AZUL
1453	1281.3559	1374.6930	N 36 40 4 E	6.734	ESCALON
1477	1281.3420	1411.0387	S 89 58 41 E	36.346	SUMIDERO DONDE SALE C
1475	1286.0124	1442.0476	N 81 26 5 E	31.359	6 PULGADAS ARRIBA
1479	1275.6726	1447.0041	S 25 36 41 E	11.466	ALMACIGO
1480	1272.5384	1448.5900	S 26 50 22 E	3.513	PALO BLANCO
1482	1269.0147	1450.6893	S 30 47 7 E	4.102	CACHUELO
1485	1242.7723	1457.5481	S 14 38 51 E	27.134	PIEDRA
1486	1229.3126	1460.4404	S 12 7 39 E	13.767	FLAM
1487	1224.8442	1461.2981	S 10 51 57 E	4.550	TACHUELO
1488	1222.2988	1461.3534	S 1 14 42 E	2.546	ALMACIGO
1489	1217.0653	1464.7308	S 32 50 8 E	6.229	ESPEQUE
1490	1215.2348	1466.0308	S 35 22 54 E	2.245	TRONCO GUASIMA
1491	1210.9721	1468.0788	S 25 39 43 E	4.729	STA.1491
1492	1211.2789	1466.8877	N 75 33 27 O	1.230	ESPEQUE
1493	1207.1363	1467.1369	S 3 36 59 E	4.091	TACHUELO
1495	1200.8516	1465.2754	S 16 1 0 O	6.747	ELEV STA.
1498	1193.8162	1466.9291	S 13 13 39 E	7.227	JAGUEY
1499	1183.7848	1469.3386	S 13 30 23 E	10.317	
1500	1177.4923	1470.9278	S 14 10 25 E	6.490	TACHUELO
1502	1173.7265	1471.1478	S 3 20 36 E	3.772	JOBO MALO
1503	1169.1147	1472.4856	S 16 10 35 E	4.802	GUASIMA
1504	1167.4351	1473.1369	S 32 50 51 E	2.022	JAGUEY
1505	1162.6302	1474.7343	S 13 8 50 E	4.934	MOCA
1506	1160.9135	1477.8410	S 61 4 36 E	3.549	ALMACIGO
1507	1162.4862	1477.8951	N 1 58 5 E	1.574	STA.1507
1508	1161.5264	1501.1730	S 87 38 20 E	23.298	STA.1508
1509	1160.2603	1484.2588	S 85 43 9 O	16.962	JOBO MALO
1510	1160.5460	1488.0781	N 85 43 24 E	3.823	SECO
1511	1171.6026	1504.2996	N 55 43 24 E	19.632	ARBOL
1512	1161.0618	1500.7625	S 18 32 59 O	11.118	ELEV=A STA 1508 ALMAC
1513	1161.4300	1503.7150	N 82 53 29 E	2.975	
1514	1165.9739	1508.8226	N 48 20 33 E	6.836	ALMACIGO
1515	1171.2962	1515.5548	N 51 40 15 E	8.582	JOBILLO
1516	1178.8624	1519.3084	N 26 23 9 E	8.446	STA.1516
1517	1179.3613	1520.5088	N 67 25 54 E	1.300	ELEV+-STA 1516 GUNS
1518	1182.7524	1523.5453	N 41 50 30 E	4.552	BLANCO
1519	1198.0000	1526.7861	N 11 59 58 E	15.588	JOBO
1520	1202.9588	1527.9016	N 12 40 37 E	5.083	STA.1520
1522	1207.8574	1531.3181	N 34 53 39 E	5.972	GUASIMA
1523	1210.5211	1532.0414	N 15 11 27 E	2.760	GUASIMA
1525	1210.7736	1533.8273	N 81 57 13 E	1.804	ALMACIGO
1528	1211.6440	1542.5339	N 84 17 28 E	8.750	JOBO
1529	1212.2451	1546.2004	N 80 41 19 E	3.715	ALMACIGO
1530	1212.4973	1548.3748	N 83 23 3 E	2.189	ALMACIGO
1531	1213.4158	1552.4554	N 77 18 52 E	4.183	CORAZON
1532	1213.8657	1555.4536	N 81 28 1 E	3.032	CORAZON
1562	1207.2597	1566.7260	S 59 37 42 E	13.065	PALO BLANCO
1563	1204.0015	1568.9400	S 34 11 49 E	3.939	MOCA
1565	1194.7872	1573.7708	S 27 40 0 E	10.404	JOBO MALO
1566	1184.8528	1583.5060	S 43 47 33 E	14.000	ALMACIGO
1569	1181.3109	1590.2353	S 63 43 37 E	7.505	PIEDRA
1570	1181.5934	1597.7947	N 87 51 36 E	7.565	HUCAR
1572	1187.5729	1600.6503	N 25 31 39 E	6.626	ALMACIGO
1573	1196.3338	1603.9726	N 20 46 3 E	9.370	BURRO
1574	1201.4145	1608.2030	N 39 46 55 E	6.611	HUCAR
1575	1216.5276	1613.3052	N 18 39 16 E	15.951	ALMACIGO
1576	1226.6845	1619.6981	N 32 11 13 E	12.001	RUBIO ESPINOSO
2210	1234.0075	1625.8633	N 40 5 39 E	9.573	ALMACIGO
2211	1237.1376	1631.5442	N 61 8 47 E	6.486	CENIZO
1579	1238.7790	1637.9655	N 75 39 40 E	6.628	CANELA
1581	1239.0241	1645.9304	N 88 14 15 E	7.969	MOCA
1583	1238.0612	1647.3843	S 56 29 13 E	1.744	CENIZO
1585	1234.5788	1655.5597	S 66 55 38 E	8.886	ALMACIGO
1586	1234.8756	1660.7938	N 86 45 13 E	5.243	ALMACIGO
1588	1236.7401	1671.2622	N 79 54 5 E	10.633	
1589	1237.4272	1675.1030	N 79 51 28 E	3.902	ALMACIGO
1590	1237.9043	1676.9066	N 75 10 59 E	1.866	ALMACACIGO
1592	1239.0510	1681.7175	N 76 35 36 E	4.946	CAPA
1593	1239.7284	1683.6404	N 70 35 30 E	2.039	TERMINA ALAMBRE
1594	1239.8363	1688.6610	N 88 46 10 E	5.022	ALMACIGO
1595	1240.3623	1693.5176	N 83 49 7 E	4.885	STA.
1596	1239.9559	1690.8862	S 73 33 44 O	2.744	ALMACIGO
1597	1238.2817	1693.7451	S 65 28 43 E	3.142	
1598	1237.1770	1694.7859	S 43 17 31 E	1.518	ALMACIGO
1599	1232.8089	1698.8191	S 42 43 1 E	5.945	ALMACIGO
1600	1229.9970	1701.4007	S 42 33 22 E	3.817	ALMACIGO
1601	1227.6451	1703.9587	S 47 24 9 E	3.475	ALMACIGO
2212	1225.3156	1706.6712	S 49 20 39 E	3.575	ALMACIGO
1603	1221.7771	1711.5769	S 54 11 43 E	6.049	ALMACIGO
1604	1221.2602	1712.6284	S 63 49 12 E	1.172	ALMACIGO
1606	1216.2837	1716.0247	S 34 18 45 E	6.025	
2213	1212.6306	1717.5396	S 22 31 23 E	3.955	CORCHO
1608	1204.0913	1720.4266	S 18 40 48 E	9.014	CORCHO
1609	1201.9509	1720.9518	S 13 47 9 E	2.204	ALMACIGO
1610	1194.9855	1721.6281	S 5 32 46 E	6.998	ALMACIGO
1611	1191.0308	1722.4612	S 11 53 45 E	4.042	ALMACIGO
1613	1182.5203	1724.0106	S 10 19 4 E	8.650	JAGUEY
1614	1179.4216	1728.2155	S 53 36 46 E	5.223	ALMACIGO
1615	1176.2578	1732.0090	S 50 10 19 E	4.940	ALMACIGO
1616	1172.5043	1736.2889	S 48 44 57 E	5.693	ALMACIGO
1617	1169.8926	1741.4515	S 63 9 55 E	5.786	ALMACIGO
1618	1169.6225	1743.1398	S 80 54 42 E	1.710	STA.
1619	1163.6587	1753.6392	S 60 24 10 E	12.075	ALMACIGO
1620	1157.1403	1765.6153	S 61 26 29 E	13.635	CAMINO
1622	1155.5408	1768.7458	S 62 56 11 E	3.515	
1623	1154.2832	1771.1628	S 62 30 44 E	2.725	ALMACIGO
1624	1151.1673	1776.7198	S 60 43 9 E	6.371	ALMACIGO
1625	1149.3477	1782.7940	S 73 19 27 E	6.341	CENISO
1627	1145.0278	1794.2839	S 69 23 42 E	12.275	PINDRA
1628	1144.1605	1804.5863	S 85 11 16 E	10.339	ALMACIGO(ALAMBRE)
1630	1143.5894	1811.4943	S 85 16 26 E	6.931	ALMACIGO
1631	1143.0655	1818.4628	S 85 42 2 E	6.988	ARBOL
1632	1143.6823	1824.4231	N 84 5 30 E	5.992	ALMACIGO
1633	1142.9959	1827.1006	S 75 37 23 E	2.764	TAMARINDO
1635	1142.0649	1833.1797	S 81 17 33 E	6.150	ARBOLYPIEDRA
1637	1138.4206	1851.0930	S 78 30 2 E	18.280	ALM.ALAMBRE
1638	1139.5031	1862.1062	N 84 23 10 E	11.066	ALM
1639	1139.7730	1872.3929	N 88 29 50 E	10.290	ALM
1641	1140.9638	1883.9264	N 84 6 19 E	11.595	JAGUEY
1642	1153.6443	1907.5524	N 61 46 37 E	26.814	ALMACIGO
1643	1159.0726	1909.4391	N 19 9 56 E	5.747	ALMACIGO
1644	1162.3900	1914.1968	N 55 6 48 E	5.800	ALMACIGO
1646	1168.9050	1931.5030	N 22 25 15 O	18.492	ALM.TRONCO
1648	1168.3051	1942.4882	S 86 52 28 E	11.002	ALMAC.
1649	1170.8343	1960.5882	N 82 2 43 E	18.276	HUCAR
1652	1170.4681	1970.8368	S 87 57 13 E	10.255	ALMA.
1653	1167.1183	1969.4888	S 21 55 15 O	3.611	ALMACIGO
1654	1161.5387	1967.0521	S 23 35 29 O	6.088	MOCA
1655	1157.2665	1965.2183	S 23 13 53 O	4.649	PIEDRA
1656	1154.6005	1964.0644	S 23 24 13 O	2.905	ARBOL
1658	1139.7380	1955.9321	S 28 41 10 O	16.942	ALMACIGO
1661	1133.7745	1965.9600	S 59 15 38 E	11.667	PIEDRA TRONCO
1662	1113.0506	1993.6981	S 53 14 8 E	34.625	ALMACIGO
1663	1109.3061	2001.4731	S 64 17 2 E	8.630	ALMACIGO
1665	1103.6198	2013.7103	S 65 4 37 E	13.494	TRONCO
1666	1100.4592	2020.7201	S 65 43 48 E	7.689	ALMACIGO
1668	1088.4921	2048.9160	S 67 0 8 E	30.630	ARBOLITO
1669	1086.4328	2053.4126	S 65 19 27 E	4.948	ESCAMBRON
1671	1083.1455	2058.0995	S 55 0 33 E	5.721	ALM.GRANDE
1673	1090.8345	2068.9967	N 54 47 36 E	13.337	TRONCO GUASIMA
1674	1094.1453	2073.7148	N 54 56 31 E	5.764	PAOBLANCO
1675	1092.5534	2074.4954	S 26 7 20 E	1.773	CENISO
1676	1089.4866	2075.0667	S 10 33 5 E	3.120	SALSILLA
1678	1072.5829	2081.7720	S 21 38 14 E	18.185	PALO TOSTAO
1680	1054.1978	2085.4538	S 21 44 16 E	8.908	TEA
1681	1054.8947	2097.4561	S 49 24 55 E	15.222	PIEDRA
1684	1045.3761	2110.4843	S 53 50 51 E	16.135	JAGUEY
1686	1032.5064	2110.6618	S 0 47 24 E	12.871	
1687	1026.4559	2109.1429	S 14 5 31 O	6.238	
1689	1018.7097	2106.2260	S 20 38 5 O	8.277	VERJA
1690	1014.5872	2103.7104	S 31 23 30 O	4.829	CERESO
1691	1007.7115	2096.4158	S 45 43 36 O	9.928	ESPEQUE
1693	1004.8904	2093.2554	S 48 8 6 O	4.332	ESPEQUE
1695	998.9218	2087.0545	S 46 5 39 O	8.607	ARBOL
2625	984.4748	2070.2420	S 49 19 38 O	22.167	MOCA
2626	983.1083	2065.0912	S 75 8 33 O	5.329	PIDRA
2627	982.0793	2061.9342	S 71 56 50 O	3.321	ORILLA
2628	975.5970	2056.8511	S 37 30 0 O	8.176	ORILLA
2634	964.0711	2045.8032	S 44 2 42 O	16.035	PIEDRA
2635	964.1506	2039.8008	N 89 14 30 O	6.003	ARBOL
2636	963.3111	2036.7842	S 74 26 56 O	3.131	2.039
2637	962.8657	2032.8827	S 83 29 13 O	3.927	
2638	956.6554	2021.3702	S 61 39 22 O	13.081	MOCA
2639	955.1686	2018.1653	S 65 6 46 O	3.533	ARBOL
2648	953.8819	1992.1071	S 87 10 23 O	26.090	PIEDRA
2650	951.4100	1982.3386	S 75 47 58 O	10.076	PIEDRA
2652	950.1433	1983.7316	S 47 43 2 E	1.883	ORILLA PIEDRA
2653	945.2993	1965.0530	S 75 27 42 O	19.296	FINAL PIEDRA
2655	946.4405	1948.6288	N 86 1 31 O	16.464	TRONCO
2656	946.1408	1939.4972	S 88 7 12 O	9.136	
2657	946.4882	1923.7683	N 88 44 5 O	15.733	PIEDRA
2658	948.2947	1912.8007	N 80 38 47 O	11.115	MOCA
2661	950.2039	1894.4751	N 84 3 9 O	18.425	CAOBA
2662	944.8186	1879.4820	S 70 14 33 O	15.931	JAGUEY
2664	942.8552	1877.7325	S 41 42 11 O	2.630	PIEDRA
2665	941.7164	1872.2382	S 78 17 24 O	5.611	TRONCO
2666	937.5759	1865.8951	S 56 51 57 O	7.575	TRONCO
2668	935.4492	1859.5904	S 71 21 33 O	6.654	ESPEQUE
2669	933.2362	1854.7027	S 65 38 27 O	5.365	ALAMBRE
2670	931.1138	1848.3470	S 74 49 48 O	6.585	ESPEQUE
2671	926.0571	1836.6619	S 64 58 18 O	12.896	TRONCO
2672	926.4110	1834.6144	N 80 11 38 O	2.078	ARBOL
2673	924.6117	1829.4369	S 70 50 12 O	5.481	ALAMBRE
2674	923.5583	1826.5013	S 70 15 39 O	3.119	STA
2675	923.5592	1822.4856	N 89 59 16 O	4.016	PALOS
2676	920.3779	1819.0404	S 47 16 48 O	4.689	CERESO
2677	918.1102	1815.4906	S 57 25 44 O	4.212	ESPEQUE
2678	915.3426	1812.7918	S 44 16 42 O	3.866	ESPEQUE
2679	913.5475	1810.7357	S 28 26 54 O	4.316	ARBOL
2680	905.9355	1808.6772	S 20 8 35 O	5.978	MALEZA
2682	900.5508	1809.2627	S 6 12 20 E	5.416	ALBOLILLO
2683	892.9666	1809.2913	S 0 12 56 E	7.584	TRONCO
2685	888.7258	1809.0502	S 3 15 15 O	4.248	TRONCO
2686	886.1815	1808.8441	S 4 37 51 O	2.553	TUBO
2692	873.9315	1804.5904	S 19 8 56 O	12.968	TUBO
2697	860.9045	1800.1846	S 18 41 7 O	13.752	TUBO
2698	862.0296	1795.6558	N 76 2 36 O	4.667	
2700	854.7232	1785.9318	S 53 4 47 O	12.163	ESP.
2701	852.0944	1782.1455	S 55 13 40 O	4.609	ESP.
2702	847.3291	1773.7460	S 60 25 56 O	9.657	ALMACIGO
2704	843.8357	1763.2880	S 71 31 42 O	11.026	ESP.
2705	838.9914	1746.7029	S 73 43 3 O	17.278	MANGO
2706	837.1454	1744.0093	S 55 51 36 O	3.254	ARBOL SECO
2707	835.2630	1739.6725	S 66 19 10 O	4.735	TRONCO SECO
2708	832.2628	1726.7087	S 76 58 11 O	13.306	QUENEPO
2711	827.2375	1707.4572	S 75 22 13 O	19.897	TRONCOSSECO
2712	825.5358	1701.2810	S 74 35 46 O	6.406	ESP.
2714	824.7827	1697.7125	S 78 5 1 O	3.647	ESP.
2715	821.6258	1684.7847	S 76 16 39 O	13.308	ARBOL SECO
2716	820.3454	1679.6457	S 76 0 32 O	5.296	ES
2717	818.1463	1674.2473	S 67 50 9 O	5.829	ES
2718	815.9507	1668.7951	S 68 3 56 O	5.878	
2721	814.9483	1665.5941	S 72 36 44 O	3.354	ESP
2722	811.2249	1653.1708	S 73 18 58 O	12.969	CERRESO
2723	807.2263	1637.1487	S 75 59 13 O	16.514	TRONCO SECO
2724	803.1738	1625.3852	S 70 59 29 O	12.442	TUBO
2725	799.0016	1613.7558	S 70 15 50 O	12.355	
2726	797.7404	1602.6929	S 83 29 47 O	11.135	ESP.
2727	793.5596	1587.9759	S 74 8 28 O	15.299	TUBO
2728	792.8588	1581.6916	S 83 38 15 O	6.323	QUENEPO
2729	789.2799	1572.6331	S 68 26 30 O	9.740	MANGO
2731	792.8056	1560.6880	N 73 33 21 O	12.455	MANGO
2734	793.3183	1555.2511	N 84 36 46 O	5.461	QUENEPO
2735	793.6376	1544.5816	N 88 17 10 O	10.574	ARBOL
2736	793.0618	1539.9224	S 82 57 21 O	4.695	QUENEPO
2737	793.2412	1536.1252	N 87 17 41 O	3.801	TACHUELO
2738	796.1369	1528.9689	N 67 58 12 O	7.720	ARBOL
2740	796.8960	1518.9954	N 85 38 51 O	10.002	ARBOL
2744	798.9057	1503.0135	N 82 49 58 O	16.108	ESPINOSO
2745	794.8372	1486.4131	S 76 13 45 O	17.092	
2746	798.6462	1484.2002	N 30 9 19 O	4.405	
2747	797.4394	1476.1898	S 81 25 59 O	8.101	ARBOL SECO
2748	798.2380	1468.8370	N 83 48 5 O	7.396	ARBOL
2750	800.1201	1463.9393	N 68 58 45 O	5.247	CEPA
2754	801.6751	1459.8126	N 69 21 10 O	4.410	HIGUERO
2755	798.3936	1451.0803	S 69 24 14 O	9.329	ROBLE SECO
2759	797.1752	1447.7913	S 69 40 26 O	3.507	TUBO POZO
2762	796.5223	1445.9365	S 70 36 27 O	1.966	VERJA BLOQUE
2763	794.5713	1438.6999	S 74 54 42 O	7.495	VERJA BLOQUE
2764	793.6553	1434.0888	S 78 45 53 O	4.701	VERJA BLOQUE
2769	793.1129	1432.3137	S

RESIDENCIAS EXISTENTES
EN EL AREA DE EXTRACCION.
(ITEM 1-I, PAG. 13)

SUCN. DALECCIO

PROYECCION SUPERFICIAL
DE LA CUEVA
(ITEM 1-G, PAG. 2)

CENTRO DE CUEVA
VER LINEA DE PERFILES
(TRANSVERSALES)

AREA VERDE REPRESENTA LAS
ESTRACCION PREVIAS
(ITEM 1-A, PAG. 2)

AREA DE EXTRACCION ACTUAL
(ITEM 1-B, PAG. 2)

AREA RESERVA PARA EXRACCION
DONDE SE UTILZARAN EXPLOSIVOS

SUMIDERO
(ITEM 1-F, PAG. 2)

150.00 MTS.

200.00 MTS.

LIMITES DE ZONA AMORTIGUAMIENTO
(ITEM 2, PAG. 1)

PROYECCION SUPERFICIAL DE CUEVA
(ITEM 3-B, PAG. 1)

ENTRADA CUEVA
(ITEM 1-F, PAG. 2)

CACERES

SANTOS GUSMAN

DALECCIO

4.77 cdas

NORTH

SCALE 1:1500

PLANO DE LOCALIZACION

NOTAS REFERENTES A LA CARTA
DEL D.R.N.A. DEL 12/OCT./01:

1. NIVEL FINAL A SER ALCANZADO = 91.50 MTS.
   (ITEM 1-B. PAG. 2)
2. SECUENCIA DE TERRENO POR EXTRAER.
3. LINEAS DE PERFILES QUE PASEN POR EL AREA EXTRAIDA SECTORES POR EXTRAER HASTA LOS LIMITED DE COLINDANCIA DE LA FINCA 16.02 CDAS. ESTAN ILUSTRADOS EN DOCUMENTOS ADJUNTOS
   (ITEM 1-C. PAG. 2)
4. CALCULO VOLUMETRICO DE LA RESERVA DISPONOBLE PARA EXTRACCION ESTAN ILUSTRADOS EN DOCUMENTO ADJUNTOS.
   (ITEM 1-D. PAG. 2)
5. PLAN DE OPERACION INCLUIDO EN DOCUMENTOS ADJUNTOS.
   (ITEM 1-E. PAG. 2)
6. NO EXISTEN DENTRO DE LA FINCA DE 16.02 CDAS. SECTORES PARA FUTURA EXTRACCION.
   (ITEM 1-H. PAG. 2)

PLANO DE MENSURA TOPOGRAFICO

(ITEM 2 - PAG. 1)
(ITEM 1 - PAG. 2)

PARA LA CONFECCION DE ESTE
PLANO SE UTLIZARON LOS DATOS
DE MENSURA DEL PLANO CERTIFICADO POR:
FELIX H. THILLET
AGRIMENSOR LIC. NUM. 9383

1 OF 3

SHEET NUMBER

ETC

MKD

FILE NAME

TOPOGRAFIA

SHEET TITTLE

CANTERA NARANJO
JUANA DIAZ, PUERTO RICO

PROJECT NAME

NO.	DATE:	REMARKS	BY:	SHEET TITTLE
		REVISIONS		REFERENCES

ETC
EMPRESAS TITO CASTRO
ENGINEERS AND CONTRACTORS
P.O. Box 330569
Ponce, Puerto Rico 00733-0569

PLANTA A.E.E. EXISTENTE

PLANTA DE LA AEE

ENTRADA

FINCA PRINCIPAL

PARED DE MARMOL

FINCA PRINCIPAL

PARED DE MARMOL

110.00 Mts.

ITEM #2
5' X 16'
SCALPING SCREEN

ITEM #8

ITEM #7
SECONDARY IMPACT CRUSHER

VIBRATING SCREEN
5'-12"

ITEM #3
14' X 14' HOPPER
SYNTRON VARIABLE RATE
VIBRATING FEEDER

ITEM #9
8' X 20'
VIBRATING BOTTOM DECK

24.00 Mts.

26.00 Mts.

ITEM #6

ITEM #5

FINCA PRINCIPAL

RADIAL STOCKER
W/42" X 20'
STUB CONVEYOR

ITEM #1
LIPPMANN ENGINEERED
PARAGON II VSI PITCH
316 IMPACT CRUSHER

OBRA

RECOGIDA DE AGUA

FINCA PRINCIPAL

PORTON

NORTH

SCALE 1:600

PLANO DE LOCALIZACION

SHEET NUMBER	1 OF 1
FILE NAME	ETC
DWG. NO.	

AS BUILT

SHEET TITTLE

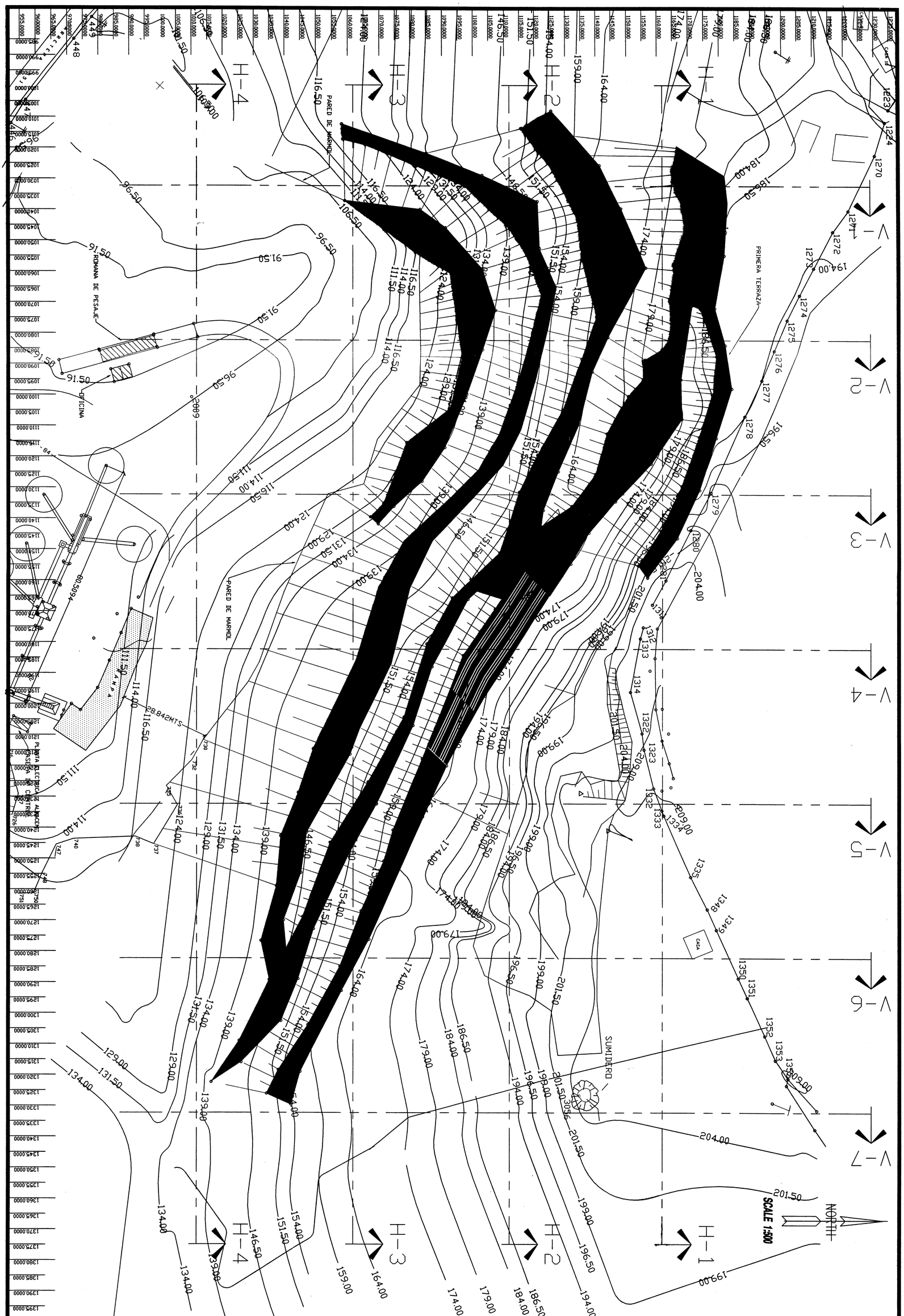
LOCALIZACION EQUIPO CANTERA (EN PROCESO DE COMPRA)
SECTOR NARANJO, JUANA DIAZ, PUERTO RICO

PROJECT NAME

NO.	DATE:	REMARKS	BY:
		REVISIONS	

SHEET TITTLE — REFERENCES

ETC
EMPRESAS TITO CASTRO
ENGINEERS AND CONTRACTORS
P.O. Box 330389
Ponce, Puerto Rico 00733-0389



EMPRESAS TITO CASTRO
ENGINEERS AND CONTRACTORS
P.O. Box 330689
Ponce, Puerto Rico 00733-0689

NO.	DATE:	REMARKS	BY:

REVISIONS

SHEET TITTLE	DWG. NO.

REFERENCES

PLANO DE MENSURA Y TOPOGRAFICO

SHEET TITTLE

CANTERA NARANJO
JUANA DIAZ, PUERTO RICO

PROJECT NAME

2 OF 3

SHEET NUMBER

FILE NAME: M-NARANJO TOTAL.DWG

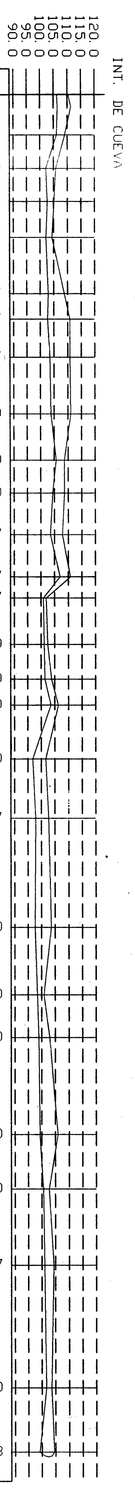
ETC

MKD

LINEAS DE PERFILES DE LA CUEVA

INT. CUEVA - RAMAL NUM. 2

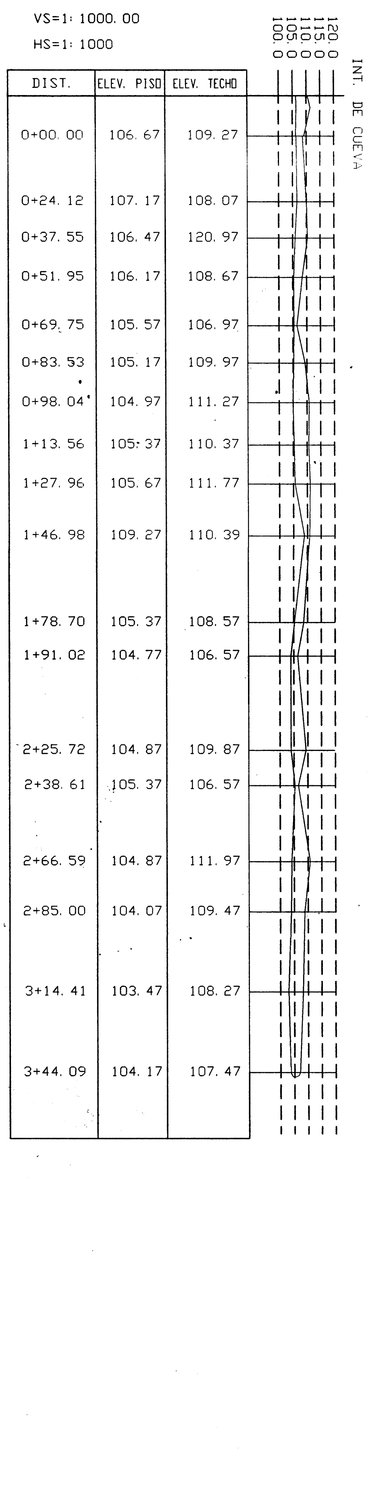
VS=1: 1000.00
HS=1: 1000



DIST.	ELEV. PISO	ELEV. TECHO
0+00.00	106.67	109.27
0+12.30	103.47	105.59
0+24.48	103.67	106.17
0+37.73	103.47	104.87
0+58.32	103.87	100.07
0+67.74	103.77	110.57
0+81.73	104.07	111.97
1+02.50	104.70	112.90
1+19.54	105.80	108.50
1+31.59	104.90	107.90
1+46.91	104.37	107.67
1+62.23	107.27	110.67
1+69.98	101.40	101.77
1+87.01	101.97	102.30
1+99.81	102.07	104.50
2+09.34	104.30	111.40
2+29.19	97.97	101.50
2+50.92	98.70	104.07
2+91.01	99.07	104.10
3+15.76	99.17	100.40
3+31.44	99.70	103.50
3+67.17	99.60	106.50
3+87.15	100.40	103.60
4+15.21	100.80	104.07
4+60.27	100.80	101.90
4+83.88	99.90	104.8

INT. CUEVA - RAMAL NUM. 1

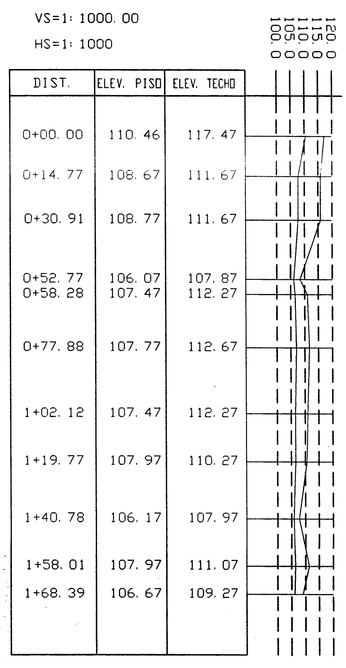
VS=1: 1000.00
HS=1: 1000



DIST.	ELEV. PISO	ELEV. TECHO
0+00.00	106.67	109.27
0+24.12	107.17	108.07
0+37.55	106.47	120.97
0+51.95	106.17	108.67
0+69.75	105.57	106.97
0+83.53	105.17	109.97
0+98.04	104.97	111.27
1+13.56	105.37	110.37
1+27.96	105.67	111.77
1+46.98	109.27	110.39
1+78.70	105.37	108.57
1+91.02	104.77	106.57
2+25.72	104.87	109.87
2+38.61	105.37	106.57
2+66.59	104.87	111.97
2+85.00	104.07	109.47
3+14.41	103.47	108.27
3+44.09	104.17	107.47

ENTRADA DE CUEVA

VS=1: 1000.00
HS=1: 1000



DIST.	ELEV. PISO	ELEV. TECHO
0+00.00	110.46	117.47
0+14.77	108.67	111.67
0+30.91	108.77	111.67
0+52.77	106.07	107.87
0+58.28	107.47	112.27
0+77.88	107.77	112.67
1+02.12	107.47	112.27
1+19.77	107.97	110.27
1+40.78	106.17	107.97
1+58.01	107.97	111.07
1+68.39	106.67	109.27

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Ponce, Puerto Rico 00733-0589

NO.	DATE	REMARKS	BY

REVISIONS

SHEET TITTLE	DWG. NO.

REFERENCES

LINEAS DE PERFILES

SHEET TITTLE

CANTERA NARANJO
JUANA DIAZ, PUERTO RICO

PROJECT NAME

1 OF 1

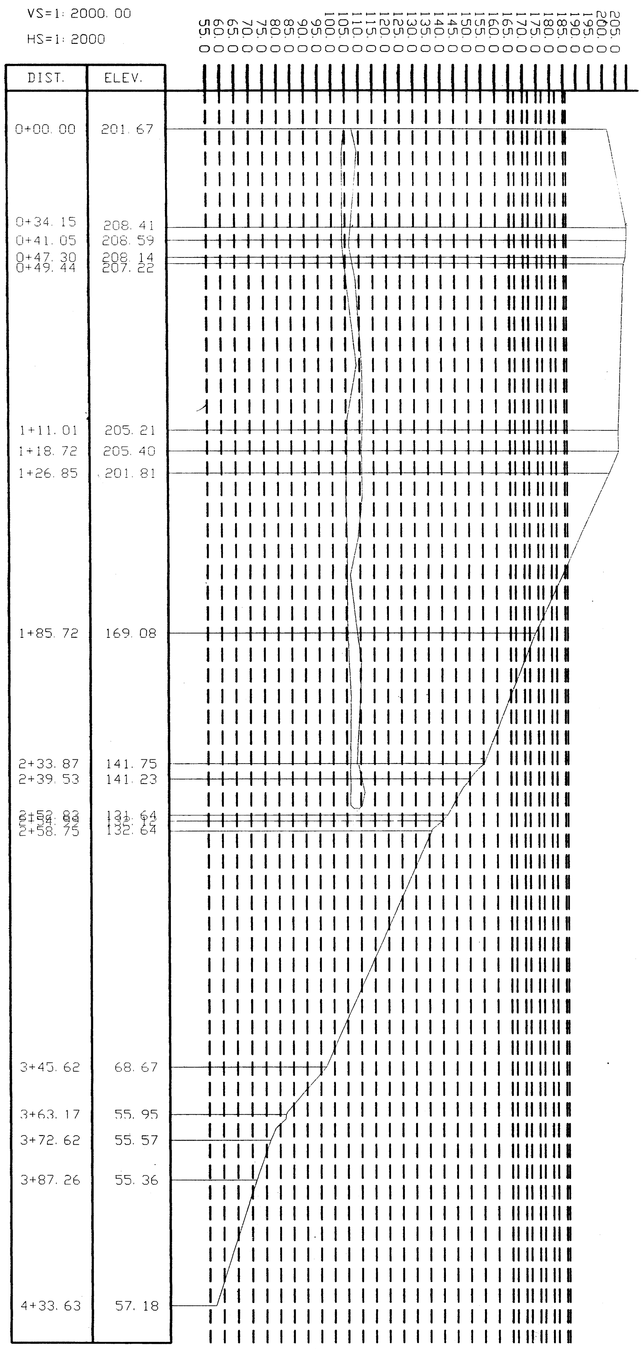
SHEET NUMBER

FILE NAME: ARCHITECTURE | ETC

WKD

CROSS SECTION CUEVA NUM. 2

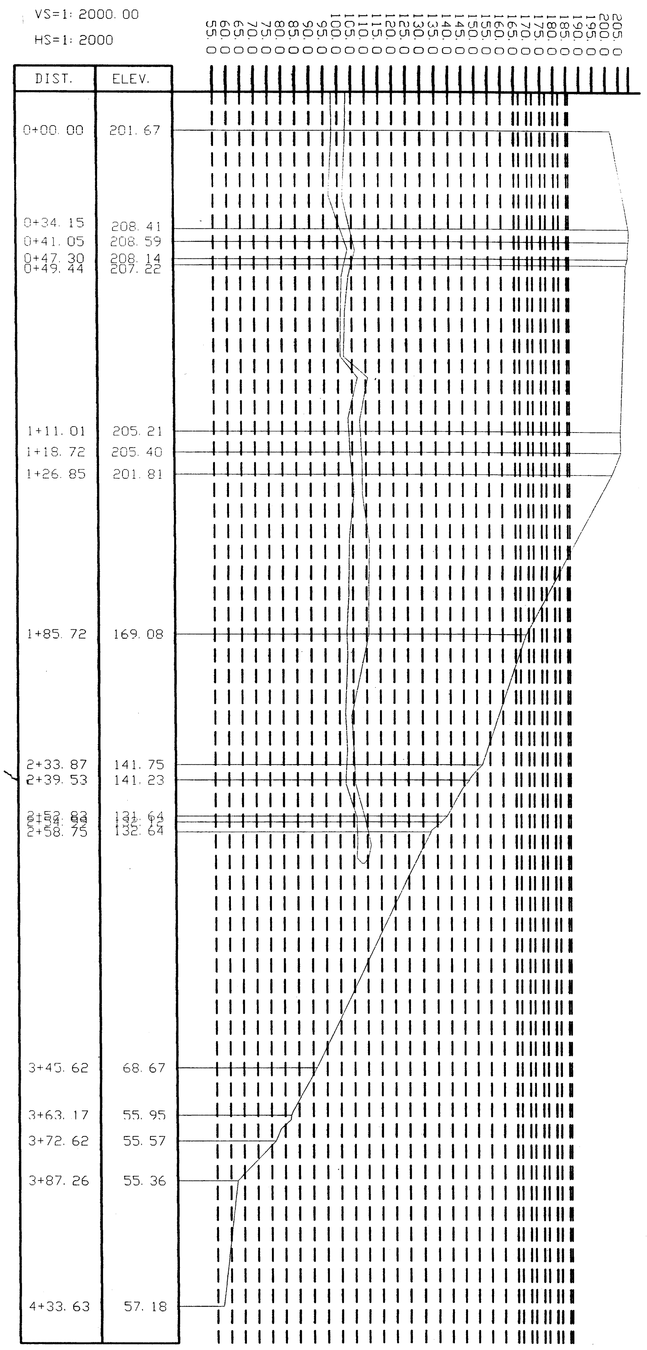
VS=1: 2000.00
HS=1: 2000



DIST.	ELEV.
0+00.00	201.67
0+34.15	208.41
0+41.05	208.59
0+47.30	208.14
0+49.44	207.22
1+11.01	205.21
1+18.72	205.40
1+26.85	201.81
1+85.72	169.08
2+33.87	141.75
2+39.53	141.23
2+52.83	131.64
2+54.75	132.15
2+58.75	132.64
3+45.62	68.67
3+63.17	55.95
3+72.62	55.57
3+87.26	55.36
4+33.63	57.18

CROSS SECTION CUEVA NUM. 1

VS=1: 2000.00
HS=1: 2000



DIST.	ELEV.
0+00.00	201.67
0+34.15	208.41
0+41.05	208.59
0+47.30	208.14
0+49.44	207.22
1+11.01	205.21
1+18.72	205.40
1+26.85	201.81
1+85.72	169.08
2+33.87	141.75
2+39.53	141.23
2+52.83	131.65
2+54.75	132.15
2+58.75	132.64
3+45.62	68.67
3+63.17	55.95
3+72.62	55.57
3+87.26	55.36
4+33.63	57.18

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NO.	DATE:	REMARKS	BY:

REVISIONS

SHEET TITLE | DWG. NO.

REFERENCES

LINEAS DE PERFILES

SHEET TITTLE

CANTERA NARANJO
JUANA DIAZ, PUERTO RICO

PROJECT NAME

33 OF 1

SHEET NUMBER

FILE NAME | ETC | MKD

CROSS SECTION MKD. V-1

CROSS SECTION MKD. V-5

CROSS SECTION MKD. V-2

CROSS SECTION MKD. V-6

CROSS SECTION MKD. V-3

CROSS SECTION MKD. V-7

CROSS SECTION MKD. V-4

CROSS SECTION MKD. H-1

CROSS SECTION MKD. H-2

CROSS SECTION MKD. H-3

CROSS SECTION MKD. H-4

LINEAS DE PERFILES

SHEET TITTLE

CANTERA NARANJO
JUANA DIAZ, PUERTO RICO

PROJECT NAME

FILE NAME

SHEET NUMBER 3 OF

ETC

MKD

DWG. NO.

SHEET TITTLE

REFERENCES

NO.	DATE:	REMARKS	BY:
		REVISIONS	

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