

**Appendix 2— Minimally Constrained Network Adjustment
Reports, by Network, for Static Global Positioning System
Survey Data, Seadrift, Texas, to Lake Charles, Louisiana, 2008**

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Minimally Constrained Network Adjustment Report

Project : Network 1

User name	bkwoodwa	Date & Time	3:01:45 PM 12/1/2008
Coordinate System	UTM	Zone	15 North
Project Datum	NAD 1983 (Conus)		
Vertical Datum		Geoid Model	Geiod03TX/LA
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

Adjustment Style Settings - 95% Confidence Limits

Residual Tolerances

To End Iterations : 0.000010m
Final Convergence Cutoff : 0.005000m

Covariance Display

Horizontal

Propagated Linear Error [E] : U.S.
Constant Term [C] : 0.000000000m
Scale on Linear Error [S] : 1.96

Three-Dimensional

Propagated Linear Error [E] : U.S.
Constant Term [C] : 0.000000000m
Scale on Linear Error [S] : 1.96

Elevation Errors were used in the calculations.

Adjustment Controls

Compute Correlations for Geoid : False

Horizontal and Vertical adjustment performed

Set-up Errors

GPS

Error in Height of Antenna : 0.003m

Centering Error : 0.002m

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Statistical Summary

Successful Adjustment in 1 iteration(s)

Network Reference Factor : 1.06

Chi Square Test ($\alpha=95\%$) : PASS

Degrees of Freedom : 126.00

GPS Observation Statistics

Reference Factor : 1.06

Redundancy Number (r) : 126.00

Individual GPS Observation Statistics

Observation ID	Reference Factor	Redundancy Number
B1	0.80	2.61
B2	0.60	2.48
B3	0.92	2.54
B4	0.68	1.82
B5	1.19	2.80
B6	0.47	2.62
B7	1.90	2.68
B8	1.34	2.37
B9	2.48	2.47

B10	1.58	2.40
B11	0.52	2.72
B12	1.09	1.93
B13	1.18	2.03
B19	2.16	1.96
B20	2.42	2.26
B22	0.61	0.84
B23	0.95	1.99
B24	0.80	1.67
B26	0.96	2.63
B32	0.65	2.43
B33	0.19	2.32
B34	0.60	2.69
B35	0.34	2.44
B36	0.51	2.34
B37	0.26	2.40
B38	0.35	2.29
B39	0.54	2.57
B40	0.09	2.57
B41	0.12	2.17
B42	0.18	2.24
B43	0.15	2.10
B44	2.69	2.48
B45	1.66	2.59
B46	2.05	2.41
B47	1.55	2.08
B48	1.01	2.17
B49	0.81	1.97
B50	0.56	2.49
B51	0.26	2.45
B53	0.35	2.27
B54	0.25	2.28

B55	0.25	2.29
B56	0.84	2.64
B57	0.66	2.46
B59	0.26	2.32
B60	0.57	2.28
B61	0.47	2.29
B62	0.35	2.41
B63	1.14	2.12
B64	0.72	1.97
B65	0.16	2.05
B66	0.70	2.16
B67	0.79	2.05
B68	0.61	2.13
B69	0.82	2.26

Weighting Strategies

GPS Observations

User-defined Scalar Applied to All Observations

Scalar : 5.04

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Adjusted Coordinates

Adjustment performed in **WGS-84**

Number of Points : 14

Number of Constrained Points : 1

Horizontal and Height Only : 1

Adjusted Grid Coordinates

Errors are reported using 1.96σ .

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
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BAYC	3206489.908m	0.004m	212474.391m	0.004m	N/A	N/A	
M005	3167337.515m	0.004m	208715.455m	0.004m	N/A	N/A	
VAND	3193462.848m	0.005m	147138.782m	0.005m	N/A	N/A	
2050	3148053.709m	0.006m	136098.882m	0.006m	N/A	N/A	
EDNA	3212982.639m	0.007m	151197.109m	0.007m	N/A	N/A	
FREE	3199932.594m	0.003m	271168.402m	0.003m	N/A	N/A	
TXAG	3228594.467m	0.004m	264725.176m	0.004m	N/A	N/A	
CLOVPORT	3267339.748m	0.004m	282993.845m	0.004m	N/A	N/A	
TOWNSEND	3245973.441m	0.000m	331316.602m	0.000m	N/A	N/A	N E h
WALL	3299209.528m	0.005m	332695.047m	0.005m	N/A	N/A	
EATX	3284409.781m	0.005m	395566.765m	0.005m	N/A	N/A	
EAFY	3249436.689m	0.005m	327407.592m	0.005m	N/A	N/A	
TXLM	3253143.827m	0.004m	303621.338m	0.004m	N/A	N/A	
TXLI	3326299.518m	0.004m	329271.126m	0.004m	N/A	N/A	

Adjusted Geodetic Coordinates

Errors are reported using 1.96σ .

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
BAYC	28°57'14.89675"N	0.004m	95°57'00.04045"W	0.004m	-13.530m	0.015m	
M005	28°36'01.32517"N	0.004m	95°58'42.54361"W	0.004m	-25.289m	0.019m	
VAND	28°49'13.56765"N	0.005m	96°36'55.01328"W	0.005m	-16.446m	0.023m	
2050	28°24'30.03049"N	0.006m	96°42'49.54183"W	0.006m	-24.551m	0.024m	
EDNA	28°59'50.58758"N	0.007m	96°34'47.30670"W	0.007m	-9.245m	0.032m	
FREE	28°54'24.68687"N	0.003m	95°20'49.01497"W	0.003m	-24.845m	0.015m	
TXAG	29°09'50.97254"N	0.004m	95°25'08.42427"W	0.004m	-14.592m	0.019m	
CLOVPORT	29°31'00.65238"N	0.004m	95°14'20.13220"W	0.004m	-15.677m	0.017m	
TOWNSEND	29°19'53.61285"N	0.000m	94°44'14.27179"W	0.000m	-25.203m	0.000m	Lat Long h
WALL	29°48'43.16438"N	0.005m	94°43'52.61479"W	0.005m	-23.536m	0.022m	
EATX	29°41'07.33047"N	0.005m	94°04'45.75085"W	0.005m	-26.211m	0.023m	
EAFY	29°21'44.17758"N	0.005m	94°46'41.10172"W	0.005m	-25.326m	0.022m	
TXLM	29°23'31.98597"N	0.004m	95°01'25.23871"W	0.004m	-16.088m	0.018m	

TXLI	30°03'21.18015"N	0.004m	94°46'15.68055"W	0.004m	-9.725m	0.018m	
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Coordinate Deltas

Point Name	Δ Northing	Δ Easting	Δ Elevation	Δ Height	Δ Geoid Separation
BAYC	0.000m	0.000m	N/A	0.000m	N/A
M005	0.000m	0.000m	N/A	0.000m	N/A
VAND	0.000m	0.000m	N/A	0.000m	N/A
2050	0.000m	0.000m	N/A	0.000m	N/A
EDNA	0.000m	0.000m	N/A	0.000m	N/A
FREE	0.000m	0.000m	N/A	0.000m	N/A
TXAG	0.000m	0.000m	N/A	0.000m	N/A
CLOVPORT	0.000m	0.000m	N/A	0.000m	N/A
TOWNSEND	0.000m	0.000m	N/A	0.000m	N/A
WALL	0.000m	0.000m	N/A	0.000m	N/A
EATX	0.000m	0.000m	N/A	0.000m	N/A
EAFY	0.000m	0.000m	N/A	0.000m	N/A
TXLM	0.000m	0.000m	N/A	0.000m	N/A
TXLI	0.000m	0.000m	N/A	0.000m	N/A

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Control Coordinate Comparisons

Values shown are control coord minus adjusted coord.

Point Name	Δ Northing	Δ Easting	Δ Elevation	Δ Height
EDNA	0.039m	0.012m	N/A	0.066m
TXAG	0.009m	0.028m	N/A	-0.070m
CLOVPORT	0.016m	-0.004m	N/A	-0.004m
TOWNSEND	N/A	N/A	N/A	N/A
TXLM	0.022m	0.023m	N/A	-0.057m
TXLI	0.023m	0.024m	N/A	-0.076m

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Adjusted Observations

Adjustment performed in **WGS-84**

GPS Observations

Number of Observations : 55

Number of Outliers : 3

Observation Adjustment (Critical Tau = 3.53). Any outliers are in **red**.

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96 σ)	Residual	Stand. Residual
B44	WALL	EATX	Az.	102°23'11.9854"	0°00'00.0117"	0°00'00.0104"	0.85
			ΔHt.	-2.675m	0.015m	-0.029m	-1.35
			Dist.	64600.998m	0.004m	-0.016m	-4.24
B9	BAYC	FREE	Az.	94°56'48.4922"	0°00'00.0097"	0°00'00.0108"	0.97
			ΔHt.	-11.315m	0.012m	0.010m	0.80
			Dist.	59034.009m	0.003m	-0.012m	-3.81
B20	M005	FREE	Az.	61°00'22.6036"	0°00'00.0091"	0°00'00.0091"	1.05
			ΔHt.	0.444m	0.014m	-0.002m	-0.18
			Dist.	70416.321m	0.003m	-0.012m	-3.79
B19	2050	M005	Az.	73°21'16.4953"	0°00'00.0108"	0°00'00.0265"	3.37
			ΔHt.	-0.739m	0.018m	-0.010m	-0.84
			Dist.	75063.612m	0.004m	-0.001m	-0.43
B7	BAYC	FREE	Az.	94°56'48.4922"	0°00'00.0097"	-0°00'00.0131"	-0.98
			ΔHt.	-11.315m	0.012m	-0.010m	-0.49
			Dist.	59034.009m	0.003m	0.011m	2.96
B47	WALL	EATX	Az.	102°23'11.9854"	0°00'00.0117"	-0°00'00.0030"	-0.32
			ΔHt.	-2.675m	0.015m	0.009m	0.82
			Dist.	64600.998m	0.004m	0.007m	2.39
B45	WALL	EAFY	Az.	185°12'32.1164"	0°00'00.0150"	0°00'00.0381"	2.21
			ΔHt.	-1.790m	0.015m	0.018m	0.71
			Dist.	50055.081m	0.004m	-0.005m	-1.22

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B46	EATX	EAFY	Az.	242°18'20.8078"	0°00'00.0097"	-0°00'00.0117"	-1.23
			ΔHt.	0.885m	0.016m	0.038m	2.02
			Dist.	76620.173m	0.004m	-0.008m	-2.06
B8	M005	FREE	Az.	61°00'22.6036"	0°00'00.0091"	0°00'00.0038"	0.41
			ΔHt.	0.444m	0.014m	-0.007m	-0.53
			Dist.	70416.321m	0.003m	0.007m	2.06
B10	M005	BAYC	Az.	4°02'57.1493"	0°00'00.0150"	0°00'00.0306"	1.87
			ΔHt.	11.759m	0.013m	-0.011m	-0.94
			Dist.	39307.511m	0.003m	-0.004m	-1.38
B5	BAYC	FREE	Az.	94°56'48.4922"	0°00'00.0097"	-0°00'00.0090"	-0.57
			ΔHt.	-11.315m	0.012m	0.010m	0.32
			Dist.	59034.009m	0.003m	0.009m	1.82
B63	TXLM	EATX	Az.	70°13'20.2075"	0°00'00.0080"	-0°00'00.0004"	-0.07
			ΔHt.	-10.123m	0.016m	0.010m	0.79
			Dist.	97126.917m	0.004m	0.005m	1.74
B13	M005	2050	Az.	253°42'19.7257"	0°00'00.0108"	-0°00'00.0136"	-1.68
			ΔHt.	0.739m	0.018m	0.003m	0.22
			Dist.	75063.612m	0.004m	0.003m	0.98
B3	BAYC	2050	Az.	231°09'48.9570"	0°00'00.0094"	-0°00'00.0143"	-1.39
			ΔHt.	-11.020m	0.021m	0.001m	0.04
			Dist.	96078.605m	0.005m	0.002m	0.45
B12	VAND	M005	Az.	111°15'06.2670"	0°00'00.0123"	0°00'00.0078"	0.89
			ΔHt.	-8.844m	0.017m	-0.014m	-1.28
			Dist.	66830.515m	0.004m	-0.003m	-0.99
B48	EATX	EAFY	Az.	242°18'20.8078"	0°00'00.0097"	0°00'00.0040"	0.50
			ΔHt.	0.885m	0.016m	-0.012m	-0.92
			Dist.	76620.173m	0.004m	0.004m	1.24
B26	M005	BAYC	Az.	4°02'57.1493"	0°00'00.0150"	-0°00'00.0249"	-1.24
			ΔHt.	11.759m	0.013m	-0.017m	-0.88
			Dist.	39307.511m	0.003m	0.001m	0.22
B67	TXLI	WALL	Az.	171°54'45.2597"	0°00'00.0287"	0°00'00.0262"	1.20

			ΔHt.	-13.811m	0.015m	-0.005m	-0.49
			Dist.	27306.806m	0.004m	0.000m	-0.04
B56	TXLI	BAYC	Az.	223°24'03.6013"	0°00'00.0045"	-0°00'00.0004"	-0.07
			ΔHt.	-3.805m	0.018m	0.038m	1.18
			Dist.	167275.713m	0.004m	-0.003m	-0.59
B64	TXLM	WALL	Az.	31°15'28.4359"	0°00'00.0139"	-0°00'00.0119"	-1.16
			ΔHt.	-7.448m	0.015m	0.000m	0.02
			Dist.	54472.715m	0.004m	0.000m	-0.06
B23	VAND	FREE	Az.	85°16'04.6794"	0°00'00.0068"	-0°00'00.0037"	-0.77
			ΔHt.	-8.400m	0.019m	0.015m	1.12
			Dist.	124116.352m	0.004m	0.003m	0.85
B66	TXLI	EATX	Az.	121°24'15.9865"	0°00'00.0104"	-0°00'00.0020"	-0.24
			ΔHt.	-16.485m	0.016m	0.006m	0.43
			Dist.	78433.757m	0.004m	0.003m	1.07
B57	TXLI	FREE	Az.	203°49'20.8039"	0°00'00.0051"	0°00'00.0003"	0.05
			ΔHt.	-15.120m	0.017m	0.000m	0.01
			Dist.	139071.252m	0.004m	-0.004m	-1.07
B1	BAYC	M005	Az.	184°03'46.4951"	0°00'00.0151"	0°00'00.0072"	0.37
			ΔHt.	-11.759m	0.013m	-0.012m	-0.60
			Dist.	39307.511m	0.003m	0.004m	1.05
B69	TXLM	TXLI	Az.	18°19'06.3220"	0°00'00.0076"	-0°00'00.0021"	-0.28
			ΔHt.	6.363m	0.012m	-0.008m	-0.95
			Dist.	77520.769m	0.003m	0.003m	0.90
B22	EDNA	VAND	Az.	190°00'45.4976"	0°00'00.0598"	-0°00'00.0098"	-0.47
			ΔHt.	-7.201m	0.026m	-0.006m	-0.94
			Dist.	19914.918m	0.006m	-0.001m	-0.36
B24	VAND	2050	Az.	191°55'53.4190"	0°00'00.0205"	-0°00'00.0101"	-0.87
			ΔHt.	-8.105m	0.021m	-0.011m	-0.94
			Dist.	46676.551m	0.005m	0.000m	0.15
B49	WALL	EAFY	Az.	185°12'32.1164"	0°00'00.0150"	-0°00'00.0105"	-0.92
			ΔHt.	-1.790m	0.015m	-0.007m	-0.72

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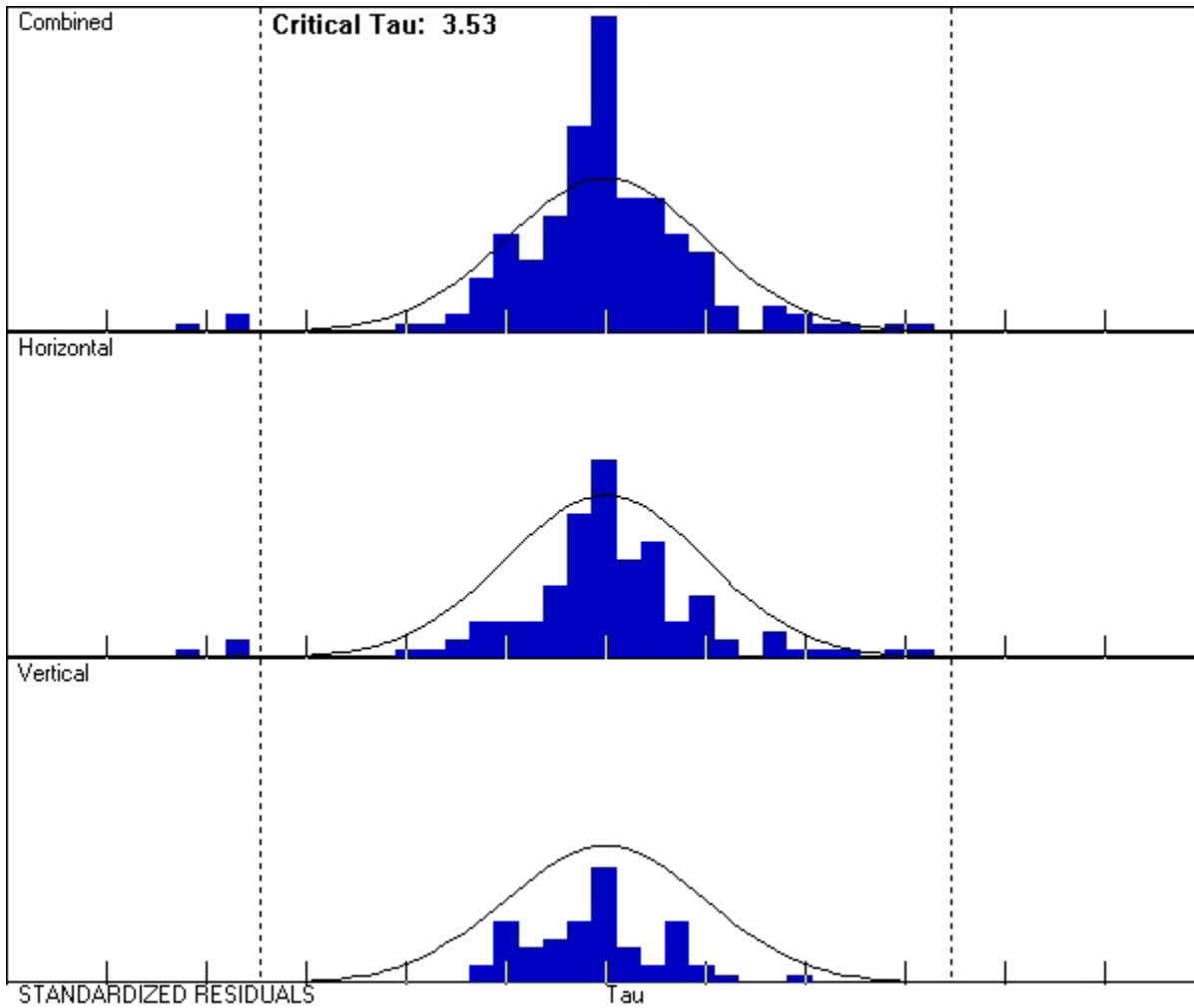
			Dist.	50055.081m	0.004m	0.001m	0.50
B2	BAYC	VAND	Az.	257°17'51.3151"	0°00'00.0122"	-0°00'00.0012"	-0.10
			ΔHt.	-2.915m	0.019m	-0.023m	-0.90
			Dist.	66563.767m	0.004m	0.001m	0.23
B4	EDNA	BAYC	Az.	94°18'45.6127"	0°00'00.0203"	0°00'00.0042"	0.36
			ΔHt.	-4.285m	0.030m	0.021m	0.89
			Dist.	61567.764m	0.006m	-0.001m	-0.36
B34	TXAG	FREE	Az.	166°09'20.9529"	0°00'00.0259"	-0°00'00.0329"	-0.87
			ΔHt.	-10.253m	0.018m	-0.003m	-0.10
			Dist.	29369.399m	0.003m	-0.002m	-0.35
B32	TXAG	BAYC	Az.	245°53'38.1279"	0°00'00.0138"	-0°00'00.0104"	-0.74
			ΔHt.	1.061m	0.019m	0.004m	0.18
			Dist.	56708.785m	0.004m	0.003m	0.84
B60	CLOVPORT	TXLI	Az.	37°00'58.7508"	0°00'00.0102"	0°00'00.0047"	0.51
			ΔHt.	5.952m	0.018m	0.014m	0.80
			Dist.	74947.317m	0.004m	0.000m	0.11
B68	TXLI	EAFY	Az.	180°30'39.4225"	0°00'00.0103"	0°00'00.0021"	0.26
			ΔHt.	-15.601m	0.016m	-0.010m	-0.77
			Dist.	76888.216m	0.004m	0.002m	0.55
B50	TXLM	BAYC	Az.	241°54'29.3673"	0°00'00.0074"	-0°00'00.0030"	-0.39
			ΔHt.	2.558m	0.018m	0.018m	0.76
			Dist.	102359.257m	0.004m	0.000m	-0.03
B11	FREE	BAYC	Az.	275°14'18.7297"	0°00'00.0097"	-0°00'00.0043"	-0.28
			ΔHt.	11.315m	0.012m	0.017m	0.75
			Dist.	59034.009m	0.003m	0.000m	-0.07
B36	TOWNSEND	BAYC	Az.	250°46'34.6389"	0°00'00.0063"	-0°00'00.0012"	-0.14
			ΔHt.	11.673m	0.015m	-0.004m	-0.41
			Dist.	125197.345m	0.004m	0.004m	0.72
B39	CLOVPORT	FREE	Az.	188°51'26.4382"	0°00'00.0106"	-0°00'00.0008"	-0.06
			ΔHt.	-9.168m	0.016m	-0.016m	-0.65
			Dist.	68421.980m	0.004m	0.002m	0.46

B61	TOWNSEND	TXLI	Az.	357°40'49.5842"	0°00'00.0098"	0°00'00.0047"	0.53
			ΔHt.	15.478m	0.018m	0.010m	0.58
			Dist.	80355.704m	0.004m	0.000m	0.01
B38	TOWNSEND	FREE	Az.	231°43'20.6856"	0°00'00.0091"	0°00'00.0008"	0.09
			ΔHt.	0.358m	0.015m	0.001m	0.11
			Dist.	75739.810m	0.004m	0.002m	0.56
B62	TXLM	TXLI	Az.	18°19'06.3220"	0°00'00.0076"	-0°00'00.0013"	-0.16
			ΔHt.	6.363m	0.012m	-0.001m	-0.10
			Dist.	77520.769m	0.003m	-0.002m	-0.55
B6	M005	BAYC	Az.	4°02'57.1493"	0°00'00.0150"	-0°00'00.0066"	-0.36
			ΔHt.	11.759m	0.013m	-0.005m	-0.26
			Dist.	39307.511m	0.003m	0.002m	0.55
B53	TXAG	TXLM	Az.	56°33'31.1907"	0°00'00.0166"	-0°00'00.0042"	-0.28
			ΔHt.	-1.496m	0.019m	0.001m	0.06
			Dist.	45987.351m	0.004m	0.002m	0.50
B35	CLOVPORT	BAYC	Az.	228°06'59.7046"	0°00'00.0084"	0°00'00.0052"	0.47
			ΔHt.	2.147m	0.016m	-0.003m	-0.25
			Dist.	93107.065m	0.004m	-0.001m	-0.12
B37	CLOVPORT	FREE	Az.	188°51'26.4382"	0°00'00.0106"	-0°00'00.0005"	-0.05
			ΔHt.	-9.168m	0.016m	0.002m	0.12
			Dist.	68421.980m	0.004m	-0.001m	-0.41
B55	TOWNSEND	TXLM	Az.	283°39'47.4651"	0°00'00.0281"	0°00'00.0100"	0.41
			ΔHt.	9.115m	0.018m	0.000m	0.00
			Dist.	28608.086m	0.004m	0.000m	-0.04
B59	TXAG	TXLI	Az.	32°15'19.6215"	0°00'00.0066"	-0°00'00.0005"	-0.08
			ΔHt.	4.866m	0.020m	0.002m	0.10
			Dist.	117086.994m	0.004m	-0.002m	-0.40
B54	CLOVPORT	TXLM	Az.	123°26'04.2157"	0°00'00.0329"	-0°00'00.0039"	-0.13
			ΔHt.	-0.411m	0.018m	-0.003m	-0.19
			Dist.	25037.125m	0.004m	-0.001m	-0.34
B51	TXLM	FREE	Az.	210°23'34.2021"	0°00'00.0111"	0°00'00.0017"	0.15

			ΔHt.	-8.757m	0.017m	-0.005m	-0.24
			Dist.	62316.886m	0.004m	0.001m	0.33
B42	TXAG	TOWNSEND	Az.	74°11'28.5912"	0°00'00.0117"	-0°00'00.0024"	-0.25
			ΔHt.	-10.611m	0.019m	-0.001m	-0.06
			Dist.	68814.417m	0.004m	-0.001m	-0.16
B33	TXAG	FREE	Az.	166°09'20.9529"	0°00'00.0259"	-0°00'00.0016"	-0.07
			ΔHt.	-10.253m	0.018m	-0.004m	-0.22
			Dist.	29369.399m	0.003m	0.001m	0.19
B65	TXLM	EAFY	Az.	97°51'55.3994"	0°00'00.0328"	0°00'00.0039"	0.16
			ΔHt.	-9.238m	0.015m	0.002m	0.21
			Dist.	24072.908m	0.004m	0.000m	-0.05
B43	CLOVPORT	TOWNSEND	Az.	112°45'09.1638"	0°00'00.0158"	0°00'00.0021"	0.18
			ΔHt.	-9.526m	0.017m	0.001m	0.09
			Dist.	52832.430m	0.004m	0.000m	-0.12
B41	TXAG	CLOVPORT	Az.	24°03'30.8504"	0°00'00.0189"	-0°00'00.0026"	-0.17
			ΔHt.	-1.085m	0.020m	-0.002m	-0.11
			Dist.	42826.302m	0.004m	0.000m	-0.01
B40	TOWNSEND	FREE	Az.	231°43'20.6856"	0°00'00.0091"	-0°00'00.0001"	-0.01
			ΔHt.	0.358m	0.015m	-0.003m	-0.13
			Dist.	75739.810m	0.004m	0.000m	-0.07

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Histograms of Standardized Residuals



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Point Error Ellipses

BAYC	M005	VAND
<p>52°</p>	<p>49°</p>	<p>43°</p>
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
2050	EDNA	FREE

<p>43°</p>	<p>38°</p>	<p>46°</p>
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
TXAG	CLOVPORT	WALL
<p>41°</p>	<p>45°</p>	<p>46°</p>
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
EATX	EAFY	TXLM
<p>46°</p>	<p>44°</p>	<p>46°</p>
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
TXLI		
<p>48°</p>		
Tick Size: 0.0010m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

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Covariant Terms

Adjustment performed in **WGS-84**

From Point	To Point		Components	A-posteriori Error (1.96 σ)	Horiz. Precision (PPM)	3D Precision (PPM)
BAYC	M005	Az.	184°03'46.4951"	0°00'00.0151"	0.074122	0.074122
		Δ Ht.	-11.759m	0.013m		
		Δ Elev.	?	?		
		Dist.	39307.511m	0.003m		
BAYC	VAND	Az.	257°17'51.3151"	0°00'00.0122"	0.061567	0.061567
		Δ Ht.	-2.915m	0.019m		
		Δ Elev.	?	?		
		Dist.	66563.767m	0.004m		
BAYC	2050	Az.	231°09'48.9570"	0°00'00.0094"	0.047672	0.047672
		Δ Ht.	-11.020m	0.021m		
		Δ Elev.	?	?		
		Dist.	96078.605m	0.005m		
BAYC	EDNA	Az.	274°37'03.9747"	0°00'00.0203"	0.100388	0.100388
		Δ Ht.	4.285m	0.030m		
		Δ Elev.	?	?		
		Dist.	61567.764m	0.006m		
BAYC	FREE	Az.	94°56'48.4922"	0°00'00.0097"	0.045200	0.045200
		Δ Ht.	-11.315m	0.012m		
		Δ Elev.	?	?		
		Dist.	59034.009m	0.003m		
BAYC	TXAG	Az.	65°38'09.6259"	0°00'00.0138"	0.072487	0.072487
		Δ Ht.	-1.061m	0.019m		
		Δ Elev.	?	?		
		Dist.	56708.785m	0.004m		
BAYC	CLOVPORT	Az.	47°46'09.4173"	0°00'00.0083"	0.045487	0.045487
		Δ Ht.	-2.147m	0.016m		

		ΔElev.	?	?		
		Dist.	93107.065m	0.004m		
BAYC	TOWNSEND	Az.	70°11'08.4868"	0°00'00.0063"	0.032371	0.032371
		ΔHt.	-11.673m	0.015m		
		ΔElev.	?	?		
		Dist.	125197.345m	0.004m		
BAYC	TXLM	Az.	61°27'23.7761"	0°00'00.0074"	0.038994	0.038994
		ΔHt.	-2.558m	0.018m		
		ΔElev.	?	?		
		Dist.	102359.257m	0.004m		
BAYC	TXLI	Az.	42°49'13.1030"	0°00'00.0044"	0.024739	0.024739
		ΔHt.	3.805m	0.018m		
		ΔElev.	?	?		
		Dist.	167275.713m	0.004m		
M005	VAND	Az.	291°33'27.5406"	0°00'00.0123"	0.058865	0.058865
		ΔHt.	8.844m	0.017m		
		ΔElev.	?	?		
		Dist.	66830.515m	0.004m		
M005	2050	Az.	253°42'19.7257"	0°00'00.0108"	0.054491	0.054491
		ΔHt.	0.739m	0.018m		
		ΔElev.	?	?		
		Dist.	75063.612m	0.004m		
M005	FREE	Az.	61°00'22.6036"	0°00'00.0091"	0.046482	0.046482
		ΔHt.	0.444m	0.014m		
		ΔElev.	?	?		
		Dist.	70416.321m	0.003m		
VAND	2050	Az.	191°55'53.4190"	0°00'00.0205"	0.100239	0.100239
		ΔHt.	-8.105m	0.021m		
		ΔElev.	?	?		
		Dist.	46676.551m	0.005m		
VAND	EDNA	Az.	9°59'43.7618"	0°00'00.0597"	0.288008	0.288008

		ΔHt.	7.201m	0.026m		
		ΔElev.	?	?		
		Dist.	19914.918m	0.006m		
VAND	FREE	Az.	85°16'04.6794"	0°00'00.0068"	0.033985	0.033985
		ΔHt.	-8.400m	0.019m		
		ΔElev.	?	?		
		Dist.	124116.352m	0.004m		
FREE	TXAG	Az.	346°11'26.8579"	0°00'00.0259"	0.119137	0.119137
		ΔHt.	10.253m	0.018m		
		ΔElev.	?	?		
		Dist.	29369.399m	0.003m		
FREE	CLOVPORT	Az.	8°48'16.6451"	0°00'00.0105"	0.052966	0.052966
		ΔHt.	9.168m	0.016m		
		ΔElev.	?	?		
		Dist.	68421.980m	0.004m		
FREE	TOWNSEND	Az.	51°25'32.6465"	0°00'00.0091"	0.047960	0.047960
		ΔHt.	-0.358m	0.015m		
		ΔElev.	?	?		
		Dist.	75739.810m	0.004m		
FREE	TXLM	Az.	30°14'07.3313"	0°00'00.0110"	0.058880	0.058880
		ΔHt.	8.757m	0.017m		
		ΔElev.	?	?		
		Dist.	62316.886m	0.004m		
FREE	TXLI	Az.	23°32'20.3742"	0°00'00.0050"	0.026615	0.026615
		ΔHt.	15.120m	0.017m		
		ΔElev.	?	?		
		Dist.	139071.252m	0.004m		
TXAG	CLOVPORT	Az.	24°03'30.8504"	0°00'00.0189"	0.097552	0.097552
		ΔHt.	-1.085m	0.020m		
		ΔElev.	?	?		
		Dist.	42826.302m	0.004m		

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TXAG	TOWNSEND	Az.	74°11'28.5912"	0°00'00.0117"	0.060384	0.060384
		ΔHt.	-10.611m	0.019m		
		ΔElev.	?	?		
		Dist.	68814.417m	0.004m		
TXAG	TXLM	Az.	56°33'31.1907"	0°00'00.0166"	0.088478	0.088478
		ΔHt.	-1.496m	0.019m		
		ΔElev.	?	?		
		Dist.	45987.351m	0.004m		
TXAG	TXLI	Az.	32°15'19.6215"	0°00'00.0066"	0.035012	0.035012
		ΔHt.	4.866m	0.020m		
		ΔElev.	?	?		
		Dist.	117086.994m	0.004m		
CLOVPORT	TOWNSEND	Az.	112°45'09.1638"	0°00'00.0158"	0.072733	0.072733
		ΔHt.	-9.526m	0.017m		
		ΔElev.	?	?		
		Dist.	52832.430m	0.004m		
CLOVPORT	TXLM	Az.	123°26'04.2157"	0°00'00.0329"	0.147666	0.147666
		ΔHt.	-0.411m	0.018m		
		ΔElev.	?	?		
		Dist.	25037.125m	0.004m		
CLOVPORT	TXLI	Az.	37°00'58.7508"	0°00'00.0102"	0.053774	0.053774
		ΔHt.	5.952m	0.018m		
		ΔElev.	?	?		
		Dist.	74947.317m	0.004m		
TOWNSEND	TXLM	Az.	283°39'47.4651"	0°00'00.0281"	0.130778	0.130778
		ΔHt.	9.115m	0.018m		
		ΔElev.	?	?		
		Dist.	28608.086m	0.004m		
TOWNSEND	TXLI	Az.	357°40'49.5842"	0°00'00.0098"	0.047797	0.047797
		ΔHt.	15.478m	0.018m		
		ΔElev.	?	?		

		Dist.	80355.704m	0.004m		
WALL	EATX	Az.	102°23'11.9854"	0°00'00.0117"	0.055576	0.055576
		ΔHt.	-2.675m	0.015m		
		ΔElev.	?	?		
		Dist.	64600.998m	0.004m		
WALL	EAFY	Az.	185°12'32.1164"	0°00'00.0150"	0.072894	0.072894
		ΔHt.	-1.790m	0.015m		
		ΔElev.	?	?		
		Dist.	50055.081m	0.004m		
WALL	TXLM	Az.	211°24'08.4089"	0°00'00.0140"	0.070085	0.070085
		ΔHt.	7.448m	0.015m		
		ΔElev.	?	?		
		Dist.	54472.715m	0.004m		
WALL	TXLI	Az.	351°55'56.6498"	0°00'00.0286"	0.137604	0.137604
		ΔHt.	13.811m	0.015m		
		ΔElev.	?	?		
		Dist.	27306.806m	0.004m		
EATX	EAFY	Az.	242°18'20.8078"	0°00'00.0097"	0.048788	0.048788
		ΔHt.	0.885m	0.016m		
		ΔElev.	?	?		
		Dist.	76620.173m	0.004m		
EATX	TXLM	Az.	250°41'16.2326"	0°00'00.0080"	0.040085	0.040085
		ΔHt.	10.123m	0.016m		
		ΔElev.	?	?		
		Dist.	97126.917m	0.004m		
EATX	TXLI	Az.	301°44'56.0970"	0°00'00.0104"	0.047977	0.047977
		ΔHt.	16.485m	0.016m		
		ΔElev.	?	?		
		Dist.	78433.757m	0.004m		
EAFY	TXLM	Az.	277°59'09.1201"	0°00'00.0328"	0.157436	0.157436
		ΔHt.	9.238m	0.015m		

		ΔElev.	?	?		
		Dist.	24072.908m	0.004m		
EAFY	TXLI	Az.	0°30'26.8236"	0°00'00.0102"	0.049888	0.049888
		ΔHt.	15.601m	0.016m		
		ΔElev.	?	?		
		Dist.	76888.216m	0.004m		
TXLM	TXLI	Az.	18°19'06.3220"	0°00'00.0076"	0.038626	0.038626
		ΔHt.	6.363m	0.012m		
		ΔElev.	?	?		
		Dist.	77520.769m	0.003m		