Desert Mountains, TX LiDAR Support Survey
Project Survey Report

FGS Project Number 190041

27 January 2020

Prime Contractor

Optimal Geo
118 West Market Street
Athens, AL 35611

Sub - Contractors

Florabama Geospatial Solutions, LLC. (FGS)

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FIELD BOOKS

USGS
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Contract No. G17PC00007
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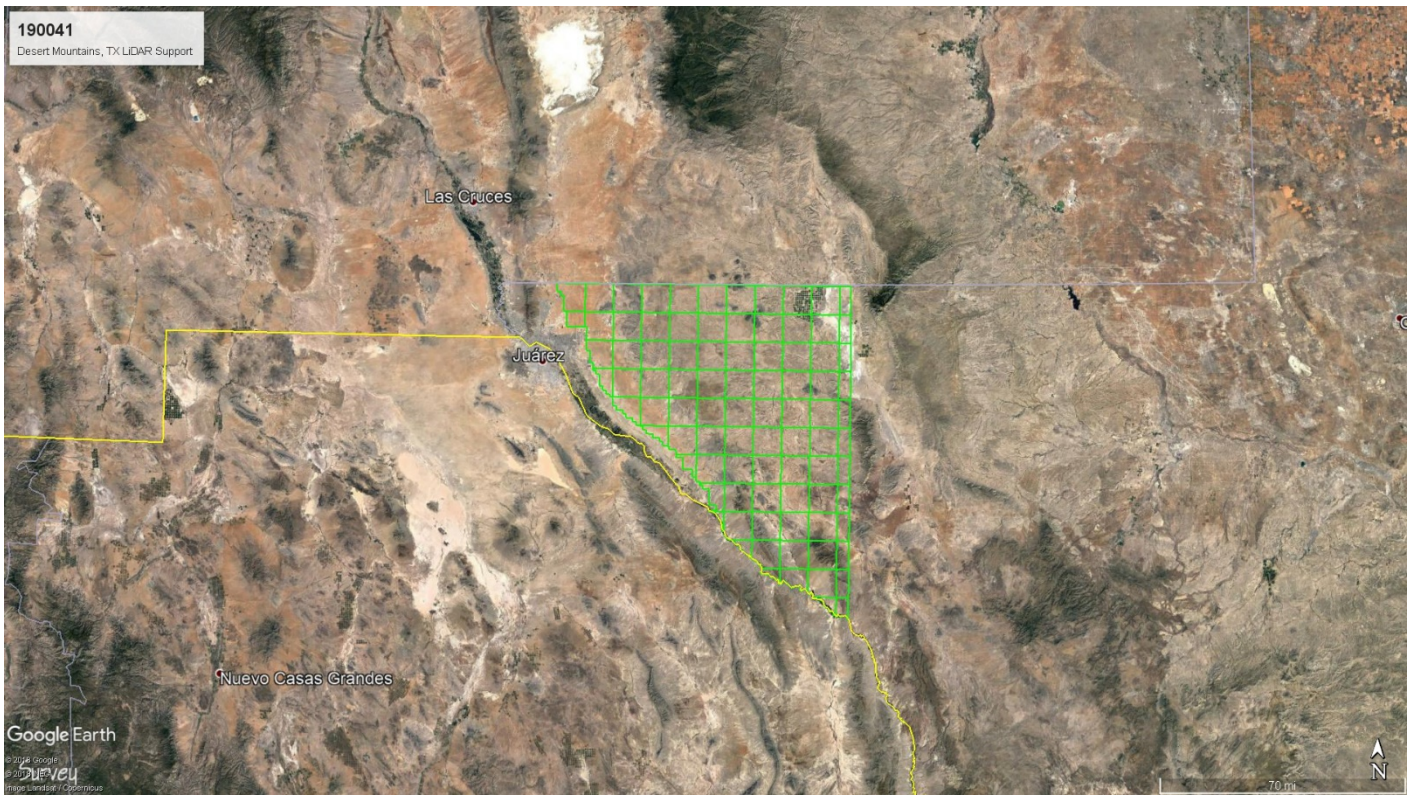
VICINITY MAP



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INTRODUCTION & SPECIFICATIONS

The purpose of this project was to provide ground truth data which will be used to validate LiDAR data for 4500 square miles in West Texas. FGS collected 314 points (36 Primary Control, 87 Secondary Control, 116 NVA, 85 VVA) in 3 different classifications spread throughout the project area. The target number of LiDAR Control Points was 324 but we were denied access to property in several instances and could not get past locked gates in several more. In some of those instances the property we were denied access to was very large which kept us from getting to as many as three points.

HORIZONTAL & VERTICAL DATUMS

The Horizontal Control Point Coordinate Values for this project are referenced to 22 control points set by FGS, on which we ran multiple static GPS sessions and then processed through OPUS and submitted to OPUS DB for recording. Horizontal and vertical datum is referenced to UTM, WGS84, Zone 13 North. Vertical values represent the North American Vertical Datum of 1988 (NAVD88). GEOID 18 was used to translate the ellipsoid heights to Orthometric heights. All coordinate values and elevations are presented in Meters unless otherwise indicated.

CONTROL SURVEY

GCT used Trimble Centerpoint RTX Data Correction Service to determine coordinate values for the Survey Control Points and logged raw data at the rovers for post-processing if necessary. We also observed static data on 22 base station sites spread evenly throughout the project area. All Site Calibration Points were oberved for at least twelve (12) minutes and all LiDAR Control Points were observed for at least twelve (12) minutes. A Site Calibration was performed using the data that was collected via Trimble Centerpoint RTX . Existing control throughout and surrounding the project area were evaluated against OPUS solutions held as fixed control. The Site Calibration was performed using Trimble Business Center Software.

FGS observed, via CentePoint RTX, 22 stations for the Site Calibration. FGS observed static data on all of these Stations which were submitted to OPUS for solutions, All of which were used in the Site Calibration on the horizontal side. On the vertical side we used 16 stations all of which were from OPUS Solutions.

See Appendix A for Trimble RTX Site Calibration Report

See Appendix B for NGS Datasheets

See Appendix C for OPUS Solutions

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QUALITY CONTROL PLAN

Survey Section
Quality Control Checklist

Job# 190041 Final Delivery Date: ?-??-????

General

[X] Received in correct format
[ ] Floppy disks labels used and signed
[ ] Fathometer Scrolls annotated with survey information
[ ] Were all #H-Records included in data file
[ ] Were field books recorded in data file
[X] Were Equipment records included
[ ] Maps stamped and signed by RLS
[X] Field Books included

Horizontal Control

[X] Datum Correct (NAD-27, NAD-83, WGS-84)
[X] Are Data Collection files on disk
[ ] Primary Traverse Adjusted (1:5000, 5" /setup)
[ ] Secondary Traverse Adjusted (1:2500, 10"/setup)
[X] Horizontal Control included
[ ] Are Traverses Stationed

Vertical Control

[X] Datum Correct (NGVD29, NAVD88)
[ ] Epoch Correct (Survey Request Form)
[X] Are PBMs included
[ ] Are TBMs included
[X] Was specified control used by contractor (example: elev/epoch)
[ ] Do levels meet accuracy requirements

Staff Gage

[ ] Were all gage readings included in data file
[ ] Spot check of W.S. interpolation performed
[ ] Gages read before and after survey

Cross Sections

[ ] Spikes checked
[ ] Are sections normal to B/L or C/L as specified
[ ] All sections included
[ ] Sections lengths checked
[ ] Gaps Checked

Miscellaneous Points

[X] Descriptions included
[X] Were all features located and included in data file.

Archive

[ ] Job archived in Project Wise Date:
[ ] Job imported into EGIS Date:
[ ] Vertical Control Imported to EGIS/Archive Date:

Comments:

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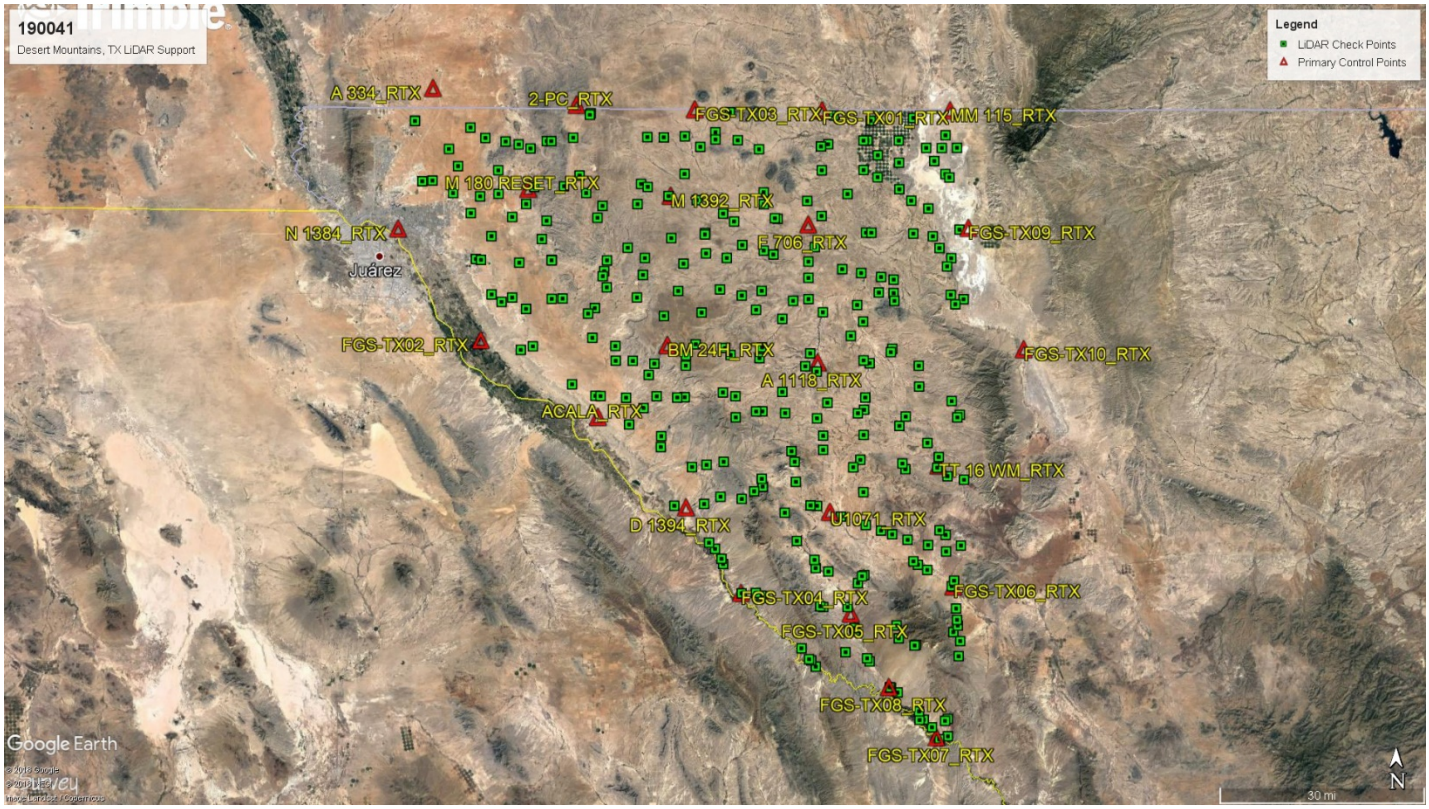
SURVEY AREA

The map shows the general location of the Site Calibration Control Points and the located Lidar Check Points.



27 JANUARY 2020 UPDATE - CONTROL COORDINATES

On 23 January 2020 FGS received a request to change our data from Geoid 18 to Geoid 12B due to the fact that OptimalGeo was unable to processs the LiDAR data with the latest geoid model (Geoid18). The data was converted to Geoid 12B using the NGS geoid toolkit to calculate a value "N" based on the points Latitude Longitude and then use that value in the following formula to derive an NAVD88 elevation based on Geoid12b. That formula is NAVD88(From Geoid 12B) = Ellipsod Height(NAD83) – N(Geoid12B). Those values were calculated for all of the control points used in the original site calibration. Then in Trimble Business Center the control points were changed to reflect the Geoid12B elevations and then the site calibration was repeated using the new Geoid12B elevation values. All points were the re-exported with the updated elevations and this survey report was updated to reflect the changes.

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UPDATED FINAL COORDINATES

190041 Desert Mountains, TX LiDAR Support
Defuniak Springs, Florida 32435
USA
www.fgs-surveyors.com
wayne.w@fgs-surveyors.com

Project file data		**Coordinate System**	
Name:	Q:\USGS-Proj\190041 Desert Mountains, TX\TBC-Proj\190041 Desert Mountains TX_RTX.vce	Name:	World wide/UTM
Size:	169 KB	Datum:	NAD83 (2011)
Modified:	01/27/2020 12:12:59 PM (UTC:-6)	Zone:	13 North
Time zone:	Central Standard Time	Geoid:	GEOID12B (Conus)
Reference number:	190041	Vertical datum:	NAVD88
Description:	LiDAR Support	Calibrated site:	
Comment 1:			
Comment 2:			
Comment 3:			

Pt_Name	Latitude (Global)	Longitude (Global)	Ellipsoid Height (Meters)	UTM_Northing (Meters)	UTM_Easting (Meters)	Elevation NAVD88 (Meters)	Description
2-PC	32°00'35.31609"	105°56'35.13035"	1616.137	3541911.083	410928.674	1639.956	Aluminum Cap on Rebar (2011)
4WHV	30°55'47.54240"	105°27'28.22875"	1017.070	3421919.383	456260.538	1041.461	USGS Monument (1950)
1001	31°55'02.02801"	106°15'19.17013"	1205.520	3531948.195	381318.248	1230.408	Secondary Control Point
1002	31°56'00.93745"	106°06'57.01502"	1286.368	3533617.822	394525.353	1310.739	Secondary Control Point
1003	31°56'05.94793"	106°00'12.07477"	1427.771	3533668.078	405159.899	1451.802	Secondary Control Point
1004	31°56'32.76586"	105°56'59.06884"	1582.317	3534448.139	410235.049	1606.191	Secondary Control Point
1005	31°56'39.14003"	105°43'37.34287"	1457.017	3534481.432	431285.866	1480.695	Secondary Control Point
1006	31°57'19.38304"	105°36'00.90221"	1480.256	3535647.074	443276.245	1503.868	Secondary Control Point
1007	31°59'49.91110"	105°33'53.70204"	1537.377	3540263.880	446639.564	1560.901	Secondary Control Point
1008	31°59'27.29562"	105°18'32.66521"	1191.325	3539469.886	470804.421	1214.972	Secondary Control Point
1009	31°54'29.59175"	105°12'04.11718"	1100.540	3530279.709	480983.009	1124.264	Secondary Control Point
1010	31°59'10.38074"	105°06'50.11531"	1085.241	3538913.032	489238.969	1108.951	Secondary Control Point
1011	31°57'00.32203"	105°02'03.54553"	1084.048	3534903.447	496757.728	1107.878	Secondary Control Point
1012	31°51'43.75222"	105°01'30.40658"	1081.280	3525156.303	497625.428	1105.221	Secondary Control Point
1013	31°45'11.71662"	105°00'02.26221"	1079.022	3513085.786	499941.507	1103.187	Secondary Control Point
1014	31°42'53.09747"	105°02'59.85873"	1088.523	3508819.026	495267.409	1112.577	Secondary Control Point
1016	31°50'14.72500"	105°08'53.79690"	1088.670	3522424.560	485970.810	1112.445	Secondary Control Point
1017	31°49'38.04468"	105°16'31.86351"	1190.239	3521318.701	473928.183	1213.954	Secondary Control Point

1018	31°58'47.82455"	105°13'06.91069"	1117.990	3538233.734	479349.863	1141.655	Secondary Control Point
1020	31°47'08.91113"	105°34'50.17338"	1353.693	3516840.732	445032.369	1377.544	Secondary Control Point
1021	31°49'18.93638"	105°42'52.58703"	1463.957	3520919.708	432371.610	1487.737	Secondary Control Point
1022	31°48'02.64559"	105°52'35.00585"	1531.216	3518682.794	417041.276	1555.092	Secondary Control Point
1023	31°50'21.81070"	106°02'38.88300"	1343.421	3523108.083	401202.996	1367.641	Secondary Control Point
1024	31°49'07.95544"	106°10'38.18335"	1213.962	3520962.815	388579.730	1238.718	Secondary Control Point
1025	31°49'30.70135"	106°14'37.68417"	1196.973	3521733.360	382290.872	1221.932	Secondary Control Point
1026	31°44'09.67006"	106°08'54.08965"	1209.411	3511748.942	391219.550	1234.232	Secondary Control Point
1027	31°43'50.57396"	106°01'28.87538"	1245.126	3511044.087	402929.664	1269.570	Secondary Control Point
1028	31°41'14.53247"	105°51'52.07157"	1365.952	3506107.990	418070.501	1390.067	Secondary Control Point
1029	31°44'03.74140"	105°42'26.11456"	1428.079	3511210.444	433004.456	1451.925	Secondary Control Point
1030	31°42'10.05948"	105°37'19.84448"	1386.451	3507661.108	441043.588	1410.356	Secondary Control Point
1031	31°35'52.37270"	105°00'40.64160"	1086.098	3495864.761	498930.055	1110.227	Secondary Control Point
1032	31°41'11.22101"	105°22'16.39585"	1243.600	3505741.225	464818.296	1267.429	Secondary Control Point
1033	31°43'13.52018"	105°32'00.50714"	1362.665	3509570.435	449458.902	1386.573	Secondary Control Point
1034	31°38'57.05974"	105°09'44.52355"	1214.186	3501562.250	484606.412	1237.988	Secondary Control Point
1035	31°37'19.85146"	105°11'55.61313"	1260.016	3498575.122	481148.451	1283.774	Secondary Control Point
1036	31°36'16.68831"	105°24'30.94482"	1280.232	3496685.753	461242.127	1304.187	Secondary Control Point
1037	31°35'08.89280"	105°29'56.61473"	1331.085	3494634.077	452651.222	1355.076	Secondary Control Point
1038	31°37'40.74373"	105°35'15.72334"	1431.517	3499351.102	444266.121	1455.489	Secondary Control Point
1039	31°34'20.31113"	105°43'28.39823"	1546.864	3493257.978	431246.315	1571.056	Secondary Control Point
1040	31°37'52.13415"	105°51'52.69683"	1311.276	3499876.376	418004.676	1335.610	Secondary Control Point
1041	31°35'06.87937"	106°03'42.58709"	1201.380	3494953.070	399254.054	1226.314	Secondary Control Point
1042	31°35'57.96054"	106°07'19.55000"	1184.044	3496582.964	393551.660	1209.079	Secondary Control Point
1043	31°30'27.01186"	106°02'39.43678"	1188.220	3486320.007	400836.330	1213.347	Secondary Control Point
1045	31°39'46.31319"	105°14'30.92514"	1201.031	3503092.631	477066.791	1224.796	Secondary Control Point
1050	31°28'42.96329"	105°50'30.03148"	1225.660	3482950.985	420052.370	1250.458	Secondary Control Point
1051	31°26'58.02418"	105°45'38.69825"	1251.483	3479663.961	427717.145	1276.179	Secondary Control Point
1052	31°24'06.73010"	105°48'56.76545"	1156.705	3474427.647	422450.145	1181.703	Secondary Control Point
1053	31°19'19.91237"	105°43'45.93851"	1185.480	3465539.533	430599.827	1210.418	Secondary Control Point
1060	30°43'47.61333"	105°02'13.62948"	1035.566	3399667.888	496447.437	1060.030	Secondary Control Point
1061	30°41'51.77887"	105°01'48.20126"	951.101	3396101.907	497122.689	975.616	Secondary Control Point
1062	30°55'43.52569"	105°00'22.39226"	1357.983	3421705.920	499406.773	1382.024	Secondary Control Point
1063	30°47'22.36131"	105°09'08.73991"	971.136	3406287.948	485417.474	995.657	Secondary Control Point
1064	30°43'55.30847"	105°05'56.67918"	943.852	3399908.374	490516.128	968.419	Secondary Control Point
1065	30°51'39.15040"	105°13'36.07028"	1058.903	3414204.985	478328.800	1083.398	Secondary Control Point
1066	30°50'36.39049"	105°21'04.97868"	994.221	3412303.813	466401.093	1018.648	Secondary Control Point
1067	30°58'03.70980"	105°20'00.19492"	1258.714	3426069.065	468163.022	1283.057	Secondary Control Point
1068	30°55'26.38192"	105°15'28.12199"	1124.650	3421206.623	475369.217	1149.093	Secondary Control Point

1069	30°53'19.81617"	105°06'28.71652"	1560.927	3417286.896	489680.958	1585.104	Secondary Control Point
1070	30°56'26.69433"	105°00'28.81347"	1320.019	3423034.854	499236.462	1344.062	Secondary Control Point
1071	31°00'39.44860"	105°01'15.08940"	1283.340	3430815.962	498010.000	1307.342	Secondary Control Point
1072	31°03'46.37227"	105°06'51.57123"	1306.411	3436575.822	489093.995	1330.431	Secondary Control Point
1073	31°02'04.23267"	105°14'02.11073"	1252.075	3433449.335	477677.649	1276.324	Secondary Control Point
1074	31°03'57.34104"	105°21'18.51558"	1248.240	3436962.067	466120.142	1272.569	Secondary Control Point
1075	31°05'18.20221"	105°35'50.02930"	1032.576	3439550.504	443037.962	1057.244	Secondary Control Point
1076	30°59'48.90779"	105°29'51.45637"	1070.792	3429366.138	452492.742	1095.253	Secondary Control Point
1077	31°11'48.42266"	105°35'03.68981"	1188.572	3451557.367	444329.073	1213.201	Secondary Control Point
1078	31°10'42.12269"	105°20'57.53068"	1347.124	3449421.752	466715.517	1371.323	Secondary Control Point
1079	31°07'37.41531"	105°11'35.59587"	1317.331	3443698.973	481579.452	1341.370	Secondary Control Point
1080	31°05'47.97877"	105°04'42.70525"	1338.610	3440316.531	492511.715	1362.500	Secondary Control Point
1081	31°05'43.71899"	104°59'54.53570"	1387.074	3440182.743	500145.779	1410.875	Secondary Control Point
1083	31°14'24.06299"	105°01'52.33730"	1637.032	3456202.241	497029.507	1660.644	Secondary Control Point
1084	31°16'48.35928"	105°03'08.65790"	1564.607	3460645.312	495012.806	1588.236	Secondary Control Point
1085	31°17'41.21694"	105°20'04.34265"	1407.436	3462319.693	468162.422	1431.405	Secondary Control Point
1086	31°15'31.37677"	105°15'40.44341"	1390.404	3458303.562	475129.556	1414.321	Secondary Control Point
1087	31°14'03.56679"	105°29'02.38633"	1331.524	3455671.778	453908.923	1355.842	Secondary Control Point
1088	31°15'29.94746"	105°39'14.42235"	1176.735	3458414.547	437733.932	1201.545	Secondary Control Point
1089	31°24'49.49660"	105°34'46.52000"	1546.975	3475601.857	444909.859	1571.208	Secondary Control Point
1090	31°28'08.76904"	105°40'13.63341"	1536.734	3481786.135	436310.243	1561.076	Secondary Control Point
1091	31°29'29.87685"	105°33'40.08549"	1454.156	3484224.991	446708.095	1478.226	Secondary Control Point
1092	31°28'06.80307"	105°22'42.66963"	1316.654	3481593.075	464043.044	1340.616	Secondary Control Point
1093	31°28'30.44113"	105°13'16.63286"	1303.897	3482280.008	478981.074	1327.634	Secondary Control Point
1094	31°21'37.87594"	105°20'59.40514"	1379.878	3469610.132	466729.885	1403.797	Secondary Control Point
1095	31°22'28.66417"	105°28'58.91314"	1467.969	3471221.667	454068.920	1492.082	Secondary Control Point
1096	31°22'41.93481"	105°14'05.28919"	1370.433	3471553.241	477674.298	1394.243	Secondary Control Point
1097	31°21'51.08620"	105°07'59.25434"	1422.028	3469971.623	487340.537	1445.747	Secondary Control Point
1098	31°21'44.46807"	105°00'25.14273"	1585.447	3469760.240	499336.811	1609.063	Secondary Control Point
1100	31°28'11.80283"	105°06'03.63935"	1426.842	3481689.412	490405.517	1450.467	Secondary Control Point
1101	31°12'30.16915"	105°30'09.12416"	1376.986	3452804.286	452130.385	1401.341	Secondary Control Point
1102	30°43'57.28485"	105°05'19.56387"	952.518	3399968.386	491503.155	977.078	Secondary Control Point
2001	31°58'31.77528"	106°20'22.76919"	1195.508	3538502.435	373424.403	1220.471	Non-Vegetated Vertical Assessment
2002	31°57'44.03150"	106°12'10.62255"	1217.044	3536880.481	386325.645	1241.721	Non-Vegetated Vertical Assessment
2003	31°55'39.71939"	106°05'00.77687"	1293.029	3532933.492	397571.072	1317.310	Non-Vegetated Vertical Assessment
2004	31°56'05.87920"	106°00'52.75507"	1406.493	3533675.913	404091.700	1430.560	Non-Vegetated Vertical Assessment
2005	31°59'25.97377"	105°54'33.35461"	1608.557	3539748.565	414105.663	1632.319	Non-Vegetated Vertical Assessment

2006	31°56'40.53699"	105°46'02.88077"	1498.586	3534550.813	427465.152	1522.262	Non-Vegetated Vertical Assessment
2007	31°56'47.65450"	105°40'31.40605"	1440.258	3534711.982	436169.150	1463.927	Non-Vegetated Vertical Assessment
2008	31°56'24.67522"	105°36'00.18591"	1487.647	3533962.512	443285.714	1511.284	Non-Vegetated Vertical Assessment
2009	31°55'12.45781"	105°29'34.40256"	1366.864	3531687.848	453404.395	1390.539	Non-Vegetated Vertical Assessment
2010	31°55'51.58026"	105°19'23.29997"	1233.004	3532831.980	469455.918	1256.690	Non-Vegetated Vertical Assessment
2011	31°56'20.01989"	105°14'10.35311"	1129.473	3533686.404	477674.988	1153.174	Non-Vegetated Vertical Assessment
2012	31°56'20.29907"	105°08'57.35479"	1087.860	3533680.376	485892.786	1111.583	Non-Vegetated Vertical Assessment
2013	31°55'24.70242"	105°02'36.49878"	1082.936	3531959.700	495891.465	1106.787	Non-Vegetated Vertical Assessment
2014	31°53'46.73663"	105°03'43.36409"	1078.928	3528944.272	494133.898	1102.775	Non-Vegetated Vertical Assessment
2015	31°53'34.48444"	105°08'55.83452"	1085.537	3528575.019	485925.689	1109.287	Non-Vegetated Vertical Assessment
2016	31°52'38.45004"	105°14'09.72415"	1131.765	3526864.401	477676.646	1155.493	Non-Vegetated Vertical Assessment
2017	31°52'35.67695"	105°20'19.19645"	1229.059	3526804.729	467969.378	1252.766	Non-Vegetated Vertical Assessment
2018	31°49'49.68218"	105°28'53.04126"	1309.684	3521744.881	454446.478	1333.447	Non-Vegetated Vertical Assessment
2019	31°48'19.69651"	105°28'51.37847"	1318.896	3518974.102	454477.925	1342.681	Non-Vegetated Vertical Assessment
2020	31°52'05.30921"	105°40'32.31056"	1402.139	3526018.698	436091.218	1425.921	Non-Vegetated Vertical Assessment
2021	31°50'48.76291"	105°46'55.66089"	1580.516	3523729.484	426001.312	1604.260	Non-Vegetated Vertical Assessment
2022	31°51'49.27269"	105°55'59.70106"	1569.992	3525705.572	411718.635	1593.904	Non-Vegetated Vertical Assessment
2023	31°50'28.46970"	105°58'15.94268"	1555.706	3523248.992	408116.228	1579.717	Non-Vegetated Vertical Assessment
2024	31°52'24.39181"	106°07'59.58297"	1255.350	3526967.055	392812.692	1279.828	Non-Vegetated Vertical Assessment
2025	31°52'53.60840"	106°13'56.40230"	1205.415	3527968.913	383447.103	1230.276	Non-Vegetated Vertical Assessment
2026	31°50'57.89402"	106°19'11.93898"	1191.517	3524503.316	375113.294	1216.597	Non-Vegetated Vertical Assessment
2027	31°47'01.48672"	106°11'58.39828"	1202.888	3517091.704	386427.783	1227.772	Non-Vegetated Vertical Assessment
2028	31°46'34.44806"	106°05'52.21194"	1223.593	3516157.437	396050.580	1248.163	Non-Vegetated Vertical Assessment
2029	31°46'08.48505"	106°00'48.06004"	1313.571	3515280.394	404043.279	1337.859	Non-Vegetated Vertical Assessment
2030	31°46'32.98641"	105°53'18.72467"	1537.412	3515931.500	415869.110	1561.343	Non-Vegetated Vertical Assessment
2031	31°48'17.42211"	105°47'25.93943"	1559.209	3519075.458	425171.619	1582.984	Non-Vegetated Vertical Assessment

2032	31°44'31.97632"	105°37'30.00262"	1366.862	3512032.122	440801.262	1390.730	Non-Vegetated Vertical Assessment
2033	31°46'10.18689"	105°33'13.33535"	1315.387	3515019.384	447569.909	1339.253	Non-Vegetated Vertical Assessment
2034	31°46'31.30157"	105°26'49.52316"	1298.387	3515623.058	457668.174	1322.177	Non-Vegetated Vertical Assessment
2035	31°46'53.35362"	105°20'21.25063"	1218.193	3516265.111	467882.497	1241.913	Non-Vegetated Vertical Assessment
2036	31°44'48.52935"	105°13'48.79636"	1204.433	3512394.939	478195.828	1228.169	Non-Vegetated Vertical Assessment
2037	31°44'42.20842"	105°06'50.85872"	1116.549	3512182.942	489191.351	1140.428	Non-Vegetated Vertical Assessment
2038	31°47'49.97266"	105°04'36.61725"	1088.882	3517960.819	492727.320	1112.799	Non-Vegetated Vertical Assessment
2039	31°40'35.91919"	105°01'52.55428"	1082.745	3504594.907	497037.550	1106.870	Non-Vegetated Vertical Assessment
2040	31°36'29.57621"	104°59'27.97943"	1080.122	3497010.149	500844.716	1104.343	Non-Vegetated Vertical Assessment
2041	31°37'16.14102"	105°09'45.29350"	1246.523	3498455.209	484581.510	1270.296	Non-Vegetated Vertical Assessment
2042	31°33'41.99929"	105°14'13.78668"	1274.861	3491875.212	477493.766	1298.606	Non-Vegetated Vertical Assessment
2043	31°39'15.95063"	105°11'35.51242"	1204.044	3502148.621	481684.320	1227.829	Non-Vegetated Vertical Assessment
2044	31°40'15.24887"	105°17'18.54070"	1225.836	3503994.231	472655.279	1249.592	Non-Vegetated Vertical Assessment
2045	31°39'09.10760"	105°22'16.12626"	1274.516	3501981.541	464812.607	1298.379	Non-Vegetated Vertical Assessment
2046	31°42'03.80699"	105°27'25.70698"	1301.791	3507391.191	456681.910	1325.698	Non-Vegetated Vertical Assessment
2047	31°41'36.76459"	105°34'16.53788"	1348.104	3506609.589	445863.309	1372.040	Non-Vegetated Vertical Assessment
2048	31°40'52.42201"	105°40'37.58866"	1426.147	3505301.740	435823.597	1450.069	Non-Vegetated Vertical Assessment
2049	31°41'33.50107"	105°46'18.46949"	1492.192	3506626.139	426857.524	1516.135	Non-Vegetated Vertical Assessment
2050	31°39'15.29944"	105°52'28.65228"	1324.126	3502444.531	417077.993	1348.390	Non-Vegetated Vertical Assessment
2051	31°41'15.71068"	106°00'00.09896"	1231.943	3506254.092	405222.142	1256.438	Non-Vegetated Vertical Assessment
2052	31°40'52.79346"	106°04'46.75456"	1211.620	3505620.416	397668.060	1236.379	Non-Vegetated Vertical Assessment
2053	31°41'17.79551"	106°11'09.38810"	1205.097	3506494.882	387601.590	1230.091	Non-Vegetated Vertical Assessment
2054	31°36'31.03081"	106°05'45.65968"	1211.404	3497576.106	396036.185	1236.359	Non-Vegetated Vertical Assessment
2055	31°36'23.34673"	105°59'57.01096"	1208.132	3497251.466	405221.068	1232.873	Non-Vegetated Vertical Assessment
2056	31°35'16.11791"	105°53'36.88566"	1257.675	3495094.821	415220.709	1282.236	Non-Vegetated Vertical Assessment
2057	31°36'37.47158"	105°47'26.43701"	1392.464	3497524.443	425002.214	1416.699	Non-Vegetated Vertical Assessment

2058	31°36'55.45211"	105°32'03.00009"	1359.763	3497930.582	449336.319	1383.742	Non-Vegetated Vertical Assessment
2059	31°34'01.72094"	105°26'06.52964"	1308.163	3492540.100	458706.948	1332.149	Non-Vegetated Vertical Assessment
2060	31°34'51.53618"	105°20'08.88333"	1252.885	3494040.595	468139.348	1276.769	Non-Vegetated Vertical Assessment
2062	31°29'53.66351"	105°10'09.59098"	1325.008	3484833.404	483920.321	1348.675	Non-Vegetated Vertical Assessment
2063	31°28'51.61159"	105°14'09.66636"	1333.133	3482934.703	477583.131	1356.885	Non-Vegetated Vertical Assessment
2064	31°29'43.65430"	105°21'59.63390"	1299.145	3484571.013	465188.636	1323.097	Non-Vegetated Vertical Assessment
2065	31°29'07.51668"	105°29'25.55352"	1417.662	3483504.384	453420.037	1441.667	Non-Vegetated Vertical Assessment
2066	31°30'22.60244"	105°34'29.15546"	1428.161	3485855.003	445422.043	1452.239	Non-Vegetated Vertical Assessment
2067	31°29'26.76898"	105°40'11.88659"	1520.623	3484187.317	436371.003	1544.909	Non-Vegetated Vertical Assessment
2068	31°28'42.66124"	105°47'59.27835"	1270.254	3482911.930	424030.108	1294.945	Non-Vegetated Vertical Assessment
2069	31°31'33.37341"	105°53'56.39198"	1214.493	3488240.919	414650.284	1239.266	Non-Vegetated Vertical Assessment
2071	31°29'59.48679"	106°04'26.15770"	1170.492	3485499.719	398012.845	1195.698	Non-Vegetated Vertical Assessment
2072	31°25'44.70281"	105°56'52.29297"	1162.808	3477544.807	409918.460	1187.994	Non-Vegetated Vertical Assessment
2073	31°24'18.84645"	105°53'26.25449"	1152.461	3474855.911	415336.544	1177.611	Non-Vegetated Vertical Assessment
2074	31°22'50.44301"	105°46'22.70671"	1214.113	3472049.535	426501.970	1239.052	Non-Vegetated Vertical Assessment
2075	31°24'10.19819"	105°41'27.26726"	1281.319	3474453.098	434320.959	1305.956	Non-Vegetated Vertical Assessment
2076	31°24'21.00105"	105°32'55.74658"	1475.761	3474709.542	447830.313	1499.949	Non-Vegetated Vertical Assessment
2077	31°24'55.16926"	105°26'04.65823"	1375.512	3475712.936	458689.601	1399.514	Non-Vegetated Vertical Assessment
2078	31°23'34.66710"	105°19'28.38269"	1366.820	3473198.391	469145.145	1390.708	Non-Vegetated Vertical Assessment
2079	31°24'13.72909"	105°13'54.86889"	1353.692	3474378.704	477955.490	1377.488	Non-Vegetated Vertical Assessment
2080	31°25'35.82387"	105°06'01.23236"	1424.625	3476887.242	490464.643	1448.273	Non-Vegetated Vertical Assessment
2081	31°22'04.14599"	105°00'03.45230"	1595.389	3470366.033	499909.824	1619.005	Non-Vegetated Vertical Assessment
2082	31°18'33.41919"	105°04'48.35940"	1512.529	3463881.287	492378.995	1536.185	Non-Vegetated Vertical Assessment
2084	31°19'33.26680"	105°14'09.15918"	1453.881	3465745.020	477559.638	1477.702	Non-Vegetated Vertical Assessment
2085	31°19'27.68672"	105°20'04.47837"	1403.835	3465597.533	468168.781	1427.762	Non-Vegetated Vertical Assessment
2086	31°17'31.20020"	105°24'42.05634"	1385.108	3462036.147	460819.441	1409.201	Non-Vegetated Vertical Assessment

2087	31°21'43.15023"	105°32'52.73443"	1429.386	3469849.354	447885.646	1453.678	Non-Vegetated Vertical Assessment
2089	31°20'46.29576"	105°48'28.41404"	1156.464	3468251.156	423153.537	1181.595	Non-Vegetated Vertical Assessment
2090	31°10'39.57181"	105°41'48.37085"	1080.417	3449499.698	433606.037	1105.332	Non-Vegetated Vertical Assessment
2091	31°16'10.54723"	105°34'37.59249"	1205.411	3459623.664	445061.871	1229.980	Non-Vegetated Vertical Assessment
2092	31°13'04.56663"	105°28'53.82980"	1363.791	3453854.390	454127.360	1388.103	Non-Vegetated Vertical Assessment
2093	31°13'41.74375"	105°24'03.24562"	1439.960	3454968.241	461819.850	1464.125	Non-Vegetated Vertical Assessment
2094	31°12'24.93493"	105°14'10.44347"	1348.443	3452558.404	477497.478	1372.411	Non-Vegetated Vertical Assessment
2095	31°15'17.08727"	105°08'01.72912"	1546.851	3457841.943	487260.439	1570.554	Non-Vegetated Vertical Assessment
2096	31°15'28.02463"	105°03'22.82652"	1597.512	3458172.310	494636.918	1621.138	Non-Vegetated Vertical Assessment
2097	31°07'39.37801"	105°03'02.39667"	1384.358	3443744.442	495170.614	1408.144	Non-Vegetated Vertical Assessment
2098	31°07'09.02074"	105°09'58.11332"	1323.440	3442820.650	484159.790	1347.436	Non-Vegetated Vertical Assessment
2099	31°09'22.33956"	105°17'27.69235"	1309.016	3446949.501	472263.282	1333.189	Non-Vegetated Vertical Assessment
2100	31°06'19.21853"	105°23'53.67378"	1306.688	3441343.788	462024.069	1331.009	Non-Vegetated Vertical Assessment
2101	31°09'50.30960"	105°25'39.53433"	1423.595	3447852.837	459244.958	1447.873	Non-Vegetated Vertical Assessment
2102	31°06'04.01941"	105°36'43.17457"	1037.608	3440968.707	441637.683	1062.309	Non-Vegetated Vertical Assessment
2103	31°03'24.64133"	105°34'38.31368"	1033.786	3436044.381	444919.851	1058.391	Non-Vegetated Vertical Assessment
2105	31°02'30.48660"	105°19'16.61168"	1235.600	3434278.392	469342.898	1259.931	Non-Vegetated Vertical Assessment
2106	31°01'55.09065"	105°14'22.10990"	1244.456	3433169.027	477146.887	1268.715	Non-Vegetated Vertical Assessment
2107	31°03'20.99675"	105°06'12.30672"	1304.215	3435793.615	490133.814	1328.232	Non-Vegetated Vertical Assessment
2108	31°01'20.79296"	105°00'54.73390"	1296.089	3432088.654	498549.907	1320.058	Non-Vegetated Vertical Assessment
2109	30°54'54.83157"	105°01'01.32297"	1457.421	3420207.010	498373.399	1481.452	Non-Vegetated Vertical Assessment
2110	30°55'45.99437"	105°09'18.51167"	1419.326	3421792.215	485179.309	1443.578	Non-Vegetated Vertical Assessment
2111	30°58'03.76294"	105°16'27.40819"	1166.019	3426055.299	473807.718	1190.402	Non-Vegetated Vertical Assessment
2112	30°58'08.96800"	105°20'26.86734"	1276.126	3426233.081	467455.964	1300.463	Non-Vegetated Vertical Assessment
2113	30°59'28.55327"	105°29'02.60160"	1101.803	3428733.803	453785.628	1126.245	Non-Vegetated Vertical Assessment
2114	30°51'32.23852"	105°22'03.97628"	1000.237	3414028.100	464839.668	1024.650	Non-Vegetated Vertical Assessment

2115	30°52'25.16484"	105°16'45.17484"	1133.556	3415632.880	473310.312	1158.007	Non-Vegetated Vertical Assessment
2116	30°54'08.94652"	105°08'59.07235"	1375.597	3418803.949	485691.176	1399.898	Non-Vegetated Vertical Assessment
2117	30°53'47.14702"	105°00'00.70371"	1379.375	3418123.263	499982.338	1403.426	Non-Vegetated Vertical Assessment
2118	30°44'03.05808"	105°01'48.97996"	1095.175	3400143.134	497103.065	1119.609	Non-Vegetated Vertical Assessment
2119	30°42'59.54342"	105°04'07.54732"	948.399	3398189.561	493417.134	972.955	Non-Vegetated Vertical Assessment
2120	30°47'58.09314"	105°10'07.02398"	973.442	3407390.132	483870.147	997.956	Non-Vegetated Vertical Assessment
2121	31°34'46.87961"	105°37'56.34826"	1487.929	3494021.712	440003.713	1511.978	Non-Vegetated Vertical Assessment
3001	31°58'30.45090"	106°20'23.85443"	1196.176	3538462.006	373395.413	1221.140	Vegetated Vertical Assessment
3002	31°56'26.73293"	106°09'56.77581"	1216.292	3534461.838	389813.601	1240.848	Vegetated Vertical Assessment
3003	31°55'10.18676"	106°03'16.67528"	1331.719	3531997.159	400295.948	1355.918	Vegetated Vertical Assessment
3004	31°59'37.53387"	105°54'25.34818"	1598.983	3540102.751	414318.751	1622.740	Vegetated Vertical Assessment
3006	31°55'29.04983"	105°38'13.59958"	1441.895	3532269.809	439772.825	1465.585	Vegetated Vertical Assessment
3007	31°56'19.95372"	105°32'43.34094"	1433.385	3533789.807	448453.185	1457.024	Vegetated Vertical Assessment
3008	31°55'34.80530"	105°20'26.68367"	1221.345	3532320.588	467790.001	1245.032	Vegetated Vertical Assessment
3009	31°56'20.42601"	105°13'35.28083"	1121.965	3533696.941	478595.839	1145.667	Vegetated Vertical Assessment
3010	31°55'24.99385"	105°04'54.79906"	1083.556	3531970.773	492259.795	1107.357	Vegetated Vertical Assessment
3011	31°55'26.13671"	105°00'22.64155"	1086.785	3532003.053	499406.471	1110.658	Vegetated Vertical Assessment
3012	31°52'08.81984"	105°02'05.84513"	1081.661	3525928.366	496694.465	1105.577	Vegetated Vertical Assessment
3013	31°41'37.83449"	105°01'15.97869"	1078.666	3506500.927	498000.927	1102.823	Vegetated Vertical Assessment
3014	31°48'48.65906"	105°07'07.96776"	1089.537	3519771.276	488749.505	1113.362	Vegetated Vertical Assessment
3015	31°51'44.94887"	105°12'06.16512"	1107.012	3525210.603	480919.795	1130.748	Vegetated Vertical Assessment
3016	31°48'46.21630"	105°22'28.02410"	1240.571	3519750.963	464560.339	1264.290	Vegetated Vertical Assessment
3017	31°46'35.58779"	105°27'13.53826"	1294.253	3515757.641	457037.086	1318.047	Vegetated Vertical Assessment
3018	31°48'49.35251"	105°38'42.95627"	1393.468	3519967.768	438928.746	1417.283	Vegetated Vertical Assessment
3019	31°50'26.80098"	105°45'56.92752"	1537.979	3523042.272	427540.184	1561.731	Vegetated Vertical Assessment
3020	31°49'37.88122"	105°55'00.29414"	1538.437	3521646.646	413245.566	1562.362	Vegetated Vertical Assessment

3021	31°48'13.02066"	106°03'49.71070"	1249.467	3519160.567	399302.448	1273.842	Vegetated Vertical Assessment
3022	31°49'27.45046"	106°07'55.78617"	1218.474	3521517.719	392855.639	1243.045	Vegetated Vertical Assessment
3023	31°51'03.29412"	106°17'41.77701"	1188.264	3524641.057	377485.044	1213.305	Vegetated Vertical Assessment
3024	31°41'11.63757"	106°10'24.43729"	1200.070	3506292.471	388783.037	1225.043	Vegetated Vertical Assessment
3025	31°41'12.11353"	106°00'00.68284"	1231.169	3506143.476	405205.754	1255.668	Vegetated Vertical Assessment
3026	31°39'53.24575"	105°52'16.37835"	1334.544	3503610.296	417410.576	1358.758	Vegetated Vertical Assessment
3027	31°42'49.60052"	105°48'50.06945"	1421.821	3508998.222	422884.014	1445.772	Vegetated Vertical Assessment
3028	31°44'43.30531"	105°37'29.05651"	1358.491	3512380.789	440828.157	1382.356	Vegetated Vertical Assessment
3029	31°42'32.77195"	105°28'51.34491"	1307.119	3508292.679	454431.617	1331.027	Vegetated Vertical Assessment
3030	31°43'00.34534"	105°21'20.41864"	1227.955	3509096.077	466302.953	1251.729	Vegetated Vertical Assessment
3031	31°44'48.28131"	105°13'00.95098"	1203.102	3512384.717	479454.602	1226.846	Vegetated Vertical Assessment
3032	31°44'21.78504"	105°03'58.05483"	1094.253	3511550.377	493737.431	1118.247	Vegetated Vertical Assessment
3033	31°37'02.87625"	105°01'20.68320"	1090.658	3498035.564	497875.346	1114.779	Vegetated Vertical Assessment
3034	31°36'17.56288"	105°09'38.36934"	1271.504	3496651.450	484761.275	1295.249	Vegetated Vertical Assessment
3035	31°35'46.84591"	105°15'06.82239"	1243.465	3495722.072	476104.501	1267.235	Vegetated Vertical Assessment
3036	31°36'30.00075"	105°22'14.73723"	1255.428	3497082.824	464832.565	1279.338	Vegetated Vertical Assessment
3037	31°37'31.55749"	105°29'07.76732"	1318.635	3499020.667	453958.115	1342.611	Vegetated Vertical Assessment
3038	31°37'27.85932"	105°41'23.43942"	1481.510	3499011.044	434576.605	1505.535	Vegetated Vertical Assessment
3039	31°39'26.56127"	105°46'34.53341"	1426.488	3502720.757	426406.821	1450.542	Vegetated Vertical Assessment
3040	31°34'34.75795"	105°54'35.60814"	1241.213	3493834.136	413662.440	1265.848	Vegetated Vertical Assessment
3041	31°36'26.21014"	105°58'21.01160"	1219.491	3497316.817	407751.513	1244.162	Vegetated Vertical Assessment
3042	31°36'53.15466"	106°08'48.03034"	1187.406	3498306.610	391237.732	1212.459	Vegetated Vertical Assessment
3044	31°30'33.00080"	105°50'33.66951"	1242.809	3486339.628	419982.409	1267.510	Vegetated Vertical Assessment
3045	31°28'22.73692"	105°44'49.83220"	1288.713	3482263.255	429024.678	1313.284	Vegetated Vertical Assessment
3046	31°30'49.17499"	105°38'47.28380"	1503.810	3486711.044	438617.984	1528.001	Vegetated Vertical Assessment
3047	31°30'27.84413"	105°29'03.56553"	1431.262	3485974.900	454011.080	1455.253	Vegetated Vertical Assessment

3048	31°27'27.62869"	105°21'02.31339"	1305.295	3480378.207	466687.397	1329.228	Vegetated Vertical Assessment
3049	31°31'55.26799"	105°16'02.11744"	1290.376	3488595.799	474629.957	1314.159	Vegetated Vertical Assessment
3050	31°30'19.41005"	105°09'57.13907"	1327.850	3485625.566	484249.996	1351.512	Vegetated Vertical Assessment
3052	31°23'46.82172"	105°01'14.38744"	1584.171	3473527.253	498036.594	1607.783	Vegetated Vertical Assessment
3053	31°20'41.32656"	105°08'54.79590"	1436.440	3467825.845	485870.394	1460.175	Vegetated Vertical Assessment
3054	31°22'15.94134"	105°14'59.89765"	1377.682	3470756.165	476230.097	1401.507	Vegetated Vertical Assessment
3055	31°22'16.45325"	105°25'38.95601"	1409.173	3470823.880	459349.227	1433.189	Vegetated Vertical Assessment
3056	31°22'28.11774"	105°29'53.83100"	1465.063	3471211.312	452618.212	1489.209	Vegetated Vertical Assessment
3057	31°24'12.35157"	105°40'21.40887"	1296.331	3474508.612	436060.493	1320.909	Vegetated Vertical Assessment
3058	31°24'18.50747"	105°44'27.42510"	1239.459	3474739.899	429565.225	1264.242	Vegetated Vertical Assessment
3059	31°24'17.68807"	105°52'41.15008"	1152.739	3474810.666	416527.331	1177.864	Vegetated Vertical Assessment
3060	31°17'58.91281"	105°43'49.42358"	1143.370	3463046.377	430491.195	1168.347	Vegetated Vertical Assessment
3061	31°15'46.85137"	105°37'07.15712"	1190.088	3458915.567	441102.677	1214.791	Vegetated Vertical Assessment
3062	31°13'04.72404"	105°28'54.32559"	1363.123	3453859.293	454114.263	1387.435	Vegetated Vertical Assessment
3063	31°16'12.36563"	105°24'14.75871"	1428.990	3459606.441	461532.235	1453.093	Vegetated Vertical Assessment
3064	31°16'27.40228"	105°14'37.87833"	1409.285	3460024.588	476788.000	1433.153	Vegetated Vertical Assessment
3065	31°13'57.14499"	104°59'26.78864"	1612.075	3455373.164	500879.586	1635.680	Vegetated Vertical Assessment
3066	31°07'04.52442"	105°02'08.51202"	1387.330	3442670.906	496597.294	1411.119	Vegetated Vertical Assessment
3067	31°06'27.84716"	105°07'42.36070"	1336.819	3441548.330	487753.778	1360.766	Vegetated Vertical Assessment
3068	31°08'18.84358"	105°13'49.60990"	1304.026	3444981.147	478032.982	1328.122	Vegetated Vertical Assessment
3069	31°10'45.07234"	105°21'54.39793"	1353.843	3449517.418	465210.591	1378.054	Vegetated Vertical Assessment
3070	31°11'32.91310"	105°31'57.48023"	1296.290	3451055.003	449254.685	1320.742	Vegetated Vertical Assessment
3071	31°10'53.86685"	105°37'27.07428"	1115.436	3449898.514	440525.009	1140.191	Vegetated Vertical Assessment
3073	31°04'04.25311"	105°34'53.17836"	1037.836	3437265.917	444532.274	1062.461	Vegetated Vertical Assessment
3074	30°59'45.61357"	105°31'55.39023"	1037.428	3429279.934	449205.567	1061.913	Vegetated Vertical Assessment
3075	31°02'55.73121"	105°21'08.50909"	1238.756	3435064.545	466379.299	1263.097	Vegetated Vertical Assessment

3076	31°01'03.97260"	105°14'57.62176"	1234.285	3431597.427	476201.951	1258.576	Vegetated Vertical Assessment
3077	31°02'41.86044"	105°04'50.09819"	1300.994	3434586.999	492311.705	1325.002	Vegetated Vertical Assessment
3078	31°04'59.70819"	105°02'04.56210"	1340.878	3438828.376	496700.711	1364.737	Vegetated Vertical Assessment
3079	30°57'51.66127"	105°00'36.85839"	1287.864	3425650.539	499023.232	1311.909	Vegetated Vertical Assessment
3080	30°53'15.24022"	105°06'40.75733"	1518.989	3417146.343	489361.145	1543.185	Vegetated Vertical Assessment
3081	30°55'04.44850"	105°15'22.01122"	1120.210	3420531.039	475529.843	1144.660	Vegetated Vertical Assessment
3082	30°52'54.15649"	105°23'10.93177"	997.703	3416555.904	463070.218	1022.103	Vegetated Vertical Assessment
3083	30°51'23.28082"	105°21'44.70523"	993.407	3413750.670	465350.565	1017.825	Vegetated Vertical Assessment
3084	30°51'15.56327"	105°13'14.54423"	1048.232	3413477.729	478899.030	1072.729	Vegetated Vertical Assessment
3085	30°48'00.88357"	105°10'16.61023"	975.417	3407476.419	483615.536	999.930	Vegetated Vertical Assessment
3086	30°51'53.51617"	105°00'14.81807"	1398.838	3414625.238	499607.516	1422.921	Vegetated Vertical Assessment
3087	30°45'00.04728"	105°06'01.63373"	964.530	3401901.381	490386.161	989.076	Vegetated Vertical Assessment
3088	30°41'30.23955"	105°03'03.40006"	939.695	3395439.578	495121.977	964.256	Vegetated Vertical Assessment
3864	31°15'59.66514"	105°08'28.27425"	1533.545	3459153.621	486560.059	1557.257	Vegetated Vertical Assessment
A 334	32°02'33.31028"	106°17'51.38019"	1199.612	3545891.610	377487.308	1224.536	USCGS Monument (1966)
A 1118	31°28'30.60198"	105°20'57.75543"	1303.259	3482316.598	466813.857	1327.179	USCGS Monument (1958)
ACALA	31°21'34.42318"	105°53'06.97685"	1151.534	3469789.490	415804.874	1176.863	USCGS Monument (1934)
BM 24H	31°30'36.62924"	105°42'59.77858"	1513.856	3486366.191	431955.658	1538.190	USGS Monument (1940)
BM	32°00'05.40762"	105°38'33.07469"	1537.662	3540781.954	439311.930	1561.290	USGS 2" Pipe (No Stamping)
BULT 54	31°44'48.10069"	105°13'57.20508"	1205.139	3512382.211	477974.570	1228.873	Concrete Monument with Tablet
D 1394	31°10'22.13138"	105°40'09.99312"	1081.971	3448946.693	436206.842	1106.839	Stainless Steel Rod w/o Sleeve (1981)
EAGLE FLAT 2	31°06'27.40723"	105°07'43.16395"	1336.669	3441534.812	487732.485	1360.616	USCGS Monument 10"x10" (1963)
EAGLE FLAT 2_#4	31°06'26.70424"	105°07'43.35192"	1336.625	3441513.176	487727.481	1360.573	USCGS Monument 10"x10" (1963)
EL PASO-443-090	31°44'40.16154"	105°05'07.00139"	1108.514	3512117.420	491923.784	1132.455	Concrete Monument with City of El Paso Disk
F 706	31°45'43.81206"	105°22'22.58143"	1247.105	3514134.458	464684.176	1270.859	USCGS Monument 12"x12" (1943)
FGS-TX01	31°59'59.24978"	105°20'21.81844"	1232.280	3540462.335	467943.287	1255.906	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX02	31°31'04.89742"	106°10'23.69564"	1076.607	3487610.381	388602.071	1101.875	Set 5/8" Rebar with Aluminum FGS Cap

FGS-TX03	32°00'04.78082"	105°39'07.83559"	1508.967	3540768.116	438399.760	1532.464	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX04	30°59'42.41394"	105°32'06.64932"	1035.005	3429182.864	448906.502	1059.499	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX05	30°57'08.98344"	105°16'04.66798"	1154.643	3424367.458	474406.899	1179.112	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX06	31°00'31.52722"	105°01'04.65451"	1281.033	3430572.056	498286.645	1305.039	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX07	30°41'37.84011"	105°03'32.10215"	938.362	3395673.922	494358.530	962.932	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX08	30°47'57.03322"	105°10'29.32265"	976.274	3407358.413	483277.537	1000.712	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX09	31°45'19.00106"	104°58'48.26472"	1078.518	3513310.235	501888.164	1102.707	Set 5/8" Rebar with Aluminum FGS Cap
FGS-TX10	31°30'08.23216"	104°50'42.21993"	1079.789	3485279.911	514714.339	1104.093	Set 5/8" Rebar with Aluminum FGS Cap
LIDAR BASE	31°47'48.83614"	106°22'26.80019"	1179.004	3518745.270	369917.999	1204.176	Found Nail
M 180 RESET	31°50'00.97948"	106°03'36.72930"	1311.078	3522481.398	399676.233	1335.388	USCGS Monument (1954)
M 1392	31°49'14.67479"	105°42'37.64996"	1460.592	3520785.920	432763.434	1484.372	NGS Stainless Steel Rod (1982)
MM 115	32°00'01.65374"	105°01'25.82835"	1084.912	3540486.284	497749.103	1108.677	Clark Boundary Survey 2" Pipe No. 115
N 1384	31°44'55.79042"	106°22'44.75968"	1099.256	3513422.745	369378.141	1124.512	NGS Stainless Steel Rod (1981)
P 1236	31°45'37.74959"	105°22'04.85905"	1245.439	3513946.215	465149.738	1269.403	NGS disk on Copper Clad Steel Rod (1977)
BM	31°57'31.59426"	105°37'35.35400"	1458.303	3536037.108	440798.971	1481.923	USGS Monument 23 E (1940)
SC1	32°03'53.89286"	105°34'41.93603"	1578.911	3547782.870	445414.172	1602.345	US GLO 2" Iron Pipe (1924)
SC	31°56'40.01858"	105°43'36.70465"	1457.949	3534508.370	431302.804	1481.627	USGS 2" Iron Pipe w\Brass Cap [BM 4850ft]
T 1394	31°12'29.58850"	105°30'08.05593"	1376.945	3452786.281	452158.570	1401.298	NGS Stainless Steel Rod (1981)
TT 16 WM	31°15'38.31286"	105°03'15.98708"	1598.223	3458488.952	494817.955	1621.858	Found Monument USGS (1950)
TT 23 WM	31°22'01.17688"	105°00'27.40168"	1585.028	3470274.649	499277.171	1608.645	FCM 6" ROUND W\BRASS DISK (1950)
U1071	31°09'52.17339"	105°19'08.06015"	1326.783	3447875.275	469608.670	1350.955	USCGS Monument (1956)
Y 1389	31°07'02.13420"	105°09'35.68264"	1325.674	3442607.771	484753.569	1349.659	NGS Stainless Steel Rod (1981)

USGS

Desert Mountains, TX LiDAR Support Survey

FGS Project Number 190041

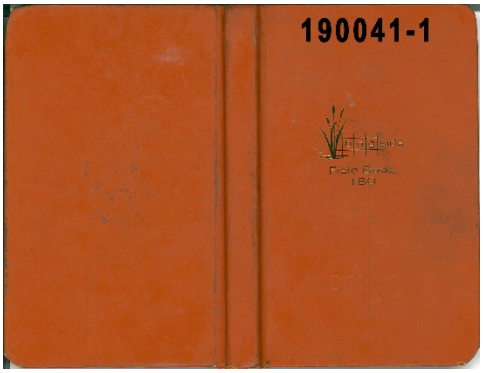
Prime Contractor: Optimal GEO

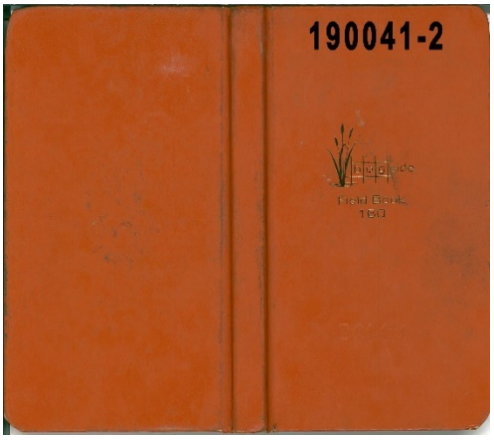
Contract No. G17PC00007

Sub-Contractor: Florabama Geospatial Solutions, LLC. (FGS)

USGS
Desert Mountains, TX LiDAR Support Survey
FGS Project Number 190041
Prime Contractor: Optimal GEO
Contract No. G17PC00007
Sub-Contractor: Florabama Geospatial Solutions, LLC. (FGS)

FIELD BOOKS





FIELD BOOKS

EQUIPMENT, PERSONNEL & SOFTWARE

Equipment

GPS

Receiver	Part No.	Serial No.	Antenna	Antenna Part Number	Antenna Serial Number
R10 GNSS	90909-60	5413460837	Integrated		
R10 GNSS	90909-60	5419465084	Integrated		
R7 GNSS	60163-00	4842K33358	Zephyr Geodetic 2	57971-00	30978478
R7 GNSS	60163-00	4735K30652	Zephyr Model 2	55970-00	511218134
R7 GNSS	60163-00	5040K18292	Zephyr Geodetic 2	55971-00	30403873
R7 GNSS	60163-00	4726K30342	Zephyr Model 2	57971-00	Unknown

RTX

Trimble CenterPoint RTX (Real Time Sattelite Corrections)
For more information regarding Trimble's CenterPoint RTX please visit: http://www.trimble.com

Data Collectors

Trimble Model TSC3 - SN: RS33C67354 w/ Trimble Access v3.10
Trimble Model TSC3 - SN: RS33C67354 w/ Trimble Access v3.10

Cameras (Geo-Referenced)

IPad with Theodolite App
IPad with Theodolite App

Personnel

Wayne Walker – Project Manager (FGS)
Mike Stone – Office Technician (FGS)
William Wall – Party Chief (FGS)
John Lowe – Party Chief (FGS)
Hunter Franklin – Party Chief (FGS)
Preston Wills – Survey Technician (FGS)

Software

Trimble Business Center
Trimble Access
Google Earth Pro
Microsoft Word
Microsoft Excel
Theodolite App for IPad

USGS
Desert Mountains, TX LiDAR Support Survey
FGS Project Number 190041
Prime Contractor: Optimal GEO
Contract No. G17PC00007
Sub-Contractor: Florabama Geospatial Solutions, LLC. (FGS)

CERTIFICATION

All Surveying and Mapping products and related work performed for this project are in compliance with the following Manuals and related technical standards and publications:

National Geospatial Program Lidar Base Specification Version 1.2

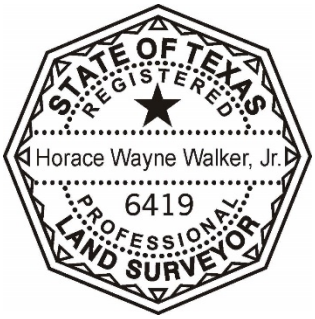
Positional Accuracy Standards for Digital Geospatial Data (American Society for Photogrammetry and Remote Sensing, 2014)

Thank you,

Dated: 31-January-2020

By: _____

Horace Wayne Walker, Jr., CFedS, PLS
Texas RPLS No.6419



APPENDIX "A" RTX SITE CALIBRATION REPORT

APPENDIX "B" NGS DATASHEETS

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CD0518 ***********************************************************************
 CD0518  DESIGNATION -  A 1118
 CD0518  PID         -  CD0518
 CD0518  STATE/COUNTY-  TX/HUDSPETH
 CD0518  COUNTRY     -  US
 CD0518  USGS QUAD   -  BLACK HILLS (1979)
 CD0518
 CD0518                        *CURRENT SURVEY CONTROL
 CD0518  ______________________________________________________________________
 CD0518* NAD 83(1986) POSITION- 31 28 30.     (N) 105 20 57.     (W)    SCALED
 CD0518* NAVD 88 ORTHO HEIGHT -  1327.217 (meters)     4354.38  (feet) ADJUSTED
 CD0518  ______________________________________________________________________
 CD0518  GEOID HEIGHT    -        -22.870 (meters)                      GEOID18
 CD0518  DYNAMIC HEIGHT  -       1325.152 (meters)     4347.60  (feet) COMP
 CD0518  MODELED GRAVITY -    979,038.0   (mgal)                        NAVD 88
 CD0518
 CD0518  VERT ORDER      -  FIRST     CLASS II
 CD0518
 CD0518.The horizontal coordinates were scaled from a map and have
 CD0518.an estimated accuracy of +/- 6 seconds.
 CD0518.
 CD0518.The orthometric height was determined by differential leveling and
 CD0518.adjusted by the NATIONAL GEODETIC SURVEY
 CD0518.in June 1991.
 CD0518
 CD0518.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0518.GEOID18 height accuracy estimate available here.
 CD0518
 CD0518.Click here to see if photographs exist for this station.
 CD0518
 CD0518.The dynamic height is computed by dividing the NAVD 88
 CD0518.geopotential number by the normal gravity value computed on the
 CD0518.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0518.degrees latitude (g = 980.6199 gals.).
 CD0518
 CD0518.The modeled gravity was interpolated from observed gravity values.
 CD0518
 CD0518;                    North         East     Units  Estimated Accuracy
 CD0518;SPC TX C     - 3,211,210.      223,560.      MT  (+/- 180 meters Scaled)
 CD0518
 CD0518_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ668822(NAD 83)
 CD0518
 CD0518                           SUPERSEDED SURVEY CONTROL
 CD0518
 CD0518  NGVD 29 (??/??/92) 1326.643   (m)          4352.49    (f) ADJ UNCH    1 2
 CD0518
 CD0518.Superseded values are not recommended for survey control.
 CD0518
 CD0518.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CD0518.See file dsdata.pdf to determine how the superseded data were derived.
 CD0518
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CD0518_MARKER: DB = BENCH MARK DISK
CD0518_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
CD0518_STAMPING: A 1118 1958
CD0518_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
CD0518+STABILITY: SURFACE MOTION
CD0518
CD0518  HISTORY     - Date     Condition        Report By
CD0518  HISTORY     - 1958     MONUMENTED       CGS
CD0518
CD0518                          STATION DESCRIPTION
CD0518
CD0518'DESCRIBED BY COAST AND GEODETIC SURVEY 1958
CD0518'22.3 MI N FROM SIERRA BLANCA.
CD0518'ABOUT 22.3 MILES NORTH ALONG RANCH ROAD 1111 FROM THE TEXAS AND
CD0518'PACIFIC RAILROAD STATION AT SIERRA BLANCA, 49 FEET EAST OF THE CENTER
CD0518'LINE OF THE ROAD, ABOUT 100 YARDS NORTH OF THE CREST OF A SMALL HILL,
CD0518'2 FEET WEST OF A FENCE, 2 FEET SOUTH OF A WHITE WOODEN WITNESS POST,
CD0518'ABOUT LEVEL WITH THE ROAD, AND IN THE TOP OF A CONCRETE POST
CD0518'PROJECTING 5 INCHES.
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CX0352 ***********************************************************************
 CX0352  DESIGNATION -  A 334
 CX0352  PID         -  CX0352
 CX0352  STATE/COUNTY-  NM/OTERO
 CX0352  COUNTRY     -  US
 CX0352  USGS QUAD   -  NEWMAN (1955)
 CX0352
 CX0352                        *CURRENT SURVEY CONTROL
 CX0352  ______________________________________________________________________
 CX0352* NAD 83(1986) POSITION- 32 02 33.29   (N) 106 17 51.34   (W)    HD_HELD1
 CX0352* NAVD 88 ORTHO HEIGHT -  1224.565 (meters)     4017.59  (feet) ADJUSTED
 CX0352  ______________________________________________________________________
 CX0352  GEOID HEIGHT    -        -23.843 (meters)                      GEOID18
 CX0352  DYNAMIC HEIGHT  -       1222.710 (meters)     4011.51  (feet) COMP
 CX0352  MODELED GRAVITY -    979,082.6   (mgal)                        NAVD 88
 CX0352
 CX0352  VERT ORDER      -  FIRST     CLASS II
 CX0352
 CX0352.The horizontal coordinates were determined by differentially corrected
 CX0352.hand held GPS observations or other comparable positioning techniques
 CX0352.and have an estimated accuracy of +/- 3 meters.
 CX0352.
 CX0352.The orthometric height was determined by differential leveling and
 CX0352.adjusted by the NATIONAL GEODETIC SURVEY
 CX0352.in June 1991.
 CX0352
 CX0352.Significant digits in the geoid height do not necessarily reflect accuracy.
 CX0352.GEOID18 height accuracy estimate available here.
 CX0352
 CX0352.Click here to see if photographs exist for this station.
 CX0352
 CX0352.The dynamic height is computed by dividing the NAVD 88
 CX0352.geopotential number by the normal gravity value computed on the
 CX0352.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CX0352.degrees latitude (g = 980.6199 gals.).
 CX0352
 CX0352.The modeled gravity was interpolated from observed gravity values.
 CX0352
 CX0352;                   North         East     Units  Estimated Accuracy
 CX0352;SPC NM C     -   115,589.2     495,505.2     MT  (+/- 3 meters HH1 GPS)
 CX0352
 CX0352_U.S. NATIONAL GRID SPATIAL ADDRESS: 13SCR7748745891(NAD 83)
 CX0352
 CX0352                           SUPERSEDED SURVEY CONTROL
 CX0352
 CX0352  NGVD 29 (??/??/92) 1223.959  (m)          4015.61   (f) ADJ UNCH    1 2
 CX0352
 CX0352.Superseded values are not recommended for survey control.
 CX0352
 CX0352.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CX0352.See file dsdata.pdf to determine how the superseded data were derived.
 CX0352
 CX0352_MARKER: DB = BENCH MARK DISK
 CX0352_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
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CX0352_STAMPING: A 334 1966
CX0352_MARK LOGO: CGS
CX0352_PROJECTION: FLUSH
CX0352_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
CX0352+STABILITY: SURFACE MOTION
CX0352_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
CX0352+SATELLITE: SATELLITE OBSERVATIONS - September 10, 2011
CX0352
CX0352  HISTORY     - Date     Condition        Report By
CX0352  HISTORY     - 1966     MONUMENTED       CGS
CX0352  HISTORY     - 1967     GOOD             CGS
CX0352  HISTORY     - 1981     GOOD             NGS
CX0352  HISTORY     - 20110910 GOOD             GCT
CX0352  HISTORY     - UNK      SEE DESCRIPTION  GCT
CX0352
CX0352                          STATION DESCRIPTION
CX0352
CX0352'DESCRIBED BY COAST AND GEODETIC SURVEY 1967
CX0352'3.15 MI NE FROM NEWMAN, TEXAS.
CX0352'ABOUT 3.15 MILES NORTHEAST ALONG THE SOUTHERN PACIFIC RAILROAD FROM
CX0352'THE POST OFFICE AT NEWMAN, IN S 14, T 26 S, R 6 E, 78 FEET NORTHWEST
CX0352'OF THE NORTHWEST RAIL OF THE MAIN TRACK, 95 FEET SOUTHEAST OF THE
CX0352'CENTER LINE OF U.S. HIGHWAY 54, 66 FEET NORTH OF THE 4TH TELEPHONE
CX0352'POLE NORTHEAST OF MILEPOST 1319, 50 FEET SOUTHEAST OF THE CENTER LINE
CX0352'OF A DIRT ROAD, 50 FEET SOUTH OF A HIGHWAY RIGHT-OF-WAY MARKER, 2 FEET
CX0352'SOUTHEAST OF A METAL WITNESS POST, ABOUT 2 FEET ABOVE THE LEVEL OF THE
CX0352'DIRT ROAD, AND SET IN THE TOP OF A CONCRETE POST PROJECTING 7 INCHES.
CX0352
CX0352                          STATION RECOVERY (1981)
CX0352
CX0352'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
CX0352'5.3 KM (3.3 MI) NORTHEAST ALONG U.S. HIGHWAY 54 FROM THE
CX0352'TEXAS-NEW MEXICO STATE LINE IN NEWMAN, 4 POLES NORTHEAST OF RAILROAD
CX0352'MILE POST 1319, 0.4 KM (0.25 MI) NORTHEAST OF MILE POST 3, 30.0
CX0352'METERS (95.0 FT) SOUTHEAST OF THE CENTERLINE OF THE HIGHWAY, 23.8
CX0352'METERS (78.0 FT) NORTHWEST OF THE NEAR RAIL OF THE SOUTHERN PACIFIC
CX0352'RAILROAD AND 20.1 METERS (66.0 FT) NORTH OF A UTILITY POLE.
CX0352'THE MARK IS 0.5 METERS  NE FROM A WITNESS POST.
CX0352'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
CX0352
CX0352                          STATION RECOVERY (2011)
CX0352
CX0352'RECOVERY NOTE BY GUSTIN, COTHERN, AND TUCKER, I 2011 (HWW)
CX0352'OPUS SOLUTION AVAILABLE.
CX0352
CX0352                          STATION RECOVERY (UNK )
CX0352
CX0352'RECOVERY NOTE BY GUSTIN, COTHERN, AND TUCKER, I UNK
CX0352'RECOVERED AS DESCRIBED.
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CE0365 ***********************************************************************
 CE0365  DESIGNATION -  N 1384
 CE0365  PID         -  CE0365
 CE0365  STATE/COUNTY-  TX/EL PASO
 CE0365  COUNTRY     -  US
 CE0365  USGS QUAD   -  YSLETA NW (1994)
 CE0365
 CE0365                        *CURRENT SURVEY CONTROL
 CE0365  ______________________________________________________________________
 CE0365* NAD 83(1986) POSITION- 31 44 55.     (N) 106 22 44.     (W)   SCALED
 CE0365* NAVD 88 ORTHO HEIGHT -  1124.540 (meters)     3689.43  (feet) ADJUSTED
 CE0365  ______________________________________________________________________
 CE0365  GEOID HEIGHT    -        -24.248 (meters)                     GEOID18
 CE0365  DYNAMIC HEIGHT  -       1122.826 (meters)     3683.81  (feet) COMP
 CE0365  MODELED GRAVITY -    979,077.1   (mgal)                       NAVD 88
 CE0365
 CE0365  VERT ORDER      -  FIRST     CLASS I
 CE0365
 CE0365.The horizontal coordinates were scaled from a map and have
 CE0365.an estimated accuracy of +/- 6 seconds.
 CE0365.
 CE0365.The orthometric height was determined by differential leveling and
 CE0365.adjusted by the NATIONAL GEODETIC SURVEY
 CE0365.in November 1996.
 CE0365
 CE0365.Significant digits in the geoid height do not necessarily reflect accuracy.
 CE0365.GEOID18 height accuracy estimate available here.
 CE0365
 CE0365.Click here to see if photographs exist for this station.
 CE0365
 CE0365.The dynamic height is computed by dividing the NAVD 88
 CE0365.geopotential number by the normal gravity value computed on the
 CE0365.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CE0365.degrees latitude (g = 980.6199 gals.).
 CE0365
 CE0365.The modeled gravity was interpolated from observed gravity values.
 CE0365
 CE0365;                    North         East     Units  Estimated Accuracy
 CE0365;SPC TX C     - 3,246,360.      127,480.      MT  (+/- 180 meters Scaled)
 CE0365
 CE0365_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RCR693133(NAD 83)
 CE0365
 CE0365                           SUPERSEDED SURVEY CONTROL
 CE0365
 CE0365  NAVD 88 (06/15/91) 1124.574  (m)          3689.54   (f) SUPERSEDED  1 1
 CE0365
 CE0365.Superseded values are not recommended for survey control.
 CE0365
 CE0365.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CE0365.See file dsdata.pdf to determine how the superseded data were derived.
 CE0365
 CE0365_MARKER: I = METAL ROD
 CE0365_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 CE0365_STAMPING: N 1384 1981
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CE0365_MARK LOGO: NGS
CE0365_PROJECTION: FLUSH
CE0365_MAGNETIC: I = MARKER IS A STEEL ROD
CE0365_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
CE0365_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
CE0365+SATELLITE: SATELLITE OBSERVATIONS - January 20, 1993
CE0365_ROD/PIPE-DEPTH: 21.9 meters
CE0365
CE0365  HISTORY     - Date     Condition        Report By
CE0365  HISTORY     - 1981     MONUMENTED       NGS
CE0365  HISTORY     - 19930120 GOOD             NGS
CE0365
CE0365                          STATION DESCRIPTION
CE0365
CE0365'DESCRIBED BY NATIONAL GEODETIC SURVEY 1981
CE0365'IN EL PASO.
CE0365'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
CE0365'IN EL PASO, AT THE JUNCTION OF STILES DRIVE AND DODGE ROAD, 88.7
CE0365'METERS (291.0 FT) SOUTHWEST OF THE CENTER OF THE DRIVE, 19.4 METERS
CE0365'(63.5 FT) EAST OF A FENCE CORNER, 11.4 METERS (37.3 FT) NORTHEAST
CE0365'OF THE NEAR RAIL OF THE SOUTHERN PACIFIC RAILROAD, 9.6 METERS
CE0365'(31.4 FT) SOUTHEAST OF THE CENTER OF THE ROAD AND 1.8 METERS
CE0365'(6.0 FT) SOUTHWEST OF A UTILITY POLE WITH A GUY WIRE.  NOTE=ACCESS
CE0365'TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.
CE0365'THE MARK IS 0.5 METERS  NE FROM A WITNESS POST.
CE0365
CE0365                          STATION RECOVERY (1993)
CE0365
CE0365'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993
CE0365'IN EL PASO, AT THE INTERSECTION OF STILES DRIVE AND DODGE ROAD, 88.7 M
CE0365'(291.0 FT) SOUTHWEST OF THE CENTERLINE OF THE DRIVE, 31.4 M
CE0365'(103.0 FT) NORTHEAST OF THE CENTER OF AN ENTRANCE TO THE MONTGOMERY
CE0365'WARD SERVICE CENTER PARKING LOT AT 206 DODGE ROAD, 8.2 M (26.9 FT)
CE0365'SOUTHEAST OF THE CENTER OF THE ROAD, 2.9 M (9.5 FT) NORTHEAST OF A
CE0365'GATE SWING POST, AND 0.9 M (3.0 FT) SOUTHEAST OF A CHAIN-LINK FENCE.
CE0365'NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.
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CD1076 ***********************************************************************
 CD1076  FBN          -  This is a Federal Base Network Control Station.
 CD1076  DESIGNATION  -  ACALA
 CD1076  PID          -  CD1076
 CD1076  STATE/COUNTY-  TX/HUDSPETH
 CD1076  COUNTRY      -  US
 CD1076  USGS QUAD    -  ACALA (1972)
 CD1076
 CD1076                        *CURRENT SURVEY CONTROL
 CD1076  ______________________________________________________________________
 CD1076* NAD 83(2011) POSITION- 31 21 34.40495(N) 105 53 06.93831(W)   ADJUSTED
 CD1076* NAD 83(2011) ELLIP HT-  1152.664 (meters)        (06/27/12)   ADJUSTED
 CD1076* NAD 83(2011) EPOCH   -  2010.00
 CD1076* NAVD 88 ORTHO HEIGHT -  1176.9   (meters)     3861.    (feet) GPS OBS
 CD1076  ______________________________________________________________________
 CD1076  NAVD 88 orthometric height was determined with geoid model    GEOID99
 CD1076  GEOID HEIGHT    -        -24.125 (meters)                     GEOID99
 CD1076  GEOID HEIGHT    -        -24.224 (meters)                     GEOID18
 CD1076  NAD 83(2011) X  - -1,492,368.808 (meters)                     COMP
 CD1076  NAD 83(2011) Y  - -5,244,121.200 (meters)                     COMP
 CD1076  NAD 83(2011) Z  -  3,300,599.695 (meters)                     COMP
 CD1076  LAPLACE CORR    -          2.23  (seconds)                    DEFLEC18
 CD1076
 CD1076  Network accuracy estimates per FGDC Geospatial Positioning Accuracy
 CD1076  Standards:
 CD1076         FGDC (95% conf, cm)     Standard deviation (cm)     CorrNE
 CD1076            Horiz  Ellip          SD_N   SD_E   SD_h      (unitless)
 CD1076  ------------------------------------------------------------------
 CD1076  NETWORK    0.58   1.33          0.23   0.24   0.68     -0.08519394
 CD1076  ------------------------------------------------------------------
 CD1076  Click here for local accuracies and other accuracy information.
 CD1076
 CD1076
 CD1076.The horizontal coordinates were established by GPS observations
 CD1076.and adjusted by the National Geodetic Survey in June 2012.
 CD1076
 CD1076.NAD 83(2011) refers to NAD 83 coordinates where the reference frame has
 CD1076.been affixed to the stable North American tectonic plate. See
 CD1076.NA2011 for more information.
 CD1076
 CD1076.The horizontal coordinates are valid at the epoch date displayed above
 CD1076.which is a decimal equivalence of Year/Month/Day.
 CD1076
 CD1076.The orthometric height was determined by GPS observations and a
 CD1076.high-resolution geoid model.
 CD1076
 CD1076.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD1076.GEOID18 height accuracy estimate available here.
 CD1076
 CD1076.Click here to see if photographs exist for this station.
 CD1076
 CD1076.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 CD1076
 CD1076.The Laplace correction was computed from DEFLEC18 derived deflections.
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CD1076
CD1076.The ellipsoidal height was determined by GPS observations
CD1076.and is referenced to NAD 83.
CD1076
CD1076. The following values were computed from the NAD 83(2011) position.
CD1076
CD1076;                    North         East      Units Scale Factor Converg.
CD1076;SPC TX C     - 3,200,844.858   172,038.624   MT  0.99990121   -2 51 34.5
CD1076;SPC TX C     -10,501,438.50    564,430.05   sFT  0.99990121   -2 51 34.5
CD1076;UTM  13      - 3,469,789.494   415,804.867   MT  0.99968743   -0 27 38.6
CD1076
CD1076!             -  Elev Factor  x  Scale Factor =   Combined Factor
CD1076!SPC TX C     -   0.99981903  x   0.99990121  =   0.99972026
CD1076!UTM  13      -   0.99981903  x   0.99968743  =   0.99950652
CD1076
CD1076:                Primary Azimuth Mark                     Grid Az
CD1076:SPC TX C     -  ACALA AZ MK                           208 04 49.5
CD1076:UTM  13      -  ACALA AZ MK                           205 40 53.6
CD1076
CD1076_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ1580469789(NAD 83)
CD1076
CD1076|-----------------------------------------------------------------------|
CD1076| PID    Reference Object                    Distance      Geod. Az   |
CD1076|                                                          dddmmss.s |
CD1076| CH7795 ACALA RM 2                          16.260 METERS 01014      |
CD1076| CH7793 ACALA AZ MK                                       2051315.0 |
CD1076| CH7794 ACALA RM 1                          21.931 METERS 28151      |
CD1076|-----------------------------------------------------------------------|
CD1076
CD1076                          SUPERSEDED SURVEY CONTROL
CD1076
CD1076  NAD 83(2007)-  31 21 34.40465(N)    105 53 06.93919(W) AD(2002.00) 0
CD1076  ELLIP H (02/10/07) 1152.679  (m)                       GP(2002.00)
CD1076  ELLIP H (05/01/00) 1152.709  (m)                       GP(       ) 3 1
CD1076  NAD 83(1993)-  31 21 34.40299(N)    105 53 06.93976(W) AD(       ) A
CD1076  ELLIP H (05/12/97) 1152.866  (m)                       GP(       ) 1 1
CD1076  NAD 83(1993)-  31 21 34.40379(N)    105 53 06.93860(W) AD(       ) A
CD1076  ELLIP H (01/13/94) 1152.815  (m)                       GP(       ) 1 1
CD1076  NAD 83(1986)-  31 21 34.41874(N)    105 53 06.93141(W) AD(       ) 1
CD1076  NAD 27      -  31 21 33.97100(N)    105 53 05.04100(W) AD(       ) 1
CD1076  NAVD 88 (05/12/97) 1177.0    (m)  GEOID96 model used   GPS OBS
CD1076  NAVD 88 (01/13/94) 1176.7    (m)  GEOID93 model used   GPS OBS
CD1076
CD1076.Superseded values are not recommended for survey control.
CD1076
CD1076.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CD1076.See file dsdata.pdf to determine how the superseded data were derived.
CD1076
CD1076_MARKER: DS = TRIANGULATION STATION DISK
CD1076_SETTING: 17 = SET INTO TOP OF METAL PIPE DRIVEN INTO GROUND
CD1076_STAMPING: ACALA 1934
CD1076_MARK LOGO: CGS
CD1076_MAGNETIC: I = MARKER IS A STEEL ROD
CD1076_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
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CD1076_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
CD1076+SATELLITE: SATELLITE OBSERVATIONS - September 05, 2002
CD1076
CD1076  HISTORY     - Date     Condition        Report By
CD1076  HISTORY     - 1934     MONUMENTED       CGS
CD1076  HISTORY     - 1934     GOOD             CGS
CD1076  HISTORY     - 1936     GOOD             CGS
CD1076  HISTORY     - 1972     GOOD             USGS
CD1076  HISTORY     - 19930222 GOOD             NGS
CD1076  HISTORY     - 19980225 GOOD             NGS
CD1076  HISTORY     - 20020905 GOOD             JCLS
CD1076
CD1076                          STATION DESCRIPTION
CD1076
CD1076'DESCRIBED BY COAST AND GEODETIC SURVEY 1934 (WRP)
CD1076'STATION IS ABOUT 5 MILES NW OF THE FORT HANCOCK RAILROAD
CD1076'STATION AND 2-1/2 MILES NE OF THE C.C. STAPLETON STORE AT
CD1076'ACALA ON U.S. HIGHWAY 80.  IT IS ON THE HIGHEST POINT OF A DETACHED
CD1076'MESA WHICH HAS WHITE CHALK RIMS ON THE N, E, AND SE.  THE W
CD1076'SIDE OF THE MESA IS COVERED WITH SAND AND SLOPES GRADUALLY
CD1076'TO THE W.
CD1076'
CD1076'SURFACE STATION, AND REFERENCE MARKS ARE STANDARD DISKS SET IN
CD1076'THE TOPS OF IRON PIPES.
CD1076'
CD1076'UNDERGROUND STATION, AND AZIMUTH MARKS ARE STANDARD DISKS
CD1076'SET IN CONCRETE.
CD1076'
CD1076'THE AZIMUTH MARK IS ABOUT 1 MILE S OF THE STATION AND IS ABOUT 75
CD1076'FEET TO THE W OF A GRAVEL RIDGE.
CD1076'
CD1076'THE STATION IS REACHED FROM FORT HANCOCK ON U.S. HIGHWAY
CD1076'80 BY GOING NW ON U.S. HIGHWAY 80, 4.6 MILES TO POINT WHERE
CD1076'A GRAVELED ROAD TURNS RIGHT AT A POINT 0.1 MILE E OF THE ACALA
CD1076'POST OFFICE.  LEAVE THE HIGHWAY HERE AND FOLLOW MAIN-GRAVELED
CD1076'ROAD N AND E 0.95 MILE TO A FORKS.  TAKE LEFT FORK STRAIGHT
CD1076'AHEAD 0.15 MILE TO RAILROAD TRACKS.  CROSS THE TRACKS TO THE
CD1076'NW OF A SMALL RAILROAD BRIDGE OVER A WASH AND PASS THROUGH A
CD1076'WIRE GATE.  (THERE IS A LUMBER GATE IN THIS SAME FENCE LINE
CD1076'BUT THE ROUTE THROUGH THE WIRE GATE IS THE BETTER BECAUSE
CD1076'IT IS LESS SANDY.) FROM THE WIRE GATE FOLLOW THE OLD ROAD N
CD1076'0.85 MILE TO SEVERAL SMALL GRAVEL KNOLLS AND RIDGES.  THIS
CD1076'IS AS FAR AS A TRUCK CAN BE DRIVEN.  FROM THIS POINT PACK N
CD1076'TO THE TOP OF THE HIGHEST HILL WHICH CAN BE SEEN FROM
CD1076'THE TRUCK.  THE DISTANCE IS ABOUT 1 MILE AND IT IS ABOUT A
CD1076'HALF-HOUR PACK.
CD1076'
CD1076'A 4-FOOT STAND WAS ERECTED.
CD1076
CD1076                          STATION RECOVERY (1934)
CD1076
CD1076'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1934
CD1076'RECOVERED IN GOOD CONDITION.
CD1076
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CD1076                          STATION RECOVERY (1936)
CD1076
CD1076'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1936 (WRP)
CD1076'STATION AND ALL MARKS RECOVERED IN EXCELLENT CONDITION.
CD1076'
CD1076'STATION IS ON THE HIGHEST POINT OF A LOW HILL, WHICH IS SANDY
CD1076'AND SLOPES GENTLY TO THE S AND SW WHILE THE E AND SE SIDES
CD1076'OF THE HILL ARE CHALK BLUFFS.  THESE CHALK BLUFFS ARE ABOUT
CD1076'A HALF MILE NW OF A LARGE WASH, WHICH EXTENDS IN A NE AND SW
CD1076'DIRECTION.  MARK IS 15 FEET NW OF THE EDGE OF THE CHALK BLUFF,
CD1076'AND PROJECTS 12 INCHES.
CD1076'
CD1076'REFERENCE MARK NO. 1 PROJECTS 8 INCHES.
CD1076'
CD1076'REFERENCE MARK NO. 2 PROJECTS 14 INCHES.
CD1076'
CD1076'THE AZIMUTH MARK PROJECTS 4 INCHES AND IS AT THE NW CORNER
CD1076'OF A GROUP OF GRAVEL HILLS, WHICH ARE ABOUT A HALF MILE N OF
CD1076'THE SOUTHERN PACIFIC RAILROAD.
CD1076'
CD1076'TO REACH THE STATION FROM THE C.C. STAPLETON STORE ON U.S.
CD1076'HIGHWAY 80, IN THE SMALL TOWN OF ACALA, GO SE ON U.S. HIGHWAY
CD1076'80, 0.1 MILE TO A GRAVEL ROAD ON THE LEFT.  HERE TURN LEFT, LEAVE
CD1076'HIGHWAY, AND FOLLOW GRAVEL ROAD E AND NE 1.2 MILES TO THE
CD1076'SOUTHERN PACIFIC RAILROAD TRACKS.  CROSS TRACKS, PASS THROUGH
CD1076'GATE IN RIGHT-OF-WAY FENCE, TAKE RIGHT FORK 50 FEET, AFTER
CD1076'PASSING THROUGH GATE, AND GO NE ON TRACK ROAD 0.15 MILE TO
CD1076'TELEPHONE LINE.  TURN LEFT AND GO N ALONG TELEPHONE LINE
CD1076'0.05 MILE TO A FORK.  HERE TAKE RIGHT FORK, LEAVE TELEPHONE
CD1076'LINE AND GO N AND E 0.6 MILE TO THE NW TOE OF THE GRAVEL
CD1076'HILLS AND END OF TRUCK TRAVEL.  FROM THIS POINT PACK NNE
CD1076'ACROSS SANDY COUNTRY ABOUT A MILE TO TOP OF HILL AND STATION.
CD1076'ABOUT A 20-MINUTE PACK.
CD1076'
CD1076'NOTE--THE AZIMUTH IS AT THE END OF TRUCK TRAVEL.
CD1076'
CD1076'A 4-FOOT STAND WILL CLEAR ALL LINES FROM THIS STATION.
CD1076
CD1076                          STATION RECOVERY (1972)
CD1076
CD1076'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1972 (JTD)
CD1076'STATION MARK FOUND IN GOOD CONDITION.
CD1076'
CD1076'REFERENCE MARKS HAVE BEEN DESTROYED.
CD1076'
CD1076'STATION REACHED BY HELICOPTER.
CD1076
CD1076                          STATION RECOVERY (1993)
CD1076
CD1076'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993
CD1076'STATION IS LOCATED ABOUT 75 KM (46.60 MI) SOUTHEAST OF EL PASO, 12 KM
CD1076'(7.45 MI) NORTHWEST OF FORT HANCOCK, 6 KM (3.70 MI) NORTH OF ACALA,
CD1076'ON A LOW EAST-WEST RIDGE.  AREA AROUND STATION HAS BEEN GRADED OFF,
CD1076'LEAVING STATION ON A NARROW 1.5 METERHIGH BY ABOUT 10 X 40 METERLONG
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CD1076'DIRT ISLAND.  AREA IS A DUMPING GROUND FOR LARGE CONCRETE POSTS USED
CD1076'TO SUPPORT HIGHWAY SIGNS.  OWNERSHIP--STATE OF TEXAS.
CD1076'TO REACH FROM THE OVERPASS AT THE JUNCTION OF INTERSTATE HIGHWAY 10
CD1076'AND ACALA ROAD (EXIT 68), GO NORTH ON PAVEMENT FOR 0.08 KM (0.05 MI)
CD1076'TO A CATTLE GUARD AT PAVEMNENT END.  CONTINUE AHEAD, NORTHERLY, ON
CD1076'GRADED ROAD FOR 1.75 KM (1.10 MI) TO A NARROW ROAD RIGHT JUST PAST
CD1076'TOP OF GRADE.  TURN RIGHT, NORTHEAST, ON NARROW ROAD FOR 0.11 KM
CD1076'(0.05 MI) TO A WIDE AREA AT DUMPING GROUND AND STATION ON THE RIGHT.
CD1076'STATION MARK IS SET IN CONCRETE-FILLED STEEL PIPE PROJECTING 25 CM
CD1076'ABOVE GROUND.  IT IS 1.3 M (4.3 FT) WEST OF A FIBERGLASS WITNESS
CD1076'POST, 29 M (95.1 FT) SOUTHEAST OF THE ROAD CENTER, 3.5 M (11.5 FT)
CD1076'NORTH OF THE SOUTH EDGE OF THE HILL AND 18 M (59.1 FT) SOUTHWEST OF
CD1076'THE NORTHEAST END OF THE HILL.
CD1076
CD1076                          STATION RECOVERY (1998)
CD1076
CD1076'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1998 (CSM)
CD1076'RECOVERED AS DESCRIBED WITH THESE ADDITIONS.  BY R.G.  HAYES 1.3 M
CD1076'(4.3 FT) WEST-SOUTHWEST OF A FIBERGLASS WITNESS POST, AND THE STATION
CD1076'PROJECTS ABOUT 25-CM ABOVE THE GROUND SURFACE.
CD1076
CD1076                          STATION RECOVERY (2002)
CD1076
CD1076'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2002
CD1076'RECOVERED IN GOOD CONDITION.
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CW0902 ***********************************************************************
 CW0902  DESIGNATION -  BM
 CW0902  PID         -  CW0902
 CW0902  STATE/COUNTY-  NM/OTERO
 CW0902  COUNTRY     -  US
 CW0902  USGS QUAD   -  ALAMO MOUNTAIN (1975)
 CW0902
 CW0902                        *CURRENT SURVEY CONTROL
 CW0902
 CW0902* NAD 83(1992) POSITION- 32 00 05.40226(N) 105 38 33.02988(W)   ADJUSTED
 CW0902* NAVD 88 ORTHO HEIGHT -  1561.29  (+/-2cm)     5122.3   (feet) VERTCON
 CW0902
 CW0902  GEOID HEIGHT    -        -22.499 (meters)                     GEOID18
 CW0902  LAPLACE CORR    -          0.71  (seconds)                   DEFLEC18
 CW0902  HORZ ORDER      -  SECOND
 CW0902  VERT ORDER      -  THIRD ? (See Below)
 CW0902
 CW0902.The horizontal coordinates were established by classical geodetic methods
 CW0902.and adjusted by the National Geodetic Survey in December 1993.
 CW0902.
 CW0902.The NAVD 88 height was computed by applying the VERTCON shift value to
 CW0902.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
 CW0902
 CW0902.Significant digits in the geoid height do not necessarily reflect accuracy.
 CW0902.GEOID18 height accuracy estimate available here.
 CW0902
 CW0902.The vertical order pertains to the NGVD 29 superseded value.
 CW0902
 CW0902.Click here to see if photographs exist for this station.
 CW0902
 CW0902.The Laplace correction was computed from DEFLEC18 derived deflections.
 CW0902
 CW0902. The following values were computed from the NAD 83(1992) position.
 CW0902
 CW0902;                    North         East     Units Scale Factor Converg.
 CW0902;SPC NM C     -   111,194.663   557,397.599   MT  0.99994062   +0 19 19.0
 CW0902;SPC NM C     -   364,811.16  1,828,728.62   sFT  0.99994062   +0 19 19.0
 CW0902;SPC TX C     - 3,270,813.308   198,500.990   MT  1.00003388   -2 44 04.3
 CW0902;SPC TX C     -10,730,993.33    651,248.66   sFT  1.00003388   -2 44 04.3
 CW0902;UTM  13      - 3,540,782.356   439,312.084   MT  0.99964542   -0 20 25.8
 CW0902
 CW0902!             -  Elev Factor  x  Scale Factor =   Combined Factor
 CW0902!SPC NM C     -   0.99975844  x   0.99994062  =   0.99969908
 CW0902!SPC TX C     -   0.99975844  x   1.00003388  =   0.99979231
 CW0902!UTM  13      -   0.99975844  x   0.99964542  =   0.99940395
 CW0902
 CW0902:                Primary Azimuth Mark                     Grid Az
 CW0902:SPC NM C     -  BM AZ MK                                 154 23 43.8
 CW0902:SPC TX C     -  BM AZ MK                                 157 27 07.1
 CW0902:UTM  13      -  BM AZ MK                                 155 03 28.6
 CW0902
 CW0902_U.S. NATIONAL GRID SPATIAL ADDRESS: 13SDR3931240782(NAD 83)
 CW0902
 CW0902|----------------------------------------------------------------------|
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CW0902| PID    Reference Object                          Distance      Geod. Az  |
CW0902|                                                                dddmmss.s |
CW0902| CH7959 RM 1                                      16.030 METERS 09130     |
CW0902| CH7958 BM AZ MK                                                1544302.8 |
CW0902| CH8387 RM 2                                      15.113 METERS 29830     |
CW0902|--------------------------------------------------------------------------|
CW0902
CW0902                          SUPERSEDED SURVEY CONTROL
CW0902
CW0902  NAD 83(1986)-  32 00 05.40506(N)    105 38 33.02716(W) AD(       ) 2
CW0902  NAD 27      -  32 00 05.01800(N)    105 38 31.14200(W) AD(       ) 2
CW0902  NGVD 29           1560.61   (m)          5120.1    (f) LEVELING    3
CW0902
CW0902.Superseded values are not recommended for survey control.
CW0902
CW0902.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CW0902.See file dsdata.pdf to determine how the superseded data were derived.
CW0902
CW0902_MARKER: P = PIPE CAP
CW0902_SETTING: 0 = UNSPECIFIED SETTING
CW0902
CW0902  HISTORY     - Date     Condition        Report By
CW0902  HISTORY     - 1943     MONUMENTED       USGS
CW0902
CW0902                           STATION DESCRIPTION
CW0902
CW0902'DESCRIBED BY US GEOLOGICAL SURVEY 1943 (EHB)
CW0902'STATION IS ABOUT 300 FEET NE OF A FENCELINE.  IT IS A STANDARD
CW0902'U.S. GEOLOGICAL SURVEY CAP WHICH IS RIVETED ON THE TOP OF A
CW0902'3-INCH IRON PIPE PROJECTING 3 FEET ABOVE THE GROUND.  PIPE
CW0902'HAS BEEN REINFORCED WITH CONCRETE.  NO STAMPING WAS VISIBLE
CW0902'ON THE MARK.
CW0902'
CW0902'REFERENCE MARK 1 IS A BRONZE REFERENCE DISK SET IN A BURIED
CW0902'BOULDER FLUSH WITH GROUND.  STAMPED USGS BM 1943.
CW0902'
CW0902'REFERENCE MARK 2 IS A BRONZE REFERENCE DISK SET IN A BURIED BOULDE
CW0902'FLUSH WITH GROUND.  STAMPED USGS BM 1943.
CW0902'
CW0902'AZIMUTH MARK IS A BRONZE DISK SET IN A BURIED BOULDER PROJECTING
CW0902'3 INCHES ABOVE GROUND.  STAMPED USGS BM 1943.
CW0902'
CW0902'TO REACH STATION FROM THE POW WOW HIGHWAY CAMP ON U.S. HIGHWAY
CW0902'62, GO N ON GRAVEL ROAD 7.1 MILES TO ENTRANCE TO HELMS RANCH.
CW0902'CONTINUE N FOR 1.0 MILE TO A ROAD LEADING NE.  KEEP STRAIGHT
CW0902'AHEAD ON MAIN TRAVELED ROAD FOR 4.2 MILES TO THE BOUNDARY
CW0902'FENCE AND A CATTLEGUARD.  AT THIS POINT TURN E ALONG N SIDE
CW0902'OF BOUNDARY FENCE FOR 0.8 MILE TO A FENCE AND A GATE ON THE
CW0902'S IN THE BOUNDARY FENCE.  PASS THROUGH GATE AND CONTINUE ALONG
CW0902'THE S SIDE OF THE BOUNDARY FENCE FOR ABOUT 6.5 MILES TO
CW0902'STATION BOUNDARY MONUMENT 12.  CONTINUE E FOR 0.3 MILE TO A
CW0902'GATE AND A FENCELINE RUNNING N AND S.  PASS THROUGH GATE AND
CW0902'FOLLOW THE MAIN ROAD FOR 2.7 MILES NE TO A ROAD RUNNING N, TAKE
CW0902'RIGHT FORK AND FOLLOW FOR 2.9 MILES TO FORKS, TAKE RIGHT
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CW0902'FORK AND PROCEED 0.9 MILE TO A ROAD RUNNING N TO A RANCH
CW0902'HOUSE.  TURN RIGHT HERE AND PROCEED IN A SE DIRECTION FOR
CW0902'2.5 MILES TO A FENCELINE.  ROAD TURNS LEFT HERE FOR 0.1 MILE TO
CW0902'A GATE, GO THROUGH GATE AND FOLLOW THE ROAD E FOR 0.3 MILE
CW0902'TO WHERE IT PASSES OVER A LOW RIDGE.  STATION IS 300 FEET N
CW0902'OF THIS POINT AND CAN BE SEEN FROM THE ROAD.
CW0902'
CW0902'HEIGHT OF LIGHT ABOVE STATION MARK - 1 METER.
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AF9910 ***********************************************************************
 AF9910  DESIGNATION -  BM 24 H
 AF9910  PID         -  AF9910
 AF9910  STATE/COUNTY-  TX/HUDSPETH
 AF9910  COUNTRY     -  US
 AF9910  USGS QUAD   -  TEPEE BUTTE SW (1978)
 AF9910
 AF9910                        *CURRENT SURVEY CONTROL
 AF9910  ______________________________________________________________________
 AF9910* NAD 83(1993) POSITION- 31 30 36.60720(N) 105 42 59.73974(W)   ADJUSTED
 AF9910* NAVD 88 ORTHO HEIGHT -  1538.23  (+/-2cm)     5046.7   (feet) VERTCON
 AF9910  ______________________________________________________________________
 AF9910  GEOID HEIGHT    -        -23.308 (meters)                    GEOID18
 AF9910  LAPLACE CORR    -          4.09  (seconds)                   DEFLEC18
 AF9910  HORZ ORDER      -  THIRD
 AF9910  VERT ORDER      -  THIRD ? (See Below)
 AF9910
 AF9910.The horizontal coordinates were established by classical geodetic methods
 AF9910.and adjusted by the National Geodetic Survey in July 1998.
 AF9910.
 AF9910.The NAVD 88 height was computed by applying the VERTCON shift value to
 AF9910.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
 AF9910
 AF9910.Significant digits in the geoid height do not necessarily reflect accuracy.
 AF9910.GEOID18 height accuracy estimate available here.
 AF9910
 AF9910.The vertical order pertains to the NGVD 29 superseded value.
 AF9910
 AF9910.Click here to see if photographs exist for this station.
 AF9910
 AF9910.The Laplace correction was computed from DEFLEC18 derived deflections.
 AF9910
 AF9910. The following values were computed from the NAD 83(1993) position.
 AF9910
 AF9910;                    North         East     Units Scale Factor Converg.
 AF9910;SPC TX C     - 3,216,734.833   188,872.989   MT  0.99992104   -2 46 21.7
 AF9910;SPC TX C     -10,553,570.86    619,660.80   sFT  0.99992104   -2 46 21.7
 AF9910;UTM  13      - 3,486,366.080   431,955.657   MT  0.99965710   -0 22 28.4
 AF9910
 AF9910!             -  Elev Factor  x  Scale Factor =   Combined Factor
 AF9910!SPC TX C     -   0.99976217  x   0.99992104  =   0.99968323
 AF9910!UTM  13      -   0.99976217  x   0.99965710  =   0.99941936
 AF9910
 AF9910_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ3195586366(NAD 83)
 AF9910
 AF9910                          SUPERSEDED SURVEY CONTROL
 AF9910
 AF9910  NGVD 29            1537.54    (m)          5044.4    (f) LEVELING    3
 AF9910
 AF9910.Superseded values are not recommended for survey control.
 AF9910
 AF9910.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AF9910.See file dsdata.pdf to determine how the superseded data were derived.
 AF9910
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 AF9910_MARKER: DB = BENCH MARK DISK
 AF9910
 AF9910  HISTORY     - Date     Condition        Report By
 AF9910  HISTORY     - 1940     MONUMENTED       USGS
 AF9910
 AF9910                          STATION DESCRIPTION
 AF9910
 AF9910'DESCRIBED BY US GEOLOGICAL SURVEY 1940
 AF9910'LEE MOORE RANCH, 1.0 MI. S. AND 1.0 MI. E. OF, 4.1 MI. S. AND 0.7 MI.
 AF9910'W. FROM IRON TANK, 1.5 MI. SE. ALONG RD. AND 0.7 MI. W. FROM CORNER OF
 AF9910'FENCE S. AND E., 0.7 MI. SW. OF USGS BM --23 H 1940---.
 AF9910'STATION MARK--STANDARD USGS BM TABLET STAMPED---24 H 1940 5044---. SET
 AF9910'IN CONCRETE POST.
1        National Geodetic Survey,   Retrieval Date = NOVEMBER 22, 2019
 CD0410 ***********************************************************************
 CD0410  DESIGNATION -  BULT 54
 CD0410  PID         -  CD0410
 CD0410  STATE/COUNTY-  TX/HUDSPETH
 CD0410  COUNTRY     -  US
 CD0410  USGS QUAD   -  BLACK MOUNTAINS NW (1984)
 CD0410
 CD0410                        *CURRENT SURVEY CONTROL
 CD0410  ______________________________________________________________________
 CD0410* NAD 83(1986) POSITION- 31 44 48.     (N) 105 13 58.     (W)    SCALED
 CD0410* NAVD 88 ORTHO HEIGHT -  1228.881 (meters)     4031.75   (feet) ADJUSTED
 CD0410  ______________________________________________________________________
 CD0410  GEOID HEIGHT    -        -22.666 (meters)                      GEOID18
 CD0410  DYNAMIC HEIGHT  -       1227.047 (meters)     4025.74   (feet) COMP
 CD0410  MODELED GRAVITY -    979,104.4   (mgal)                        NAVD 88
 CD0410
 CD0410  VERT ORDER      -  FIRST     CLASS I
 CD0410
 CD0410.The horizontal coordinates were scaled from a map and have
 CD0410.an estimated accuracy of +/- 6 seconds.
 CD0410.
 CD0410.The orthometric height was determined by differential leveling and
 CD0410.adjusted by the NATIONAL GEODETIC SURVEY
 CD0410.in June 1991.
 CD0410
 CD0410.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0410.GEOID18 height accuracy estimate available here.
 CD0410
 CD0410.Click here to see if photographs exist for this station.
 CD0410
 CD0410.The dynamic height is computed by dividing the NAVD 88
 CD0410.geopotential number by the normal gravity value computed on the
 CD0410.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0410.degrees latitude (g = 980.6199 gals.).
 CD0410
 CD0410.The modeled gravity was interpolated from observed gravity values.
 CD0410
 CD0410;                   North         East     Units  Estimated Accuracy
 CD0410;SPC TX C     - 3,240,810.      235,930.      MT  (+/- 180 meters Scaled)
 CD0410
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CD0410_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDR779123(NAD 83)
CD0410
CD0410                           SUPERSEDED SURVEY CONTROL
CD0410
CD0410  NGVD 29 (??/??/92) 1228.362   (m)          4030.05    (f) ADJ UNCH    1 1
CD0410
CD0410.Superseded values are not recommended for survey control.
CD0410
CD0410.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CD0410.See file dsdata.pdf to determine how the superseded data were derived.
CD0410
CD0410_MARKER: X = CHISELED CROSS
CD0410_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
CD0410_STAMPING: B U L T 54
CD0410_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
CD0410+STABILITY: SURFACE MOTION
CD0410
CD0410  HISTORY      - Date      Condition        Report By
CD0410  HISTORY      - UNK       MONUMENTED       RBNF
CD0410  HISTORY      - 1958      GOOD             CGS
CD0410  HISTORY      - 1977      GOOD             NGS
CD0410
CD0410                            STATION DESCRIPTION
CD0410
CD0410'DESCRIBED BY COAST AND GEODETIC SURVEY 1958
CD0410'70.4 MI E FROM EL PASO.
CD0410'ABOUT 70.4 MILES EAST ALONG U.S. HIGHWAYS 62 AND 180 FROM THE JUNCTION
CD0410'OF LOOP 16 AT EL PASO, 75 FEET SOUTH OF THE CENTER LINE OF THE
CD0410'HIGHWAY, 9 FEET SOUTH OF A FENCE, 1 1/2 FEET EAST OF A CONCRETE
CD0410'WITNESS POST, ABOUT LEVEL WITH THE HIGHWAY, AND IN THE TOP OF A
CD0410'CONCRETE POST PROJECTING 8 INCHES.
CD0410
CD0410                           STATION RECOVERY (1977)
CD0410
CD0410'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977
CD0410'32.65 MILES SOUTHWEST ALONG U.S. HIGHWAYS 62 AND 180 FROM THE STATE
CD0410'HIGHWAY MAINTENANCE YARD AT PINE SPRINGS, 1.85 MILES WEST OF THE
CD0410'JUNCTION OF FARM ROAD 1437, 73 FT. SOUTH OF THE CENTER LINE OF THE
CD0410'HIGHWAY, 8.5 FT. SOUTH OF THE RIGHT OF WAY FENCE, NOTE= A SQUARE
CD0410'METAL TABLET WITH A RAISED CROSS WITH THE STAMPING BULT 54 IS IN
CD0410'THE TOP OF THE CONCRETE POST, WITNESS POST IS OF CONCRETE.
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CD0778 ***********************************************************************
 CD0778  DESIGNATION -  D 1394
 CD0778  PID         -  CD0778
 CD0778  STATE/COUNTY-  TX/HUDSPETH
 CD0778  COUNTRY     -  US
 CD0778  USGS QUAD   -  ESPERANZA (1972)
 CD0778
 CD0778                        *CURRENT SURVEY CONTROL
 CD0778
 CD0778* NAD 83(1986) POSITION- 31 10 20.     (N) 105 40 06.     (W)   SCALED
 CD0778* NAVD 88 ORTHO HEIGHT -  1106.907 (meters)     3631.58  (feet) ADJUSTED
 CD0778
 CD0778  GEOID HEIGHT    -        -23.815 (meters)                     GEOID18
 CD0778  DYNAMIC HEIGHT  -       1105.177 (meters)     3625.90  (feet) COMP
 CD0778  MODELED GRAVITY -    979,040.9   (mgal)                       NAVD 88
 CD0778
 CD0778  VERT ORDER      -  FIRST     CLASS II
 CD0778
 CD0778.The horizontal coordinates were scaled from a map and have
 CD0778.an estimated accuracy of +/- 6 seconds.
 CD0778.
 CD0778.The orthometric height was determined by differential leveling and
 CD0778.adjusted by the NATIONAL GEODETIC SURVEY
 CD0778.in June 1991.
 CD0778
 CD0778.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0778.GEOID18 height accuracy estimate available here.
 CD0778
 CD0778.Click here to see if photographs exist for this station.
 CD0778
 CD0778.The dynamic height is computed by dividing the NAVD 88
 CD0778.geopotential number by the normal gravity value computed on the
 CD0778.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0778.degrees latitude (g = 980.6199 gals.).
 CD0778
 CD0778.The modeled gravity was interpolated from observed gravity values.
 CD0778
 CD0778;                    North         East     Units  Estimated Accuracy
 CD0778;SPC TX C     - 3,179,090.      191,660.      MT  (+/- 180 meters Scaled)
 CD0778
 CD0778_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ363488(NAD 83)
 CD0778
 CD0778                           SUPERSEDED SURVEY CONTROL
 CD0778
 CD0778.No superseded survey control is available for this station.
 CD0778
 CD0778_MARKER: I = METAL ROD
 CD0778_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 CD0778_STAMPING: D 1394 1981
 CD0778_MARK LOGO: NGS
 CD0778_PROJECTION: FLUSH
 CD0778_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 CD0778+STABILITY: POSITION/ELEVATION WELL
 CD0778_ROD/PIPE-DEPTH: 7.6  meters
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CD0778
CD0778  HISTORY     - Date     Condition        Report By
CD0778  HISTORY     - 1981     MONUMENTED       NGS
CD0778
CD0778                          STATION DESCRIPTION
CD0778
CD0778'DESCRIBED BY NATIONAL GEODETIC SURVEY 1981
CD0778'32.9 KM (20.45 MI) NW FROM SIERRA BLANCA.
CD0778'6.3 KM (3.9 MI) NORTHWEST ALONG THE SOUTHERN PACIFIC RAILROAD FROM
CD0778'THE RAILROAD STATION IN SIERRA BLANCA, THENCE 0.2 KM (0.1 MI) SOUTH
CD0778'ALONG A GRAVELED ROAD, THENCE 26.5 KM (16.45 MI) NORTHWEST ALONG
CD0778'INTERSTATE HIGHWAY 10, 31.9 METERS (104.5 FT) NORTH OF THE CENTERLINE
CD0778'OF THE WEST BOUND LANES OF THE HIGHWAY AND 26.7 METERS (87.5 FT)
CD0778'NORTH-NORTHWEST OF MILEPOST 87.  NOTE=ACCESS TO THE DATUM POINT
CD0778'IS THROUGH A 5-INCH LOGO CAP.
CD0778'THE MARK IS 0.3 METERS  S FROM  A WITNESS POST AND FENCE
CD0778'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
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CD0538 ***********************************************************************
 CD0538  DESIGNATION -  EAGLE FLAT 2 RM 4
 CD0538  PID         -  CD0538
 CD0538  STATE/COUNTY-  TX/HUDSPETH
 CD0538  COUNTRY     -  US
 CD0538  USGS QUAD   -  GRAYTON LAKE (1963)
 CD0538
 CD0538                        *CURRENT SURVEY CONTROL
 CD0538  ______________________________________________________________________
 CD0538* NAD 83(1986) POSITION- 31 06 26.68   (N) 105 07 43.32   (W)    HD_HELD1
 CD0538* NAVD 88 ORTHO HEIGHT -  1360.631 (meters)     4464.00  (feet) ADJUSTED
 CD0538  ______________________________________________________________________
 CD0538  GEOID HEIGHT    -        -22.871 (meters)                      GEOID18
 CD0538  DYNAMIC HEIGHT  -       1358.463 (meters)     4456.89  (feet) COMP
 CD0538  MODELED GRAVITY -    979,000.2   (mgal)                        NAVD 88
 CD0538
 CD0538  VERT ORDER      -  FIRST     CLASS II
 CD0538
 CD0538.The horizontal coordinates were determined by differentially corrected
 CD0538.hand held GPS observations or other comparable positioning techniques
 CD0538.and have an estimated accuracy of +/- 3 meters.
 CD0538.
 CD0538.The orthometric height was determined by differential leveling and
 CD0538.adjusted by the NATIONAL GEODETIC SURVEY
 CD0538.in June 1991.
 CD0538
 CD0538.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0538.GEOID18 height accuracy estimate available here.
 CD0538
 CD0538.Click here to see if photographs exist for this station.
 CD0538
 CD0538.The dynamic height is computed by dividing the NAVD 88
 CD0538.geopotential number by the normal gravity value computed on the
 CD0538.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0538.degrees latitude (g = 980.6199 gals.).
 CD0538
 CD0538.The modeled gravity was interpolated from observed gravity values.
 CD0538
 CD0538;                    North         East     Units  Estimated Accuracy
 CD0538;SPC TX C     - 3,169,571.4     242,731.2     MT  (+/- 3 meters HH1 GPS)
 CD0538
 CD0538_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ8772741513(NAD 83)
 CD0538
 CD0538                           SUPERSEDED SURVEY CONTROL
 CD0538
 CD0538.No superseded survey control is available for this station.
 CD0538
 CD0538_MARKER: DR = REFERENCE MARK DISK
 CD0538_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 CD0538_STAMPING: EAGLE FLAT 2 NO 4 1963
 CD0538_PROJECTION: PROJECTING 15 CENTIMETERS
 CD0538_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 CD0538+STABILITY: SURFACE MOTION
 CD0538
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CD0538  HISTORY     - Date     Condition        Report By
CD0538  HISTORY     - 1963     MONUMENTED       CGS
CD0538  HISTORY     - 1968     GOOD             CGS
CD0538  HISTORY     - 1981     GOOD             NGS
CD0538
CD0538                          STATION DESCRIPTION
CD0538
CD0538'DESCRIBED BY COAST AND GEODETIC SURVEY 1968
CD0538'14 MI ESE FROM SIERRA BLANCA.
CD0538'ABOUT 14.5 MILES EAST ALONG INTERSTATE 10 AND U.S. HIGHWAY 80 FROM THE
CD0538'JUNCTION OF RANCH ROAD 1111 AND INTERSTATE 10 AND U.S. HIGHWAY 80 IN
CD0538'SIERRA BLANCA, 96 FEET SOUTH OF AN EAST-WEST FENCE LINE, 75 FEET WEST
CD0538'OF A NORTH-SOUTH FENCE LINE, 74.5 FEET SOUTH OF A METAL WITNESS POST
CD0538'WITH A SIGN ATTACHED, AND 72.91 FEET SOUTH OF TRIANGULATION STATION
CD0538'EAGLE FLAT 2 1963.  IT IS SET IN THE TOP OF A 12 INCH SQUARE CONCRETE
CD0538'MONUMENT WHICH PROJECTS ABOUT 6 INCHES ABOVE THE SURFACE OF THE
CD0538'GROUND.
CD0538
CD0538                          STATION RECOVERY (1981)
CD0538
CD0538'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
CD0538'23.3 KM (14.45 MI) SOUTHEASTERLY ALONG THE MISSOURI PACIFIC RAILROAD
CD0538'FROM THE RAILROAD STATION IN SIERRA BLANCA, AT A POWERLINE CROSSING,
CD0538'67.4 METERS (221.0 FT) NORTHEAST OF A UTILITY POLE, 60.0 METERS
CD0538'(197.0 FT) SOUTH OF THE CENTERLINE OF THE EAST BOUND LANES OF
CD0538'INTERSTATE HIGHWAY 10, 28.9 METERS (94.9 FT) WEST-SOUTHWEST OF EAGLE
CD0538'FLAT 2 RM 3, 22.9 METERS (75.0 FT) WEST OF A FENCE AND 22.2 METERS
CD0538'(72.9 FT) SOUTH OF TRIANGULATION STATION EAGLE FLAT 2.
CD0538'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
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CD0535 ***********************************************************************
 CD0535  DESIGNATION -  EAGLE FLAT 2
 CD0535  PID         -  CD0535
 CD0535  STATE/COUNTY-  TX/HUDSPETH
 CD0535  COUNTRY     -  US
 CD0535  USGS QUAD   -  GRAYTON LAKE (1963)
 CD0535
 CD0535                        *CURRENT SURVEY CONTROL
 CD0535  ______________________________________________________________________
 CD0535* NAD 83(1993) POSITION- 31 06 27.38674(N) 105 07 43.12794(W)   ADJUSTED
 CD0535* NAVD 88 ORTHO HEIGHT -  1360.667 (meters)     4464.12  (feet) ADJUSTED
 CD0535  ______________________________________________________________________
 CD0535  GEOID HEIGHT    -        -22.870 (meters)                     GEOID18
 CD0535  LAPLACE CORR    -          1.76  (seconds)                    DEFLEC18
 CD0535  DYNAMIC HEIGHT  -       1358.500 (meters)     4457.01  (feet) COMP
 CD0535  MODELED GRAVITY -    979,000.3   (mgal)                       NAVD 88
 CD0535
 CD0535  HORZ ORDER      -  FIRST
 CD0535  VERT ORDER      -  FIRST     CLASS II
 CD0535
 CD0535.The horizontal coordinates were established by classical geodetic methods
 CD0535.and adjusted by the National Geodetic Survey in February 1996.
 CD0535.
 CD0535.The orthometric height was determined by differential leveling and
 CD0535.adjusted by the NATIONAL GEODETIC SURVEY
 CD0535.in June 1991.
 CD0535
 CD0535.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0535.GEOID18 height accuracy estimate available here.
 CD0535
 CD0535.Click here to see if photographs exist for this station.
 CD0535
 CD0535.The Laplace correction was computed from DEFLEC18 derived deflections.
 CD0535
 CD0535.The dynamic height is computed by dividing the NAVD 88
 CD0535.geopotential number by the normal gravity value computed on the
 CD0535.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0535.degrees latitude (g = 980.6199 gals.).
 CD0535
 CD0535.The modeled gravity was interpolated from observed gravity values.
 CD0535
 CD0535. The following values were computed from the NAD 83(1993) position.
 CD0535
 CD0535;                    North         East      Units Scale Factor Converg.
 CD0535;SPC TX C     - 3,169,592.887   242,737.176   MT  0.99988345   -2 28 11.5
 CD0535;SPC TX C     -10,398,906.00    796,380.22    sFT  0.99988345   -2 28 11.5
 CD0535;UTM  13      - 3,441,534.754   487,732.419   MT  0.99960186   -0 03 59.3
 CD0535
 CD0535!             -  Elev Factor  x  Scale Factor =   Combined Factor
 CD0535!SPC TX C     -   0.99978997  x   0.99988345  =   0.99967344
 CD0535!UTM  13      -   0.99978997  x   0.99960186  =   0.99939191
 CD0535
 CD0535:               Primary Azimuth Mark                    Grid Az
 CD0535:SPC TX C     -  TEXAN                                  289 02 49.1
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CD0535:UTM  13      -  TEXAN                                        286 38 36.9
CD0535
CD0535_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ8773241534(NAD 83)
CD0535
CD0535|----------------------------------------------------------------------|
CD0535| PID    Reference Object                    Distance      Geod. Az   |
CD0535|                                                          dddmmss.s  |
CD0535| CD0534 EAGLE FLAT                          71.570 METERS 01547      |
CD0535| CD0532 EAGLE FLAT AZ MK                   203.304 METERS 08510      |
CD0535| CD0536 EAGLE FLAT 2 AZ MK                 190.292 METERS 10547      |
CD0535| CD0537 EAGLE FLAT 2 RM 3                    22.540 METERS 11228      |
CD0535| CD0538 EAGLE FLAT 2 RM 4                    22.226 METERS 19256      |
CD0535| CD1030 TEXAN                              APPROX.23.8 KM 2863437.6  |
CD0535|----------------------------------------------------------------------|
CD0535
CD0535                          SUPERSEDED SURVEY CONTROL
CD0535
CD0535  NAD 83(1986)-  31 06 27.39116(N)    105 07 43.12309(W) AD(       ) 1
CD0535  NAD 27      -  31 06 26.91974(N)    105 07 41.31910(W) AD(       ) 1
CD0535  NGVD 29            1360.10   (m)          4462.3    (f) LEVELING    3
CD0535
CD0535.Superseded values are not recommended for survey control.
CD0535
CD0535.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CD0535.See file dsdata.pdf to determine how the superseded data were derived.
CD0535
CD0535_MARKER: DS = TRIANGULATION STATION DISK
CD0535_SETTING: 30 = SET IN A LIGHT STRUCTURE
CD0535_SP_SET: MONUMENT
CD0535_STAMPING: EAGLE FLAT 2 1963
CD0535_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
CD0535
CD0535  HISTORY     - Date     Condition        Report By
CD0535  HISTORY     - 1963     MONUMENTED       CGS
CD0535  HISTORY     - 1968     GOOD             CGS
CD0535  HISTORY     - 1968     GOOD             CGS
CD0535  HISTORY     - 1981     GOOD             NGS
CD0535
CD0535                           STATION DESCRIPTION
CD0535
CD0535'DESCRIBED BY COAST AND GEODETIC SURVEY 1963 (SEU)
CD0535'THE STATION IS ABOUT 14 MILES EAST OF SIERRA BLANCA, AND 20
CD0535'MILES WEST OF VAN HORN, ALONG THE SOUTH SIDE OF U.S. HIGHWAY
CD0535'80, AT A TEXAS AND PACIFIC RAILROAD SIDING KNOWN AS EAGLE
CD0535'FLAT, AND ON LAND OWNED BY TEXAS PACIFIC LAND TRUST.
CD0535'
CD0535'TO REACH THE STATION FROM THE JUNCTION OF RANDH ROAD 1111
CD0535'AND U.S. HIGHWAY 80 IN SIERRA BLANCA, GO EASTERLY ON U.S. HIGHWAY
CD0535'80 FOR 14.45 MILES TO STATION ON THE RIGHT.  CONTINUE ON
CD0535'U.S. HIGHWAY 80 FOR 0.1 MILE TO AZIMUTH MARK ON THE RIGHT.
CD0535'
CD0535'STATION MARKS ARE STANDARD DISKS STAMPED EAGLE FLAT 2 1963.
CD0535'THE SURFACE DISK IS SET IN A 10 IN X 10 IN CONCRETE POST
CD0535'WHICH PROJECTS 4 INCHES.  IT IS 63 FEET SOUTH OF THE CENTER
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CD0535'LINE OF THE EAST BOUND TRAFFIC LANE OF U.S. HIGHWAY 80,
CD0535'74 FEET WEST OF A NORTH-SOUTH FENCE LINE, 21 FEET SOUTH
CD0535'OF THE HIGHWAY RIGHT-OF-WAY, AND 1.6 FEET SOUTHEAST OF A
CD0535'METAL WITNESS POST.  THE UNDERGROUND DISK IS SET IN A ROUND
CD0535'CONCRETE POST 8 INCHES IN DIAMETER AND 36 INCHES BELOW THE
CD0535'SURFACE OF THE GROUND.
CD0535'
CD0535'REFERENCE MARK NO. 3, A STANDARD DISK STAMPED EAGLE FLAT 2
CD0535'NO 3 1963, IS SET IN A 10 IN X 10 IN CONCRETE POST WHICH
CD0535'PROJECTS 8 INCHES.  IT IS 72 FEET SOUTH OF THE CENTER LINE
CD0535'OF THE EAST BOUND TRAFFIC LANE OF U.S. HIGHWAY 80, 30 FEET
CD0535'SOUTH OF THE HIGHWAY RIGHT-OF-WAY, AND 1 FOOT WEST OF A
CD0535'NORTH-SOUTH FENCE LINE.
CD0535'
CD0535'REFERENCE MARK NO. 4, A STANDARD DISK STAMPED EAGLE FLAT 2
CD0535'NO 4 1963, IS SET IN A 12 IN X 12 IN CONCRETE POST WHICH
CD0535'PROJECTS 6 INCHES.  IT IS 136 FEET SOUTH OF THE CENTER LINE OF THE
CD0535'EAST BOUND TRAFFIC LANE OF U.S. HIGHWAY 80, 221 FEET NORTHEAST
CD0535'OF A POWER LINE POLE, 94 FEET SOUTH OF THE HIGHWAY RIGHT-OF-WAY
CD0535'LINE, AND 75 FEET WEST OF A NORTH-SOUTH FENCE LINE.
CD0535'
CD0535'AZIMUTH MARK, A STANDARD DISK STAMPED EAGLE FLAT 2 1963,
CD0535'IS SET IN A 10 IN X 10 IN CONCRETE POST WHICH PROJECTS 5
CD0535'INCHES.  IT IS 64 FEET SOUTH OF THE CENTER LINE OF THE EAST
CD0535'BOUND TRAFFIC LANE OF U.S. HIGHWAY 80, 56 FEET NORTH OF THE
CD0535'CENTER OF A TRACK ROAD, 21 FEET SOUTH OF THE SOUTH HIGHWAY
CD0535'RIGHT-OF-WAY LINE, AND 2.3 FEET NORTHEAST OF A METAL WITNESS
CD0535'POST.
CD0535'
CD0535'NOTE--REFERENCE MARKS WERE MEASURED WITH A 5 KG. TAPE TENSION.
CD0535
CD0535                          STATION RECOVERY (1968)
CD0535
CD0535'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1968 (LGB)
CD0535'THE STATION, REFERENCE MARKS 3 AND 4, AND THE AZIMUTH MARK
CD0535'WERE RECOVERED AND FOUND IN GOOD CONDITION.  THE DISTANCE AND
CD0535'DIRECTION TO THE REFERENCE MARKS COMPARED FAVORABLY WITH THE
CD0535'ORIGINAL OBSERVATIONS.
CD0535'
CD0535'THE STATION WAS RECOVERED AS DESCRIBED IN THE 1963
CD0535'DESCRIPTION.  THE ORIGINAL TO REACH IS ADEQUATE.
CD0535'
CD0535'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN
CD0535'14 MILES EAST-SOUTHEAST OF SIERRA BLANCA.
CD0535
CD0535                          STATION RECOVERY (1968)
CD0535
CD0535'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1968
CD0535'14 MI ESE FROM SIERRA BLANCA.
CD0535'ABOUT 14.5 MILES EAST ALONG INTERSTATE 10 AND U.S. HIGHWAY 80 FROM THE
CD0535'JUNCTION OF RANCH ROAD 1111 AND INTERSTATE 10 AND U.S. HIGHWAY 80 IN
CD0535'SIERRA BLANCA, 76.5 FEET SOUTHWEST OF A T-FENCE CORNER, 23 FEET SOUTH
CD0535'OF AN EAST-WEST FENCE LINE, AND 1.5 FEET SOUTHEAST OF A METAL WITNESS
CD0535'POST WITH A SIGN ATTACHED.  IT IS SET IN THE TOP OF A 12 INCH SQUARE
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CD0535'CONCRETE MONUMENT WHICH PROJECTS ABOUT 2 INCHES ABOVE THE SURFACE OF
CD0535'THE GROUND.
CD0535
CD0535                          STATION RECOVERY (1981)
CD0535
CD0535'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
CD0535'23.3 KM (14.45 MI) SOUTHEASTERLY ALONG THE MISSOURI PACIFIC RAILROAD
CD0535'FROM THE RAILROAD STATION IN SIERRA BLANCA, AT A POWERLINE CROSSING,
CD0535'132.6 METERS (435.0 FT) SOUTH OF THE NEAR RAIL , 37.8 METERS (124.0
CD0535'FT) SOUTH OF THE CENTERLINE OF THE EAST BOUND LANES OF INTERSTATE
CD0535'HIGHWAY 10, 22.9 METERS (75.0 FT) WEST OF A FENCE CORNER, 22.2
CD0535'METERS (72.9 FT) NORTH OF EAGLE FLAT 2 RM 4 AND 6.4 METERS (21.0 FT)
CD0535'SOUTH OF A FENCE.
CD0535'THE MARK IS 0.6 METERS  NE FROM A WITNESS POST.
CD0535'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
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CD0397 ***********************************************************************
 CD0397  DESIGNATION -  F 706
 CD0397  PID         -  CD0397
 CD0397  STATE/COUNTY-  TX/HUDSPETH
 CD0397  COUNTRY     -  US
 CD0397  USGS QUAD   -  MICKEY DRAW WEST (1984)
 CD0397
 CD0397                        *CURRENT SURVEY CONTROL
 CD0397
 CD0397* NAD 83(1986) POSITION- 31 45 44.     (N) 105 22 24.     (W)   SCALED
 CD0397* NAVD 88 ORTHO HEIGHT -  1270.892 (meters)     4169.58  (feet) ADJUSTED
 CD0397
 CD0397  GEOID HEIGHT    -        -22.686 (meters)                     GEOID18
 CD0397  DYNAMIC HEIGHT  -       1268.980 (meters)     4163.31  (feet) COMP
 CD0397  MODELED GRAVITY -    979,091.1   (mgal)                       NAVD 88
 CD0397
 CD0397  VERT ORDER      -  FIRST     CLASS I
 CD0397
 CD0397.The horizontal coordinates were scaled from a map and have
 CD0397.an estimated accuracy of +/- 6 seconds.
 CD0397.
 CD0397.The orthometric height was determined by differential leveling and
 CD0397.adjusted by the NATIONAL GEODETIC SURVEY
 CD0397.in June 1991.
 CD0397
 CD0397.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0397.GEOID18 height accuracy estimate available here.
 CD0397
 CD0397.Click here to see if photographs exist for this station.
 CD0397
 CD0397.The dynamic height is computed by dividing the NAVD 88
 CD0397.geopotential number by the normal gravity value computed on the
 CD0397.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0397.degrees latitude (g = 980.6199 gals.).
 CD0397
 CD0397.The modeled gravity was interpolated from observed gravity values.
 CD0397
 CD0397;                    North         East     Units  Estimated Accuracy
 CD0397;SPC TX C     - 3,243,130.      222,710.      MT  (+/- 180 meters Scaled)
 CD0397
 CD0397_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDR646141(NAD 83)
 CD0397
 CD0397                           SUPERSEDED SURVEY CONTROL
 CD0397
 CD0397  NGVD 29 (??/??/92) 1270.352  (m)          4167.81   (f) ADJ UNCH    1 1
 CD0397
 CD0397.Superseded values are not recommended for survey control.
 CD0397
 CD0397.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CD0397.See file dsdata.pdf to determine how the superseded data were derived.
 CD0397
 CD0397_MARKER: DB = BENCH MARK DISK
 CD0397_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 CD0397_STAMPING: F 706 1943
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CD0397_MARK LOGO: CGS
CD0397_PROJECTION: PROJECTING 20 CENTIMETERS
CD0397_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
CD0397+STABILITY: SURFACE MOTION
CD0397
CD0397  HISTORY     - Date     Condition        Report By
CD0397  HISTORY     - 1943     MONUMENTED       CGS
CD0397  HISTORY     - 1958     GOOD             CGS
CD0397  HISTORY     - 1981     GOOD             NGS
CD0397
CD0397                          STATION DESCRIPTION
CD0397
CD0397'DESCRIBED BY COAST AND GEODETIC SURVEY 1958
CD0397'62.15 MI E FROM EL PASO.
CD0397'62.15 MILES ALONG U.S. HIGHWAYS 62 AND 180 FROM THE JUNCTION OF LOOP
CD0397'16 AT EL PASO, 0.75 MILE EAST OF BENCH MARK K 181 DESCRIBED ABOVE, AT
CD0397'A DIRT-ROAD INTERSECTION, 70 FEET SOUTHEAST OF THE CENTER OF THE
CD0397'INTERSECTION, 64 FEET SOUTH OF THE CENTERLINE OF THE HIGHWAY, 32 FEET
CD0397'EAST OF THE CENTERLINE OF THE DIRT ROAD, 50 FEET EAST-NORTHEAST ACROSS
CD0397'THE DIRT ROAD FROM A POWER POLE WITH THREE TRANSFORMERS, ONE FOOT
CD0397'NORTH OF A FENCE CORNER, LEVEL WITH THE HIGHWAY, AND IN THE TOP OF A
CD0397'CONCRETE POST PROJECTING 8 INCHES ABOVE GROUND.
CD0397
CD0397                          STATION RECOVERY (1981)
CD0397
CD0397'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
CD0397'104.2 KM (64.7 MI) EASTERLY ALONG U. S. HIGHWAYS 62 AND 180 (PAISANO
CD0397'DRIVE) FROM ITS JUNCTION WITH INTERSTATE HIGHWAY 10 IN EL PASO,
CD0397'0.4 KM (0.25 MI) WEST OF RANCH ROAD 1111, AT A POWERLINE CROSSING AND
CD0397'A DIRT ROAD LEADING NORTH, 16.2 METERS (53.2 FT) SOUTH-SOUTHWEST
CD0397'OF THE CENTERLINE OF THE HIGHWAY, 15.2 METERS (50.0 FT) EAST OF A
CD0397'UTILITY POLE WITH 3 TRANSFORMERS, 9.8 METERS (32.0 FT) EAST OF THE
CD0397'CENTER OF A WIRE GATE AND 0.3 METER (1.0 FT) NORTH OF A FENCE CORNER.
CD0397'THE MARK IS 0.3 METERS  E FROM A WITNESS POST.
CD0397'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
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CE0170 ************************************************************************
 CE0170  DESIGNATION -  M 180 RESET
 CE0170  PID         -  CE0170
 CE0170  STATE/COUNTY-  TX/EL PASO
 CE0170  COUNTRY     -  US
 CE0170  USGS QUAD   -  HELMS WEST WELL (1995)
 CE0170
 CE0170                        *CURRENT SURVEY CONTROL
 CE0170  ______________________________________________________________________
 CE0170* NAD 83(1986) POSITION- 31 50 00.96   (N) 106 03 36.72   (W)    HD_HELD1
 CE0170* NAVD 88 ORTHO HEIGHT -  1335.398 (meters)     4381.22  (feet) ADJUSTED
 CE0170  ______________________________________________________________________
 CE0170  GEOID HEIGHT    -        -23.266 (meters)                      GEOID18
 CE0170  DYNAMIC HEIGHT  -       1333.370 (meters)     4374.56  (feet) COMP
 CE0170  MODELED GRAVITY -    979,074.5   (mgal)                        NAVD 88
 CE0170
 CE0170  VERT ORDER      -  FIRST     CLASS II
 CE0170
 CE0170.The horizontal coordinates were determined by differentially corrected
 CE0170.hand held GPS observations or other comparable positioning techniques
 CE0170.and have an estimated accuracy of +/- 3 meters.
 CE0170.
 CE0170.The orthometric height was determined by differential leveling and
 CE0170.adjusted by the NATIONAL GEODETIC SURVEY
 CE0170.in June 1991.
 CE0170
 CE0170.Significant digits in the geoid height do not necessarily reflect accuracy.
 CE0170.GEOID18 height accuracy estimate available here.
 CE0170
 CE0170.Click here to see if photographs exist for this station.
 CE0170
 CE0170.The dynamic height is computed by dividing the NAVD 88
 CE0170.geopotential number by the normal gravity value computed on the
 CE0170.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CE0170.degrees latitude (g = 980.6199 gals.).
 CE0170
 CE0170.The modeled gravity was interpolated from observed gravity values.
 CE0170
 CE0170;                    North         East     Units  Estimated Accuracy
 CE0170;SPC TX C     - 3,254,177.1     158,121.8     MT  (+/- 3 meters HH1 GPS)
 CE0170
 CE0170_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RCR9967522481(NAD 83)
 CE0170
 CE0170                           SUPERSEDED SURVEY CONTROL
 CE0170
 CE0170.No superseded survey control is available for this station.
 CE0170
 CE0170_MARKER: DB = BENCH MARK DISK
 CE0170_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 CE0170_STAMPING: M 180 RESET 1954
 CE0170_MARK LOGO: CGS
 CE0170_PROJECTION: PROJECTING 10 CENTIMETERS
 CE0170_MAGNETIC: N = NO MAGNETIC MATERIAL
 CE0170_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
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CE0170+STABILITY: SURFACE MOTION
CE0170_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
CE0170+SATELLITE: SATELLITE OBSERVATIONS - December 11, 1992
CE0170
CE0170  HISTORY     - Date     Condition        Report By
CE0170  HISTORY     - 1954     MONUMENTED       CGS
CE0170  HISTORY     - 1958     GOOD             CGS
CE0170  HISTORY     - 1981     GOOD             NGS
CE0170  HISTORY     - 19921211 GOOD             NGS
CE0170
CE0170                          STATION DESCRIPTION
CE0170
CE0170'DESCRIBED BY COAST AND GEODETIC SURVEY 1958
CE0170'21.65 MI E FROM EL PASO.
CE0170'ABOUT 21.65 MILES EAST ALONG U. S. HIGHWAYS 62 AND 180 FROM THE
CE0170'JUNCTION OF LOOP 16 AT EL PASO, 75 FEET SOUTH OF THE CENTER LINE OF
CE0170'THE HIGHWAY, 215 FEET SOUTHWEST OF THE SOUTHWEST CORNER OF A CONCRETE
CE0170'BRIDGE, 1 FOOT NORTH OF A FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS
CE0170'POST, ABOUT 1 FOOT BELOW THE LEVEL OF THE HIGHWAY, AND IN THE TOP OF A
CE0170'CONCRETE POST PROJECTING 4 INCHES.
CE0170
CE0170                          STATION RECOVERY (1981)
CE0170
CE0170'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
CE0170'THE MARK IS 0.3 M BELOW THE HIGHWAY.
CE0170'35.3 KM (21.9 MI) EASTERLY ALONG U. S. HIGHWAY 62 AND 180 (PAISANO
CE0170'DRIVE) FROM ITS JUNCTION WITH INTERSTATE HIGHWAY 10 IN EL PASO,
CE0170'0.4 KM (0.25 MI) WEST OF RANCH ROAD 2775, AT A CONCRETE HIGHWAY
CE0170'BRIDGE, 63.4 METERS (208.0 FT) SOUTHWEST OF THE SOUTHWEST CORNER
CE0170'OF THE BRIDGE, 22.6 METERS (74.0 FT) SOUTH OF THE CENTERLINE OF
CE0170'THE HIGHWAY AND 0.3 METER (1.0 FT) NORTH OF A FENCE.
CE0170'THE MARK IS 0.5 METERS  W FROM A WITNESS POST.
CE0170
CE0170                          STATION RECOVERY (1992)
CE0170
CE0170'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
CE0170'35.0 KM (21.75 MI) EASTERLY ALONG U.S. HIGHWAYS 62 AND 180 FROM THE
CE0170'JUNCTION OF INTERSTATE HIGHWAY 10 IN EL PASO, 65.5 M (214.9 FT)
CE0170'SOUTHWEST OF THE SOUTHWEST CORNER OF A HIGHWAY BRIDGE SPANNING A DRY
CE0170'CREEK, 22.5 M (73.8 FT) SOUTH OF AND LEVEL WITH THE HIGHWAY
CE0170'CENTERLINE, 0.4 M (1.3 FT) NORTH OF A FENCE, 0.4 M (1.3 FT) EAST OF A
CE0170'WITNESS POST, AND THE MONUMENT PROJECTS 0.15 M (0.49 FT) ABOVE THE
CE0170'GROUND SURFACE.
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CD0834 ***********************************************************************
 CD0834  DESIGNATION -  M 1392
 CD0834  PID         -  CD0834
 CD0834  STATE/COUNTY-  TX/HUDSPETH
 CD0834  COUNTRY     -  US
 CD0834  USGS QUAD   -  BUCKHORN DRAW EAST (1979)
 CD0834
 CD0834                        *CURRENT SURVEY CONTROL
 CD0834
 CD0834* NAD 83(1986) POSITION- 31 49 15.     (N) 105 42 39.     (W)   SCALED
 CD0834* NAVD 88 ORTHO HEIGHT -  1484.404 (meters)     4870.08  (feet) ADJUSTED
 CD0834
 CD0834  GEOID HEIGHT    -        -22.742 (meters)                      GEOID18
 CD0834  DYNAMIC HEIGHT  -       1482.097 (meters)     4862.51  (feet) COMP
 CD0834  MODELED GRAVITY -    979,032.6   (mgal)                        NAVD 88
 CD0834
 CD0834  VERT ORDER      -  FIRST     CLASS II
 CD0834
 CD0834.The horizontal coordinates were scaled from a map and have
 CD0834.an estimated accuracy of +/- 6 seconds.
 CD0834.
 CD0834.The orthometric height was determined by differential leveling and
 CD0834.adjusted by the NATIONAL GEODETIC SURVEY
 CD0834.in June 1991.
 CD0834
 CD0834.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0834.GEOID18 height accuracy estimate available here.
 CD0834
 CD0834.Click here to see if photographs exist for this station.
 CD0834
 CD0834.The dynamic height is computed by dividing the NAVD 88
 CD0834.geopotential number by the normal gravity value computed on the
 CD0834.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0834.degrees latitude (g = 980.6199 gals.).
 CD0834
 CD0834.The modeled gravity was interpolated from observed gravity values.
 CD0834
 CD0834;                    North         East     Units  Estimated Accuracy
 CD0834;SPC TX C     - 3,251,110.      191,080.      MT  (+/- 180 meters Scaled)
 CD0834
 CD0834_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDR327207(NAD 83)
 CD0834
 CD0834                           SUPERSEDED SURVEY CONTROL
 CD0834
 CD0834.No superseded survey control is available for this station.
 CD0834
 CD0834_MARKER: I = METAL ROD
 CD0834_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
 CD0834+WITH SETTING: INFORMATION.
 CD0834_STAMPING: M 1392 1981
 CD0834_MARK LOGO: NGS
 CD0834_PROJECTION: FLUSH
 CD0834_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 CD0834_ROD/PIPE-DEPTH: 2.4  meters
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CD0834
CD0834  HISTORY     - Date     Condition        Report By
CD0834  HISTORY     - 1981     MONUMENTED       NGS
CD0834
CD0834                          STATION DESCRIPTION
CD0834
CD0834'DESCRIBED BY NATIONAL GEODETIC SURVEY 1981
CD0834'71.5 KM (44.4 MI) EAST FROM EL PASO.
CD0834'71.5 KM (44.4 MI) EASTERLY ALONG U. S. HIGHWAYS 62 AND 180 (PAISANO
CD0834'DRIVE) FROM ITS JUNCTION WITH INTERSTATE HIGHWAY 10 IN EL PASO,
CD0834'0.4 KM (0.25 MI) EAST-SOUTHEAST OF A ROAD LEADING NORTHEAST TO THE
CD0834'DIAMOND CATTLE COMPANY, 23.0 METERS (75.5 FT) SOUTH-SOUTHEAST OF
CD0834'THE CENTERLINE OF THE HIGHWAY AND 0.3 METER (1.0 FT) NORTH-NORTHEAST
CD0834'OF A FENCE.  NOTE=ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH
CD0834'LOGO CAP.
CD0834'THE MARK IS 0.3 METERS  NNE FROM  A WITNESS POST AND FENCE
CD0834'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
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CW0880 ************************************************************************
 CW0880  DESIGNATION -  MILE CORNER 115 NM TX
 CW0880  PID         -  CW0880
 CW0880  STATE/COUNTY-  NM/OTERO
 CW0880  COUNTRY     -  US
 CW0880  USGS QUAD   -  CIENEGA SCHOOL (1969)
 CW0880
 CW0880                        *CURRENT SURVEY CONTROL
 CW0880  ______________________________________________________________________
 CW0880* NAD 83(1992) POSITION- 32 00 01.64055(N) 105 01 25.79600(W)   ADJUSTED
 CW0880* NAVD 88 ORTHO HEIGHT -  1108.    (meters)     3635.    (feet) SCALED
 CW0880  ______________________________________________________________________
 CW0880  GEOID HEIGHT    -        -22.682 (meters)                    GEOID18
 CW0880  LAPLACE CORR    -          0.37  (seconds)                   DEFLEC18
 CW0880  HORZ ORDER      -  FIRST
 CW0880
 CW0880.The horizontal coordinates were established by classical geodetic methods
 CW0880.and adjusted by the National Geodetic Survey in December 1993.
 CW0880.
 CW0880.The orthometric height was scaled from a topographic map.
 CW0880
 CW0880.Significant digits in the geoid height do not necessarily reflect accuracy.
 CW0880.GEOID18 height accuracy estimate available here.
 CW0880
 CW0880.Click here to see if photographs exist for this station.
 CW0880
 CW0880.The Laplace correction was computed from DEFLEC18 derived deflections.
 CW0880
 CW0880. The following values were computed from the NAD 83(1992) position.
 CW0880
 CW0880;                    North         East     Units Scale Factor Converg.
 CW0880;SPC NM C     -   111,574.561   615,856.193   MT  1.00006548   +0 38 59.5
 CW0880;SPC NM C     -   366,057.54  2,020,521.53   sFT  1.00006548   +0 38 59.5
 CW0880;SPC TX C     - 3,268,070.814   256,898.665   MT  1.00003356   -2 24 57.2
 CW0880;SPC TX C     -10,721,995.66    842,841.70   sFT  1.00003356   -2 24 57.2
 CW0880;UTM  13      - 3,540,486.453   497,748.930   MT  0.99960006   -0 00 45.5
 CW0880
 CW0880!             -  Elev Factor  x  Scale Factor =   Combined Factor
 CW0880!SPC NM C     -   0.99982969  x   1.00006548  =   0.99989516
 CW0880!SPC TX C     -   0.99982969  x   1.00003356  =   0.99986325
 CW0880!UTM  13      -   0.99982969  x   0.99960006  =   0.99942982
 CW0880
 CW0880:                Primary Azimuth Mark                    Grid Az
 CW0880:SPC NM C     -  MILE CORNER 115 AZ MK                   258 01 58.7
 CW0880:SPC TX C     -  MILE CORNER 115 AZ MK                   261 05 55.4
 CW0880:UTM  13      -  MILE CORNER 115 AZ MK                   258 41 43.7
 CW0880
 CW0880_U.S. NATIONAL GRID SPATIAL ADDRESS: 13SDR9774840486(NAD 83)
 CW0880
 CW0880|-----------------------------------------------------------------------|
 CW0880| PID    Reference Object                    Distance      Geod. Az   |
 CW0880|                                                          dddmmss.s  |
 CW0880| CH9042 MILE CORNER 115 RM 1                 9.544 METERS 01044      |
 CW0880| CH9043 MILE CORNER 115 RM 2                 9.107 METERS 10338      |
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CW0880| CD0997 EL PASO FORT WORTH AWY BCN 8 B      APPROX.27.1 KM 1583859.8 |
CW0880| CH9041 MILE CORNER 115 AZ MK                              2584058.2 |
CW0880|-------------------------------------------------------------------|
CW0880
CW0880                          SUPERSEDED SURVEY CONTROL
CW0880
CW0880  NAD 83(1986)-  32 00 01.64194(N)    105 01 25.79495(W) AD(       ) 1
CW0880  NAD 27      -  32 00 01.23600(N)    105 01 23.96700(W) AD(       ) 1
CW0880
CW0880.Superseded values are not recommended for survey control.
CW0880
CW0880.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CW0880.See file dsdata.pdf to determine how the superseded data were derived.
CW0880
CW0880_MARKER: P = PIPE CAP
CW0880_SETTING: 0 = UNSPECIFIED SETTING
CW0880
CW0880  HISTORY     - Date     Condition        Report By
CW0880  HISTORY     - 1943     MONUMENTED       USGLO
CW0880
CW0880                          STATION DESCRIPTION
CW0880
CW0880'DESCRIBED BY US GENERAL LAND OFFICE 1943 (EHB)
CW0880'THE STATION IS ON A RISE OF GROUND, LOCATED ABOUT 90 MILES
CW0880'E OF EL PASO, 20 MILES N OF U.S. HIGHWAY 62, AND ALONG THE
CW0880'TEXAS-NEW MEXICO STATE LINE AT MILE CORNER 115.  IT IS ABOUT
CW0880'100 YARDS N OF THE BOUNDARY FENCELINE.
CW0880'
CW0880'STATION MARK IS A 3-INCH GALVANIZED-IRON PIPE WITH BRASS
CW0880'CAP, BEARING THE INSCRIPTION CLARK BOUNDARY SURVEY, U.S.
CW0880'BOUNDARY COMMISSION, GENERAL LAND OFFICE REESTABLISHMENT
CW0880'1911 AND STAMPED MILE CORNER 115 TEXAS-NEW MEXICO.  MARK
CW0880'PROJECTS 1.0 FOOT ABOVE GROUND.
CW0880'
CW0880'REFERENCE MARK 1 IS A BRONZE REFERENCE DISK SET IN A CONCRETE
CW0880'CYLINDER AND FLUSH WITH THE GROUND 1.0 FOOT LOWER THAN STATION.
CW0880'STAMPED MILE CORNER 115 NO 1 1943.
CW0880'
CW0880'REFERENCE MARK 2 IS A BRONZE REFERENCE DISK SET IN A CONCRETE
CW0880'CYLINDER AND FLUSH WITH THE GROUND 1.5 FEET LOWER THAN STATION.
CW0880'STAMPED MILE CORNER 115 NO 2 1943.
CW0880'
CW0880'AZIMUTH MARK IS A BRONZE AZIMUTH DISK SET IN A CONCRETE
CW0880'CYLINDER FLUSH WITH THE GROUND, IN BOUNDARY FENCELINE AND
CW0880'ALONG S SIDE OF TRACK ROAD.  TO REACH AZIMUTH MARK GO 0.3
CW0880'MILE WSW ALONG FENCELINE AND AZIMUTH MARK 2.0 FEET S OF
CW0880'FENCELINE.  STAMPED MILE CORNER 115 1943.
CW0880'
CW0880'TO REACH FROM SALT FLAT SERVICE STATION ON U.S. HIGHWAY 62,
CW0880'GO E ON HIGHWAY FOR 8.0 MILES TO A CATTLE GUARD AND ROAD
CW0880'LEADING LEFT OR N.  TURN LEFT OR N OFF HIGHWAY AND KEEP ON
CW0880'MAIN-TRAVELED ROAD N AND W FOR 20.0 MILES TO THE TEXAS-NEW
CW0880'MEXICO STATE BOUNDARY FENCELINE.  PASS THROUGH GATE AND
CW0880'TURN RIGHT OR E ALONG THE N SIDE OF FENCELINE 2.4 MILES
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CW0880'TO MILE CORNER 115, 100 YARDS N OF FENCELINE AND ROAD,
CW0880'ON A RISE OF GROUND AND STATION.
CW0880'
CW0880'HEIGHT OF LIGHT ABOVE STATION MARK-1 METER.
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CE0365 ***********************************************************************
 CE0365  DESIGNATION -  N 1384
 CE0365  PID         -  CE0365
 CE0365  STATE/COUNTY-  TX/EL PASO
 CE0365  COUNTRY     -  US
 CE0365  USGS QUAD   -  YSLETA NW (1994)
 CE0365
 CE0365                        *CURRENT SURVEY CONTROL
 CE0365  ______________________________________________________________________
 CE0365* NAD 83(1986) POSITION- 31 44 55.     (N) 106 22 44.     (W)   SCALED
 CE0365* NAVD 88 ORTHO HEIGHT -  1124.540 (meters)     3689.43  (feet) ADJUSTED
 CE0365  ______________________________________________________________________
 CE0365  GEOID HEIGHT    -        -24.248 (meters)                     GEOID18
 CE0365  DYNAMIC HEIGHT  -       1122.826 (meters)     3683.81  (feet) COMP
 CE0365  MODELED GRAVITY -    979,077.1   (mgal)                       NAVD 88
 CE0365
 CE0365  VERT ORDER      -  FIRST     CLASS I
 CE0365
 CE0365.The horizontal coordinates were scaled from a map and have
 CE0365.an estimated accuracy of +/- 6 seconds.
 CE0365.
 CE0365.The orthometric height was determined by differential leveling and
 CE0365.adjusted by the NATIONAL GEODETIC SURVEY
 CE0365.in November 1996.
 CE0365
 CE0365.Significant digits in the geoid height do not necessarily reflect accuracy.
 CE0365.GEOID18 height accuracy estimate available here.
 CE0365
 CE0365.Click here to see if photographs exist for this station.
 CE0365
 CE0365.The dynamic height is computed by dividing the NAVD 88
 CE0365.geopotential number by the normal gravity value computed on the
 CE0365.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CE0365.degrees latitude (g = 980.6199 gals.).
 CE0365
 CE0365.The modeled gravity was interpolated from observed gravity values.
 CE0365
 CE0365;                   North         East     Units  Estimated Accuracy
 CE0365;SPC TX C     - 3,246,360.      127,480.      MT  (+/- 180 meters Scaled)
 CE0365
 CE0365_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RCR693133(NAD 83)
 CE0365
 CE0365                           SUPERSEDED SURVEY CONTROL
 CE0365
 CE0365  NAVD 88 (06/15/91) 1124.574  (m)          3689.54   (f) SUPERSEDED  1 1
 CE0365
 CE0365.Superseded values are not recommended for survey control.
 CE0365
 CE0365.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CE0365.See file dsdata.pdf to determine how the superseded data were derived.
 CE0365
 CE0365_MARKER: I = METAL ROD
 CE0365_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 CE0365_STAMPING: N 1384 1981
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CE0365_MARK LOGO: NGS
CE0365_PROJECTION: FLUSH
CE0365_MAGNETIC: I = MARKER IS A STEEL ROD
CE0365_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
CE0365_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
CE0365+SATELLITE: SATELLITE OBSERVATIONS - January 20, 1993
CE0365_ROD/PIPE-DEPTH: 21.9 meters
CE0365
CE0365  HISTORY     - Date     Condition        Report By
CE0365  HISTORY     - 1981     MONUMENTED       NGS
CE0365  HISTORY     - 19930120 GOOD             NGS
CE0365
CE0365                          STATION DESCRIPTION
CE0365
CE0365'DESCRIBED BY NATIONAL GEODETIC SURVEY 1981
CE0365'IN EL PASO.
CE0365'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
CE0365'IN EL PASO, AT THE JUNCTION OF STILES DRIVE AND DODGE ROAD, 88.7
CE0365'METERS (291.0 FT) SOUTHWEST OF THE CENTER OF THE DRIVE, 19.4 METERS
CE0365'(63.5 FT) EAST OF A FENCE CORNER, 11.4 METERS (37.3 FT) NORTHEAST
CE0365'OF THE NEAR RAIL OF THE SOUTHERN PACIFIC RAILROAD, 9.6 METERS
CE0365'(31.4 FT) SOUTHEAST OF THE CENTER OF THE ROAD AND 1.8 METERS
CE0365'(6.0 FT) SOUTHWEST OF A UTILITY POLE WITH A GUY WIRE.  NOTE=ACCESS
CE0365'TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.
CE0365'THE MARK IS 0.5 METERS  NE FROM A WITNESS POST.
CE0365
CE0365                          STATION RECOVERY (1993)
CE0365
CE0365'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993
CE0365'IN EL PASO, AT THE INTERSECTION OF STILES DRIVE AND DODGE ROAD, 88.7 M
CE0365'(291.0 FT) SOUTHWEST OF THE CENTERLINE OF THE DRIVE, 31.4 M
CE0365'(103.0 FT) NORTHEAST OF THE CENTER OF AN ENTRANCE TO THE MONTGOMERY
CE0365'WARD SERVICE CENTER PARKING LOT AT 206 DODGE ROAD, 8.2 M (26.9 FT)
CE0365'SOUTHEAST OF THE CENTER OF THE ROAD, 2.9 M (9.5 FT) NORTHEAST OF A
CE0365'GATE SWING POST, AND 0.9 M (3.0 FT) SOUTHEAST OF A CHAIN-LINK FENCE.
CE0365'NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.
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CD0747 ***********************************************************************
 CD0747  DESIGNATION -  P 1236
 CD0747  PID         -  CD0747
 CD0747  STATE/COUNTY-  TX/HUDSPETH
 CD0747  COUNTRY     -  US
 CD0747  USGS QUAD   -  MICKEY DRAW WEST (1984)
 CD0747
 CD0747                        *CURRENT SURVEY CONTROL
 CD0747  ______________________________________________________________________
 CD0747* NAD 83(1986) POSITION- 31 45 38.     (N) 105 22 05.     (W)    SCALED
 CD0747* NAVD 88 ORTHO HEIGHT -  1269.403 (meters)     4164.70   (feet) ADJUSTED
 CD0747  ______________________________________________________________________
 CD0747  GEOID HEIGHT    -        -22.683 (meters)                      GEOID18
 CD0747  DYNAMIC HEIGHT  -       1267.495 (meters)     4158.44   (feet) COMP
 CD0747  MODELED GRAVITY -    979,092.1   (mgal)                        NAVD 88
 CD0747
 CD0747  VERT ORDER      -  FIRST     CLASS I
 CD0747
 CD0747.The horizontal coordinates were scaled from a map and have
 CD0747.an estimated accuracy of +/- 6 seconds.
 CD0747.
 CD0747.The orthometric height was determined by differential leveling and
 CD0747.adjusted by the NATIONAL GEODETIC SURVEY
 CD0747.in June 1991.
 CD0747
 CD0747.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0747.GEOID18 height accuracy estimate available here.
 CD0747
 CD0747.Click here to see if photographs exist for this station.
 CD0747
 CD0747.The dynamic height is computed by dividing the NAVD 88
 CD0747.geopotential number by the normal gravity value computed on the
 CD0747.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0747.degrees latitude (g = 980.6199 gals.).
 CD0747
 CD0747.The modeled gravity was interpolated from observed gravity values.
 CD0747
 CD0747;                    North         East     Units  Estimated Accuracy
 CD0747;SPC TX C     - 3,242,920.      223,200.      MT  (+/- 180 meters Scaled)
 CD0747
 CD0747_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDR651139(NAD 83)
 CD0747
 CD0747                           SUPERSEDED SURVEY CONTROL
 CD0747
 CD0747  NGVD 29 (??/??/92) 1268.864   (m)          4162.93    (f) ADJ UNCH    1 1
 CD0747
 CD0747.Superseded values are not recommended for survey control.
 CD0747
 CD0747.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CD0747.See file dsdata.pdf to determine how the superseded data were derived.
 CD0747
 CD0747_MARKER: DV = VERTICAL CONTROL DISK
 CD0747_SETTING: 46 = COPPER-CLAD STEEL ROD W/O SLEEVE (10 FT.+)
 CD0747_STAMPING: P 1236 1977
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CD0747_MARK LOGO: NGS
CD0747_PROJECTION: RECESSED 15 CENTIMETERS
CD0747_MAGNETIC: I = MARKER IS A STEEL ROD
CD0747_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
CD0747
CD0747  HISTORY     - Date     Condition        Report By
CD0747  HISTORY     - 1977     MONUMENTED       NGS
CD0747
CD0747                          STATION DESCRIPTION
CD0747
CD0747'DESCRIBED BY NATIONAL GEODETIC SURVEY 1977
CD0747'40.8 MI SW FROM PINE SPRINGS.
CD0747'40.8 MILES SOUTHWEST ALONG U.S. HIGHWAYS 62 AND 180 FROM THE STATE
CD0747'HIGHWAY MAINTENANCE YARD AT PINE SPRINGS, AT THE JUNCTION OF RANCH
CD0747'ROAD 1111, 349 FT. SOUTH OF THE CENTER LINE OF THE HIGHWAY, 271 FT.
CD0747'EAST OF THE CENTER LINE OF THE ROAD, 222 FT. SOUTHWEST OF THE
CD0747'SOUTHWEST CORNER OF THE DESERT INN CAFE, 56 FT. NORTH OF THE NORTH
CD0747'FACE OF THE WEST ONE OF TWO LARGE GAS TANKS, 41 FT. NORTH OF A
CD0747'PRIVATE GRAVEL ROAD, 2 FT. SOUTH OF A POWER LINE GUY POLE WITH
CD0747'ONE GUY WIRE, DISK IS 0.5 FT. BELOW GROUND LEVEL ACCESS TO WHICH IS
CD0747'HAD THROUGH A 4-INCH PLASTIC SCREW CAP FLUSH WITH THE GROUND.
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CD0792 ***********************************************************************
 CD0792  DESIGNATION -  T 1394
 CD0792  PID         -  CD0792
 CD0792  STATE/COUNTY-  TX/HUDSPETH
 CD0792  COUNTRY     -  US
 CD0792  USGS QUAD   -  SILVER KING CANYON (1972)
 CD0792
 CD0792                        *CURRENT SURVEY CONTROL
 CD0792  ______________________________________________________________________
 CD0792* NAD 83(1986) POSITION- 31 12 29.     (N) 105 30 09.     (W)   SCALED
 CD0792* NAVD 88 ORTHO HEIGHT -  1401.383 (meters)     4597.70  (feet) ADJUSTED
 CD0792  ______________________________________________________________________
 CD0792  GEOID HEIGHT    -        -23.300 (meters)                     GEOID18
 CD0792  DYNAMIC HEIGHT  -       1399.153 (meters)     4590.39  (feet) COMP
 CD0792  MODELED GRAVITY -    978,999.9   (mgal)                       NAVD 88
 CD0792
 CD0792  VERT ORDER      -  FIRST     CLASS II
 CD0792
 CD0792.The horizontal coordinates were scaled from a map and have
 CD0792.an estimated accuracy of +/- 6 seconds.
 CD0792.
 CD0792.The orthometric height was determined by differential leveling and
 CD0792.adjusted by the NATIONAL GEODETIC SURVEY
 CD0792.in June 1991.
 CD0792
 CD0792.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0792.GEOID18 height accuracy estimate available here.
 CD0792
 CD0792.Click here to see if photographs exist for this station.
 CD0792
 CD0792.The dynamic height is computed by dividing the NAVD 88
 CD0792.geopotential number by the normal gravity value computed on the
 CD0792.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0792.degrees latitude (g = 980.6199 gals.).
 CD0792
 CD0792.The modeled gravity was interpolated from observed gravity values.
 CD0792
 CD0792;                    North         East     Units  Estimated Accuracy
 CD0792;SPC TX C     - 3,182,310.      207,630.      MT  (+/- 180 meters Scaled)
 CD0792
 CD0792_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ521527(NAD 83)
 CD0792
 CD0792                           SUPERSEDED SURVEY CONTROL
 CD0792
 CD0792.No superseded survey control is available for this station.
 CD0792
 CD0792_MARKER: I = METAL ROD
 CD0792_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 CD0792_STAMPING: T 1394 1981
 CD0792_MARK LOGO: NGS
 CD0792_PROJECTION: FLUSH
 CD0792_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 CD0792_ROD/PIPE-DEPTH: 3.7  meters
 CD0792
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CD0792  HISTORY     - Date     Condition        Report By
CD0792  HISTORY     - 1981     MONUMENTED       NGS
CD0792  HISTORY     - 1990     GOOD             USPSQD
CD0792
CD0792                          STATION DESCRIPTION
CD0792
CD0792'DESCRIBED BY NATIONAL GEODETIC SURVEY 1981
CD0792'15.7 KM (9.75 MI) NW FROM SIERRA BLANCA.
CD0792'6.3 KM (3.9 MI) NORTHWESTERLY ALONG THE SOUTHERN PACIFIC RAILROAD
CD0792'FROM THE RAILROAD STATION IN SIERRA BLANCA, THENCE 0.2 KM (0.1 MI)
CD0792'SOUTH ALONG A GRAVELED ROAD, THENCE 9.3 KM (5.75 MI) NORTHWESTERLY
CD0792'ALONG INTERSTATE HIGHWAY 10, 0.6 KM (0.4 MI) SOUTHWEST OF A SIDE ROAD
CD0792'LEADING SOUTH, 30.6 METERS (100.5 FT) SOUTHEAST OF THE CENTERLINE
CD0792'OF A FRONTAGE ROAD AND 4.4 METERS (14.5 FT) SOUTHWEST OF A UTILITY
CD0792'POLE.  NOTE=ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.
CD0792'THE MARK IS 0.5 METERS  NW FROM  A WITNESS POST AND FENCE
CD0792'THE MARK IS 1.0 M ABOVE THE ROAD.
CD0792
CD0792                          STATION RECOVERY (1990)
CD0792
CD0792'RECOVERY NOTE BY US POWER SQUADRON 1990 (GGB)
CD0792'RECOVERED IN GOOD CONDITION.
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CD1015 ***********************************************************************
 CD1015  DESIGNATION -  TT 16 WM
 CD1015  PID         -  CD1015
 CD1015  STATE/COUNTY-  TX/HUDSPETH
 CD1015  COUNTRY     -  US
 CD1015  USGS QUAD   -  SNEED MOUNTAIN (1973)
 CD1015
 CD1015                        *CURRENT SURVEY CONTROL
 CD1015  ______________________________________________________________________
 CD1015* NAD 83(1993) POSITION- 31 15 38.29097(N) 105 03 15.94965(W)   ADJUSTED
 CD1015* NAVD 88 ORTHO HEIGHT -  1621.98  (+/-2cm)     5321.4   (feet) VERTCON
 CD1015  ______________________________________________________________________
 CD1015  GEOID HEIGHT    -        -22.545 (meters)                    GEOID18
 CD1015  LAPLACE CORR    -          1.64  (seconds)                   DEFLEC18
 CD1015  HORZ ORDER      -  THIRD
 CD1015  VERT ORDER      -  THIRD ? (See Below)
 CD1015
 CD1015.The horizontal coordinates were established by classical geodetic methods
 CD1015.and adjusted by the National Geodetic Survey in February 1996.
 CD1015.
 CD1015.The NAVD 88 height was computed by applying the VERTCON shift value to
 CD1015.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
 CD1015
 CD1015.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD1015.GEOID18 height accuracy estimate available here.
 CD1015
 CD1015.The vertical order pertains to the NGVD 29 superseded value.
 CD1015
 CD1015.Click here to see if photographs exist for this station.
 CD1015
 CD1015.The Laplace correction was computed from DEFLEC18 derived deflections.
 CD1015
 CD1015. The following values were computed from the NAD 83(1993) position.
 CD1015
 CD1015;                    North         East     Units Scale Factor Converg.
 CD1015;SPC TX C     - 3,186,239.709   250,529.640   MT  0.99989194   -2 25 53.9
 CD1015;SPC TX C     -10,453,521.45    821,945.99   sFT  0.99989194   -2 25 53.9
 CD1015;UTM  13      - 3,458,488.853   494,817.925   MT  0.99960033   -0 01 41.7
 CD1015
 CD1015!             -  Elev Factor  x  Scale Factor =   Combined Factor
 CD1015!SPC TX C     -   0.99974890  x   0.99989194  =   0.99964087
 CD1015!UTM  13      -   0.99974890  x   0.99960033  =   0.99934933
 CD1015
 CD1015:                Primary Azimuth Mark                    Grid Az
 CD1015:SPC TX C     -  TP IN                                   192 31 26.7
 CD1015:UTM  13      -  TP IN                                   190 07 14.5
 CD1015
 CD1015_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ9481758488(NAD 83)
 CD1015
 CD1015|---------------------------------------------------------------------|
 CD1015| PID    Reference Object                  Distance      Geod. Az   |
 CD1015|                                                        dddmmss.s  |
 CD1015| CD1017 TP IN                          APPROX. 2.7 KM 1900532.8  |
 CD1015|---------------------------------------------------------------------|
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CD1015
CD1015                          SUPERSEDED SURVEY CONTROL
CD1015
CD1015  NAD 83(1986)-  31 15 38.29125(N)    105 03 15.94813(W) AD(       ) 3
CD1015  NAD 27      -  31 15 37.83164(N)    105 03 14.13843(W) AD(       ) 3
CD1015  NGVD 29           1621.34   (m)          5319.3    (f) LEVELING    3
CD1015
CD1015.Superseded values are not recommended for survey control.
CD1015
CD1015.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CD1015.See file dsdata.pdf to determine how the superseded data were derived.
CD1015
CD1015
CD1015  HISTORY     - Date     Condition        Report By
CD1015  HISTORY     - 1950     MONUMENTED       USGS
CD1015  HISTORY     - 1963     GOOD             USGS
CD1015
CD1015                          STATION DESCRIPTION
CD1015
CD1015'DESCRIBED BY US GEOLOGICAL SURVEY 1963 (CHS)
CD1015'ALLAMOORE, 16.0 MI. NW OF, ABOUT 4.5 MI. W. OF ROAD TO SCOTT KEELING
CD1015'RANCH, 350 FT. E. OF EARTH TANK, 49 FT. E. OF ROAD, 5 FT. S. AND 5 FT.
CD1015'E. OF TELEPHONE POLE, IN A CONCRETE POST.
CD1015'
CD1015'POSITION DETERMINED BY 1963 ELECTRONIC TRAVERSE.
CD1015'
CD1015'STATION MARK--STANDARD TABLET STAMPED -TT 16 WM 1950-.
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CD0554 ***********************************************************************
 CD0554  DESIGNATION -  U 1071
 CD0554  PID         -  CD0554
 CD0554  STATE/COUNTY-  TX/HUDSPETH
 CD0554  COUNTRY     -  US
 CD0554  USGS QUAD   -  SIERRA BLANCA (1979)
 CD0554
 CD0554                        *CURRENT SURVEY CONTROL
 CD0554  ______________________________________________________________________
 CD0554* NAD 83(1986) POSITION- 31 09 52.     (N) 105 19 08.     (W)   SCALED
 CD0554* NAVD 88 ORTHO HEIGHT -  1351.004 (meters)     4432.42  (feet) ADJUSTED
 CD0554  ______________________________________________________________________
 CD0554  GEOID HEIGHT    -        -23.128 (meters)                     GEOID18
 CD0554  DYNAMIC HEIGHT  -       1348.840 (meters)     4425.32  (feet) COMP
 CD0554  MODELED GRAVITY -    978,991.9   (mgal)                       NAVD 88
 CD0554
 CD0554  VERT ORDER      -  FIRST     CLASS II
 CD0554
 CD0554.The horizontal coordinates were scaled from a map and have
 CD0554.an estimated accuracy of +/- 6 seconds.
 CD0554.
 CD0554.The orthometric height was determined by differential leveling and
 CD0554.adjusted by the NATIONAL GEODETIC SURVEY
 CD0554.in June 1991.
 CD0554
 CD0554.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0554.GEOID18 height accuracy estimate available here.
 CD0554
 CD0554.Click here to see if photographs exist for this station.
 CD0554
 CD0554.The dynamic height is computed by dividing the NAVD 88
 CD0554.geopotential number by the normal gravity value computed on the
 CD0554.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0554.degrees latitude (g = 980.6199 gals.).
 CD0554
 CD0554.The modeled gravity was interpolated from observed gravity values.
 CD0554
 CD0554;                   North         East     Units  Estimated Accuracy
 CD0554;SPC TX C     - 3,176,690.      224,890.      MT  (+/- 180 meters Scaled)
 CD0554
 CD0554_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ696478(NAD 83)
 CD0554
 CD0554                          SUPERSEDED SURVEY CONTROL
 CD0554
 CD0554  NGVD 29 (??/??/92) 1350.410   (m)          4430.47    (f) ADJ UNCH    1 2
 CD0554
 CD0554.Superseded values are not recommended for survey control.
 CD0554
 CD0554.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CD0554.See file dsdata.pdf to determine how the superseded data were derived.
 CD0554
 CD0554_MARKER: DB = BENCH MARK DISK
 CD0554_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 CD0554_STAMPING: U 1071 1956
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CD0554_MARK LOGO: CGS
CD0554_PROJECTION: PROJECTING 12 CENTIMETERS
CD0554_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
CD0554+STABILITY: SURFACE MOTION
CD0554
CD0554  HISTORY     - Date     Condition        Report By
CD0554  HISTORY     - 1956     MONUMENTED       CGS
CD0554  HISTORY     - 1981     GOOD             NGS
CD0554
CD0554                          STATION DESCRIPTION
CD0554
CD0554'DESCRIBED BY COAST AND GEODETIC SURVEY 1956
CD0554'2.4 MI E FROM SIERRA BLANCA.
CD0554'2.4 MILES EAST ALONG THE TEXAS AND PACIFIC RAILROAD FROM THE STATION
CD0554'AT SIERRA BLANCA, 38.8 FEET WEST OF THE 1ST POLE WEST OF MILEPOST 766,
CD0554'IN LINE WITH A ROW OF TELEPHONE POLES, 38 FEET SOUTH OF THE SOUTH
CD0554'RAIL, 79.5 FEET NORTH OF THE CENTER LINE OF U.S. HIGHWAY 80, 2 FEET
CD0554'NORTH OF A WITNESS POST, SET IN THE TOP OF A CONCRETE POST WHICH
CD0554'PROJECTS 0.5 FOOT ABOVE THE GROUND.
CD0554
CD0554                          STATION RECOVERY (1981)
CD0554
CD0554'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1981
CD0554'3.9 KM (2.4 MI) SOUTHEASTERLY ALONG THE MISSOURI PACIFIC RAILROAD
CD0554'FROM THE RAILROAD STATION IN SIERRA BLANCA, 1 POLE NORTHWEST OF
CD0554'MILEPOST 766, 24.8 METERS (81.5 FT) SOUTH-SOUTHWEST OF A UTILITY
CD0554'POLE, 24.2 METERS (79.5 FT) NORTH-NORTHEAST OF THE CENTERLINE OF A
CD0554'FRONTAGE ROAD AND 11.6 METERS (38.0 FT) SOUTH-SOUTHWEST OF THE
CD0554'NEAR RAIL.
CD0554'THE MARK IS 0.5 METERS  W FROM A WITNESS POST.
CD0554'THE MARK IS 1.2 M BELOW THE TRACKS.
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CD0803 ***********************************************************************
 CD0803  DESIGNATION -  Y 1389
 CD0803  PID         -  CD0803
 CD0803  STATE/COUNTY-  TX/HUDSPETH
 CD0803  COUNTRY     -  US
 CD0803  USGS QUAD   -  GRAYTON LAKE (1963)
 CD0803
 CD0803                        *CURRENT SURVEY CONTROL
 CD0803  ______________________________________________________________________
 CD0803* NAD 83(1986) POSITION- 31 07 01.     (N) 105 09 35.     (W)   SCALED
 CD0803* NAVD 88 ORTHO HEIGHT -  1349.701 (meters)     4428.14  (feet) ADJUSTED
 CD0803  ______________________________________________________________________
 CD0803  GEOID HEIGHT    -        -22.910 (meters)                     GEOID18
 CD0803  DYNAMIC HEIGHT  -       1347.558 (meters)     4421.11  (feet) COMP
 CD0803  MODELED GRAVITY -    979,006.0   (mgal)                       NAVD 88
 CD0803
 CD0803  VERT ORDER      -  FIRST     CLASS II
 CD0803
 CD0803.The horizontal coordinates were scaled from a map and have
 CD0803.an estimated accuracy of +/- 6 seconds.
 CD0803.
 CD0803.The orthometric height was determined by differential leveling and
 CD0803.adjusted by the NATIONAL GEODETIC SURVEY
 CD0803.in June 1991.
 CD0803
 CD0803.Significant digits in the geoid height do not necessarily reflect accuracy.
 CD0803.GEOID18 height accuracy estimate available here.
 CD0803
 CD0803.Click here to see if photographs exist for this station.
 CD0803
 CD0803.The dynamic height is computed by dividing the NAVD 88
 CD0803.geopotential number by the normal gravity value computed on the
 CD0803.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CD0803.degrees latitude (g = 980.6199 gals.).
 CD0803
 CD0803.The modeled gravity was interpolated from observed gravity values.
 CD0803
 CD0803;                    North         East     Units  Estimated Accuracy
 CD0803;SPC TX C     - 3,170,760.      239,820.      MT  (+/- 180 meters Scaled)
 CD0803
 CD0803_U.S. NATIONAL GRID SPATIAL ADDRESS: 13RDQ847425(NAD 83)
 CD0803
 CD0803                           SUPERSEDED SURVEY CONTROL
 CD0803
 CD0803.No superseded survey control is available for this station.
 CD0803
 CD0803_MARKER: I = METAL ROD
 CD0803_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 CD0803_STAMPING: Y 1389 1981
 CD0803_MARK LOGO: NGS
 CD0803_PROJECTION: FLUSH
 CD0803_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 CD0803+STABILITY: POSITION/ELEVATION WELL
 CD0803_ROD/PIPE-DEPTH: 7.3  meters
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CD0803
CD0803  HISTORY     - Date     Condition        Report By
CD0803  HISTORY     - 1981     MONUMENTED       NGS
CD0803
CD0803                          STATION DESCRIPTION
CD0803
CD0803'DESCRIBED BY NATIONAL GEODETIC SURVEY 1981
CD0803'20.1 KM (12.5 MI) SE FROM SIERRA BLANCA.
CD0803'20.1 KM (12.5 MI) SOUTHEASTERLY ALONG THE MISSOURI PACIFIC RAILROAD
CD0803'FROM THE RAILROAD STATION IN SIERRA BLANCA, 0.8 KM (0.5 MI)
CD0803'EAST-SOUTHEAST OF MILEPOST 119, 0.2 KM (0.1 MI) NORTH-NORTHWEST
CD0803'OF RAILROAD SIGNAL NUMBER 756.0, 29.0 METERS (95.0 FT) SOUTH-SOUTHWEST
CD0803'OF THE NEAR RAIL AND 9.7 METERS (31.7 FT) NORTH-NORTHEAST OF THE
CD0803'CENTERLINE OF A FRONTAGE ROAD.  NOTE=ACCESS TO THE DATUM POINT IS
CD0803'THROUGH A 5-INCH LOGO CAP.
CD0803'THE MARK IS 0.3 METERS  WNW FROM A WITNESS POST.
CD0803'THE MARK IS 0.5 M BELOW THE ROAD.
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APPENDIX "C" OPUS DATASHEETS

USGS

Desert Mountains, TX LiDAR Support Survey

FGS Project Number 190041

Prime Contractor: Optimal GEO

Contract No. G17PC00007

Sub-Contractor: Florabama Geospatial Solutions, LLC. (FGS)