

Appendix 3—Fully Constrained (Final) Network Adjustment Reports, by Network, for Static Global Positioning System Survey Data, Seadrift, Texas, to Lake Charles, Louisiana, 2008

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Final Network Adjustment Report

Project : Network 1

User name	bkwoodwa	Date & Time	3:11:30 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] : 0.00000000m
 Scale on Linear Error [S] : 1.96

Three-Dimensional

Propagated Linear Error [E] : U.S.
 Constant Term [C] : 0.00000000m
 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 2 iteration(s)

Network Reference Factor : 1.27

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

Degrees of Freedom : 128.00

GPS Observation Statistics

Reference Factor : 1.27

Redundancy Number (r) : 128.00

Individual GPS Observation Statistics

Observation ID	Reference Factor	Redundancy Number
B1	0.80	2.61
B2	0.60	2.49
B3	0.99	2.54
B4	2.02	1.98
B5	1.07	2.80
B6	0.50	2.62
B7	1.75	2.68
B8	1.12	2.37
B9	2.67	2.47
B10	1.54	2.40

B11	0.55	2.72
B12	1.49	1.94
B13	1.20	2.03
B19	2.19	1.96
B20	2.63	2.27
B22	2.20	1.02
B23	0.79	2.01
B24	0.68	1.68
B26	1.01	2.63
B32	0.57	2.44
B33	0.30	2.32
B34	0.72	2.69
B35	0.91	2.53
B36	0.95	2.37
B37	1.39	2.56
B38	1.08	2.35
B39	1.41	2.70
B40	0.73	2.62
B41	1.47	2.30
B42	0.83	2.31
B43	2.33	2.58
B44	2.70	2.48
B45	1.66	2.59
B46	2.04	2.41
B47	1.55	2.08
B48	1.03	2.17
B49	0.81	1.97
B50	0.70	2.49
B51	0.18	2.45
B53	0.33	2.27
B54	1.12	2.41
B55	1.13	2.37

B56	0.92	2.63
B57	0.64	2.45
B59	0.36	2.31
B60	1.68	2.41
B61	0.85	2.37
B62	0.39	2.41
B63	1.13	2.12
B64	0.73	1.97
B65	0.13	2.04
B66	0.71	2.16
B67	0.79	2.05
B68	0.62	2.13
B69	0.80	2.26

Geoid Model Statistics

Reference Factor : 1.00

Redundancy Number (r) : 0.00

The GPS height errors exceed the geoid errors. Further scaling of the geoid errors is not recommended.

Weighting Strategies

GPS Observations

User-defined Scalar Applied to All Observations

Scalar : 5.04

Geoid Observations

User-defined Scalar Applied to All Observations

Scalar : 0.04

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Adjusted Coordinates

Adjustment performed in **WGS-84**

Number of Points : 14
 Number of Constrained Points : 3
 Horizontal and Height Only : 3

Adjusted Grid Coordinates

Errors are reported using 1.96σ .

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
BAYC	3206489.935m	0.005m	212474.388m	0.005m	13.343m	0.046m	
M005	3167337.545m	0.006m	208715.446m	0.006m	1.274m	0.064m	
VAND	3193462.888m	0.007m	147138.783m	0.007m	10.848m	0.051m	
2050	3148053.753m	0.009m	136098.874m	0.009m	2.490m	0.076m	
EDNA	3212982.677m	0.000m	151197.121m	0.000m	18.151m	0.034m	N E h
FREE	3199932.611m	0.004m	271168.394m	0.004m	1.508m	0.049m	
TXAG	3228594.484m	0.004m	264725.173m	0.005m	12.158m	0.043m	
CLOVPORT	3267339.763m	0.000m	282993.841m	0.000m	11.374m	0.034m	N E h
TOWNSEND	3245973.441m	0.000m	331316.602m	0.000m	1.397m	0.034m	N E h
WALL	3299209.529m	0.006m	332695.053m	0.006m	3.815m	0.051m	
EATX	3284409.771m	0.007m	395566.765m	0.007m	0.712m	0.049m	
EAFY	3249436.694m	0.006m	327407.589m	0.006m	1.355m	0.043m	
TXLM	3253143.836m	0.004m	303621.337m	0.004m	10.772m	0.039m	
TXLI	3326299.519m	0.005m	329271.137m	0.005m	17.765m	0.061m	

Adjusted Geodetic Coordinates

Errors are reported using 1.96σ .

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
BAYC	28°57'14.89765"N	0.005m	95°57'00.04057"W	0.005m	-13.482m	0.032m	
M005	28°36'01.32615"N	0.006m	95°58'42.54398"W	0.006m	-25.219m	0.054m	
VAND	28°49'13.56895"N	0.007m	96°36'55.01330"W	0.007m	-16.371m	0.038m	
2050	28°24'30.03193"N	0.009m	96°42'49.54219"W	0.009m	-24.452m	0.067m	
EDNA	28°59'50.58884"N	0.000m	96°34'47.30629"W	0.000m	-9.179m	0.000m	Lat Long h
FREE	28°54'24.68743"N	0.004m	95°20'49.01527"W	0.004m	-24.808m	0.035m	

TXAG	29°09'50.97308"N	0.004m	95°25'08.42441"W	0.005m	-14.568m	0.026m	
CLOVPORT	29°31'00.65288"N	0.000m	95°14'20.13235"W	0.000m	-15.681m	0.000m	Lat Long h
TOWNSEND	29°19'53.61285"N	0.000m	94°44'14.27179"W	0.000m	-25.203m	0.000m	Lat Long h
WALL	29°48'43.16442"N	0.006m	94°43'52.61458"W	0.006m	-23.565m	0.037m	
EATX	29°41'07.33016"N	0.007m	94°04'45.75085"W	0.007m	-26.248m	0.035m	
EAFY	29°21'44.17774"N	0.006m	94°46'41.10183"W	0.006m	-25.329m	0.026m	
TXLM	29°23'31.98625"N	0.004m	95°01'25.23876"W	0.004m	-16.086m	0.019m	
TXLI	30°03'21.18017"N	0.005m	94°46'15.68015"W	0.005m	-9.767m	0.051m	

Coordinate Deltas

Point Name	Δ Northing	Δ Easting	Δ Elevation	Δ Height	Δ Geoid Separation
BAYC	0.028m	-0.003m	0.049m	0.049m	0.000m
M005	0.031m	-0.009m	0.070m	0.070m	0.000m
VAND	0.040m	0.001m	0.074m	0.074m	0.000m
2050	0.045m	-0.008m	0.099m	0.099m	0.000m
EDNA	0.000m	0.000m	0.066m	0.000m	0.066m
FREE	0.018m	-0.008m	0.037m	0.037m	0.000m
TXAG	0.017m	-0.003m	0.024m	0.024m	0.000m
CLOVPORT	0.000m	0.000m	-0.004m	0.000m	-0.004m
TOWNSEND	0.000m	0.000m	0.000m	0.000m	0.000m
WALL	0.001m	0.006m	-0.029m	-0.029m	0.000m
EATX	-0.009m	0.000m	-0.037m	-0.037m	0.000m
EAFY	0.005m	-0.003m	-0.002m	-0.002m	0.000m
TXLM	0.009m	-0.001m	0.002m	0.002m	0.000m
TXLI	0.000m	0.011m	-0.042m	-0.042m	0.000m

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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
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EDNA	N/A	N/A	N/A	N/A
TXAG	-0.008m	0.031m	N/A	-0.094m
CLOVPORT	N/A	N/A	N/A	N/A
TOWNSEND	N/A	N/A	N/A	N/A
TXLM	0.013m	0.024m	N/A	-0.058m
TXLI	0.023m	0.013m	N/A	-0.034m

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Adjusted Observations

Adjustment performed in **WGS-84**

GPS Observations

GPS Transformation Group: <GPS Default>

Deflection in Longitude : -0°00'00.0505" (1.96 σ) : 0°00'00.0460"

Deflection in Latitude : 0°00'00.1058" (1.96 σ) : 0°00'00.1376"

Azimuth Rotation : -0°00'00.0371" (1.96 σ) : 0°00'00.0090"

Network Scale : 1.00000005 (1.96 σ) : 0.00000004

Number of Observations : 55

Number of Outliers : 0

Observation Adjustment (Critical Tau = 3.56). 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°23'11.9856"	0°00'00.0141"	0°00'00.0106"	0.73
			Δ Ht.	-2.675m	0.019m	-0.029m	-1.12
			Dist.	64600.998m	0.004m	-0.016m	-3.53
B20	M005	FREE	Az.	61°00'22.6023"	0°00'00.0109"	0°00'00.0079"	0.75
			Δ Ht.	0.444m	0.016m	-0.002m	-0.18
			Dist.	70416.319m	0.004m	-0.013m	-3.46
B9	BAYC	FREE	Az.	94°56'48.4934"	0°00'00.0116"	0°00'00.0119"	0.89
			Δ Ht.	-11.314m	0.015m	0.010m	0.69

			Dist.	59034.008m	0.003m	-0.013m	-3.41
B43	CLOVPORT	TOWNSEND	Az.	112°45'09.1768"	0°00'00.0090"	0°00'00.0151"	0.90
			ΔHt.	-9.521m	0.020m	0.007m	0.39
			Dist.	52832.443m	0.002m	0.012m	2.87
B19	2050	M005	Az.	73°21'16.4954"	0°00'00.0130"	0°00'00.0266"	2.82
			ΔHt.	-0.739m	0.021m	-0.010m	-0.72
			Dist.	75063.611m	0.005m	-0.002m	-0.58
B22	EDNA	VAND	Az.	190°00'45.5810"	0°00'00.0670"	0°00'00.0736"	2.61
			ΔHt.	-7.203m	0.031m	-0.009m	-1.12
			Dist.	19914.920m	0.006m	0.001m	0.43
B4	EDNA	BAYC	Az.	94°18'45.6171"	0°00'00.0223"	0°00'00.0086"	0.59
			ΔHt.	-4.290m	0.035m	0.016m	0.57
			Dist.	61567.753m	0.007m	-0.012m	-2.54
B7	BAYC	FREE	Az.	94°56'48.4934"	0°00'00.0116"	-0°00'00.0120"	-0.75
			ΔHt.	-11.314m	0.015m	-0.009m	-0.39
			Dist.	59034.008m	0.003m	0.010m	2.26
B60	CLOVPORT	TXLI	Az.	37°00'58.7709"	0°00'00.0106"	0°00'00.0247"	2.16
			ΔHt.	5.955m	0.022m	0.017m	0.84
			Dist.	74947.318m	0.004m	0.001m	0.20
B47	WALL	EATX	Az.	102°23'11.9856"	0°00'00.0141"	-0°00'00.0028"	-0.25
			ΔHt.	-2.675m	0.019m	0.009m	0.68
			Dist.	64600.998m	0.004m	0.007m	1.99
B41	TXAG	CLOVPORT	Az.	24°03'30.8150"	0°00'00.0198"	-0°00'00.0379"	-1.93
			ΔHt.	-1.089m	0.023m	-0.005m	-0.26
			Dist.	42826.302m	0.004m	0.001m	0.19
B45	WALL	EAFY	Az.	185°12'32.1164"	0°00'00.0180"	0°00'00.0380"	1.83
			ΔHt.	-1.790m	0.018m	0.018m	0.59
			Dist.	50055.081m	0.004m	-0.005m	-1.03
B37	CLOVPORT	FREE	Az.	188°51'26.4148"	0°00'00.0100"	-0°00'00.0240"	-1.81
			ΔHt.	-9.164m	0.019m	0.006m	0.27
			Dist.	68421.983m	0.003m	0.001m	0.21

B46	EATX	EAFY	Az.	242°18'20.8074"	0°00'00.0116"	-0°00'00.0121"	-1.06
			ΔHt.	0.885m	0.019m	0.038m	1.69
			Dist.	76620.173m	0.004m	-0.007m	-1.68
B39	CLOVPORT	FREE	Az.	188°51'26.4148"	0°00'00.0100"	-0°00'00.0242"	-1.56
			ΔHt.	-9.164m	0.019m	-0.013m	-0.42
			Dist.	68421.983m	0.003m	0.004m	0.85
B54	CLOVPORT	TXLM	Az.	123°26'04.2139"	0°00'00.0339"	-0°00'00.0056"	-0.16
			ΔHt.	-0.407m	0.021m	0.000m	0.02
			Dist.	25037.132m	0.004m	0.006m	1.50
B13	M005	2050	Az.	253°42'19.7248"	0°00'00.0130"	-0°00'00.0145"	-1.49
			ΔHt.	0.739m	0.021m	0.003m	0.22
			Dist.	75063.611m	0.005m	0.003m	0.69
B10	M005	BAYC	Az.	4°02'57.1478"	0°00'00.0181"	0°00'00.0291"	1.48
			ΔHt.	11.758m	0.016m	-0.012m	-0.82
			Dist.	39307.511m	0.003m	-0.004m	-1.15
B63	TXLM	EATX	Az.	70°13'20.2077"	0°00'00.0096"	-0°00'00.0003"	-0.04
			ΔHt.	-10.123m	0.019m	0.010m	0.66
			Dist.	97126.916m	0.005m	0.005m	1.42
B8	M005	FREE	Az.	61°00'22.6023"	0°00'00.0109"	0°00'00.0025"	0.23
			ΔHt.	0.444m	0.016m	-0.007m	-0.46
			Dist.	70416.319m	0.004m	0.005m	1.41
B12	VAND	M005	Az.	111°15'06.2698"	0°00'00.0147"	0°00'00.0107"	1.00
			ΔHt.	-8.845m	0.021m	-0.015m	-1.17
			Dist.	66830.513m	0.005m	-0.005m	-1.40
B38	TOWNSEND	FREE	Az.	231°43'20.6991"	0°00'00.0101"	0°00'00.0143"	1.39
			ΔHt.	0.356m	0.018m	0.000m	-0.01
			Dist.	75739.810m	0.004m	0.002m	0.39
B5	BAYC	FREE	Az.	94°56'48.4934"	0°00'00.0116"	-0°00'00.0079"	-0.41
			ΔHt.	-11.314m	0.015m	0.010m	0.27
			Dist.	59034.008m	0.003m	0.008m	1.36
B3	BAYC	2050	Az.	231°09'48.9555"	0°00'00.0113"	-0°00'00.0159"	-1.28

			ΔHt.	-11.019m	0.025m	0.003m	0.07
			Dist.	96078.605m	0.006m	0.002m	0.33
B26	M005	BAYC	Az.	4°02'57.1478"	0°00'00.0181"	-0°00'00.0264"	-1.09
			ΔHt.	11.758m	0.016m	-0.018m	-0.76
			Dist.	39307.511m	0.003m	0.001m	0.18
B55	TOWNSEND	TXLM	Az.	283°39'47.4856"	0°00'00.0310"	0°00'00.0305"	1.00
			ΔHt.	9.113m	0.021m	-0.002m	-0.08
			Dist.	28608.091m	0.004m	0.005m	1.09
B48	EATX	EAFY	Az.	242°18'20.8074"	0°00'00.0116"	0°00'00.0036"	0.38
			ΔHt.	0.885m	0.019m	-0.012m	-0.76
			Dist.	76620.173m	0.004m	0.004m	1.08
B42	TXAG	TOWNSEND	Az.	74°11'28.6060"	0°00'00.0131"	0°00'00.0124"	1.02
			ΔHt.	-10.609m	0.023m	0.001m	0.05
			Dist.	68814.420m	0.005m	0.002m	0.43
B67	TXLI	WALL	Az.	171°54'45.2596"	0°00'00.0345"	0°00'00.0262"	1.00
			ΔHt.	-13.811m	0.018m	-0.005m	-0.41
			Dist.	27306.806m	0.005m	0.000m	-0.03
B56	TXLI	BAYC	Az.	223°24'03.5996"	0°00'00.0055"	-0°00'00.0021"	-0.33
			ΔHt.	-3.805m	0.022m	0.038m	0.99
			Dist.	167275.712m	0.005m	-0.004m	-0.56
B40	TOWNSEND	FREE	Az.	231°43'20.6991"	0°00'00.0101"	0°00'00.0134"	0.98
			ΔHt.	0.356m	0.018m	-0.005m	-0.16
			Dist.	75739.810m	0.004m	-0.001m	-0.12
B64	TXLM	WALL	Az.	31°15'28.4359"	0°00'00.0167"	-0°00'00.0120"	-0.97
			ΔHt.	-7.448m	0.017m	0.000m	0.02
			Dist.	54472.715m	0.005m	0.000m	-0.05
B35	CLOVPORT	BAYC	Az.	228°06'59.6864"	0°00'00.0081"	-0°00'00.0129"	-0.95
			ΔHt.	2.150m	0.020m	0.001m	0.04
			Dist.	93107.062m	0.004m	-0.004m	-0.53
B61	TOWNSEND	TXLI	Az.	357°40'49.5743"	0°00'00.0109"	-0°00'00.0051"	-0.47
			ΔHt.	15.476m	0.021m	0.009m	0.41

			Dist.	80355.708m	0.004m	0.004m	0.94
B66	TXLI	EATX	Az.	121°24'15.9869"	0°00'00.0125"	-0°00'00.0016"	-0.16
			ΔHt.	-16.485m	0.020m	0.006m	0.36
			Dist.	78433.757m	0.005m	0.003m	0.91
B1	BAYC	M005	Az.	184°03'46.4940"	0°00'00.0181"	0°00'00.0061"	0.26
			ΔHt.	-11.758m	0.016m	-0.011m	-0.47
			Dist.	39307.511m	0.004m	0.004m	0.90
B34	TXAG	FREE	Az.	166°09'20.9451"	0°00'00.0311"	-0°00'00.0407"	-0.90
			ΔHt.	-10.253m	0.022m	-0.003m	-0.07
			Dist.	29369.399m	0.004m	-0.002m	-0.30
B57	TXLI	FREE	Az.	203°49'20.8028"	0°00'00.0061"	-0°00'00.0008"	-0.13
			ΔHt.	-15.120m	0.021m	0.000m	0.01
			Dist.	139071.252m	0.004m	-0.004m	-0.86
B24	VAND	2050	Az.	191°55'53.4256"	0°00'00.0246"	-0°00'00.0035"	-0.25
			ΔHt.	-8.106m	0.025m	-0.012m	-0.85
			Dist.	46676.551m	0.006m	0.001m	0.21
B23	VAND	FREE	Az.	85°16'04.6799"	0°00'00.0081"	-0°00'00.0032"	-0.54
			ΔHt.	-8.401m	0.022m	0.013m	0.84
			Dist.	124116.348m	0.005m	-0.001m	-0.24
B69	TXLM	TXLI	Az.	18°19'06.3218"	0°00'00.0092"	-0°00'00.0023"	-0.25
			ΔHt.	6.363m	0.014m	-0.008m	-0.79
			Dist.	77520.769m	0.004m	0.002m	0.70
B49	WALL	EAFY	Az.	185°12'32.1164"	0°00'00.0180"	-0°00'00.0106"	-0.77
			ΔHt.	-1.790m	0.018m	-0.007m	-0.61
			Dist.	50055.081m	0.004m	0.001m	0.40
B32	TXAG	BAYC	Az.	245°53'38.1262"	0°00'00.0165"	-0°00'00.0121"	-0.72
			ΔHt.	1.062m	0.023m	0.004m	0.16
			Dist.	56708.784m	0.005m	0.002m	0.32
B36	TOWNSEND	BAYC	Az.	250°46'34.6459"	0°00'00.0072"	0°00'00.0058"	0.55
			ΔHt.	11.671m	0.018m	-0.006m	-0.46
			Dist.	125197.346m	0.005m	0.005m	0.71

B2	BAYC	VAND	Az.	257°17'51.3126"	0°00'00.0146"	-0°00'00.0038"	-0.25
			ΔHt.	-2.913m	0.023m	-0.021m	-0.68
			Dist.	66563.765m	0.005m	-0.001m	-0.22
B68	TXLI	EAFY	Az.	180°30'39.4226"	0°00'00.0124"	0°00'00.0022"	0.23
			ΔHt.	-15.601m	0.019m	-0.010m	-0.64
			Dist.	76888.216m	0.005m	0.002m	0.47
B50	TXLM	BAYC	Az.	241°54'29.3657"	0°00'00.0088"	-0°00'00.0046"	-0.49
			ΔHt.	2.558m	0.021m	0.018m	0.63
			Dist.	102359.256m	0.005m	-0.002m	-0.34
B11	FREE	BAYC	Az.	275°14'18.7297"	0°00'00.0116"	-0°00'00.0042"	-0.23
			ΔHt.	11.315m	0.015m	0.017m	0.62
			Dist.	59034.008m	0.003m	-0.001m	-0.23
B62	TXLM	TXLI	Az.	18°19'06.3218"	0°00'00.0092"	-0°00'00.0015"	-0.15
			ΔHt.	6.363m	0.014m	-0.001m	-0.08
			Dist.	77520.769m	0.004m	-0.002m	-0.51
B59	TXAG	TXLI	Az.	32°15'19.6214"	0°00'00.0079"	-0°00'00.0005"	-0.07
			ΔHt.	4.867m	0.024m	0.002m	0.10
			Dist.	117086.993m	0.005m	-0.002m	-0.46
B6	M005	BAYC	Az.	4°02'57.1478"	0°00'00.0181"	-0°00'00.0081"	-0.36
			ΔHt.	11.758m	0.016m	-0.006m	-0.24
			Dist.	39307.511m	0.003m	0.002m	0.46
B53	TXAG	TXLM	Az.	56°33'31.1909"	0°00'00.0200"	-0°00'00.0041"	-0.23
			ΔHt.	-1.496m	0.023m	0.001m	0.07
			Dist.	45987.351m	0.005m	0.002m	0.38
B33	TXAG	FREE	Az.	166°09'20.9451"	0°00'00.0311"	-0°00'00.0094"	-0.31
			ΔHt.	-10.253m	0.022m	-0.003m	-0.17
			Dist.	29369.399m	0.004m	0.001m	0.14
B51	TXLM	FREE	Az.	210°23'34.1995"	0°00'00.0133"	-0°00'00.0009"	-0.06
			ΔHt.	-8.757m	0.021m	-0.005m	-0.20
			Dist.	62316.885m	0.004m	0.001m	0.12
B65	TXLM	EAFY	Az.	97°51'55.3969"	0°00'00.0395"	0°00'00.0014"	0.05

			ΔHt.	-9.238m	0.019m	0.002m	0.17
			Dist.	24072.909m	0.005m	0.000m	-0.01

Geoid Observations

Number of Observations : 14

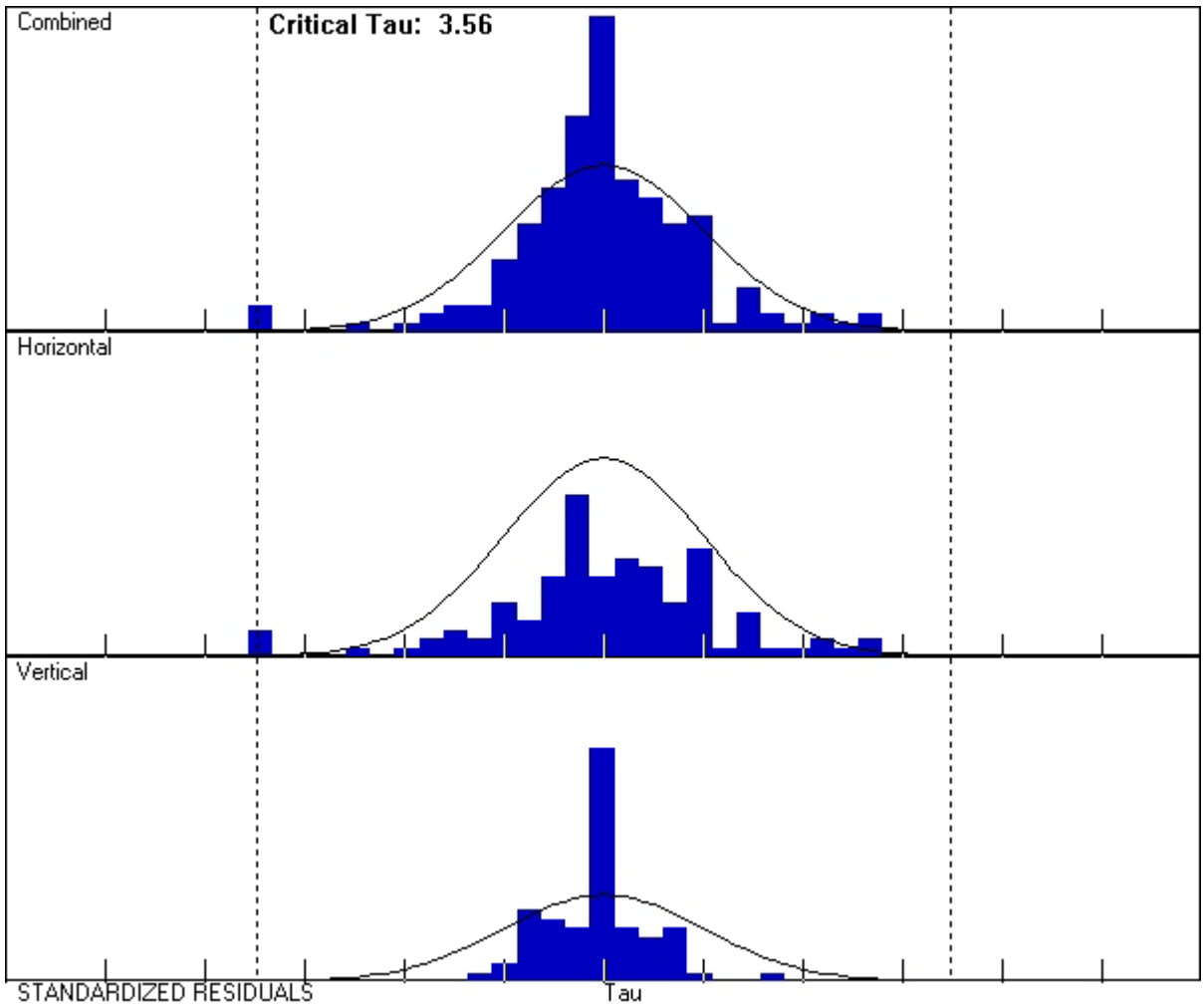
Number of Outliers : 0

Observation Adjustment (Critical Tau = 3.56). Any outliers are in **red**.

Observation ID	Point Name	Separation	A-posteriori Error (1.96σ)	Residual	Standardized Residual
G16	BAYC	-26.825m	0.034m	0.000m	0.00
G17	M005	-26.493m	0.034m	0.000m	0.00
G18	VAND	-27.220m	0.034m	0.000m	0.00
G19	2050	-26.942m	0.034m	0.000m	0.00
G20	EDNA	-27.330m	0.034m	0.000m	0.00
G21	FREE	-26.316m	0.034m	0.000m	0.00
G22	TXAG	-26.726m	0.034m	0.000m	0.00
G23	CLOVPORT	-27.055m	0.034m	0.000m	0.00
G24	TOWNSEND	-26.600m	0.034m	0.000m	0.00
G25	WALL	-27.380m	0.034m	0.000m	0.00
G26	EATX	-26.961m	0.034m	0.000m	0.00
G27	EAFY	-26.683m	0.034m	0.000m	0.00
G28	TXLM	-26.859m	0.034m	0.000m	0.00
G29	TXLI	-27.532m	0.034m	0.000m	0.00

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Histograms of Standardized Residuals



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Point Error Ellipses

BAYC	M005	VAND
<p>43°</p>	<p>47°</p>	<p>42°</p>
Tick Size: 0.0100m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
2050	EDNA	FREE

<p>48°</p>	<p>0°</p>	<p>43°</p>
<p>Tick Size: 0.0100m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ</p>		
<p>TXAG</p>	<p>CLOVPORT</p>	<p>TOWNSEND</p>
<p>41°</p>	<p>0°</p>	<p>0°</p>
<p>Tick Size: 0.0100m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ</p>		
<p>WALL</p>	<p>EATX</p>	<p>EAFY</p>
<p>52°</p>	<p>48°</p>	<p>44°</p>
<p>Tick Size: 0.0100m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ</p>		
<p>TXLM</p>	<p>TXLI</p>	
<p>47°</p>	<p>63°</p>	
<p>Tick Size: 0.0100m Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ</p>		

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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°03'46.5310"	0°00'00.0201"	0.099353	0.099353
		ΔHt.	-11.738m	0.030m		
		ΔElev.	-12.069m	0.079m		
		Dist.	39307.509m	0.004m		
BAYC	VAND	Az.	257°17'51.3502"	0°00'00.0151"	0.075188	0.075188
		ΔHt.	-2.889m	0.021m		
		ΔElev.	-2.495m	0.069m		
		Dist.	66563.762m	0.005m		
BAYC	2050	Az.	231°09'48.9930"	0°00'00.0138"	0.069868	0.069868
		ΔHt.	-10.970m	0.043m		
		ΔElev.	-10.853m	0.089m		
		Dist.	96078.600m	0.007m		
BAYC	EDNA	Az.	274°37'04.0155"	0°00'00.0164"	0.079135	0.079135
		ΔHt.	4.303m	0.032m		
		ΔElev.	4.807m	0.058m		
		Dist.	61567.750m	0.005m		
BAYC	FREE	Az.	94°56'48.5300"	0°00'00.0135"	0.064948	0.064948
		ΔHt.	-11.326m	0.021m		
		ΔElev.	-11.835m	0.068m		
		Dist.	59034.005m	0.004m		
BAYC	TXAG	Az.	65°38'09.6616"	0°00'00.0171"	0.089232	0.089232
		ΔHt.	-1.086m	0.026m		
		ΔElev.	-1.185m	0.063m		
		Dist.	56708.780m	0.005m		
BAYC	CLOVPORT	Az.	47°46'09.4366"	0°00'00.0105"	0.053928	0.053928
		ΔHt.	-2.199m	0.032m		

		ΔElev.	-1.970m	0.058m		
		Dist.	93107.056m	0.005m		
BAYC	TOWNSEND	Az.	70°11'08.5317"	0°00'00.0079"	0.039766	0.039766
		ΔHt.	-11.721m	0.032m		
		ΔElev.	-11.947m	0.058m		
		Dist.	125197.339m	0.005m		
BAYC	TXLM	Az.	61°27'23.8122"	0°00'00.0111"	0.056934	0.056934
		ΔHt.	-2.604m	0.035m		
		ΔElev.	-2.571m	0.060m		
		Dist.	102359.250m	0.006m		
BAYC	TXLI	Az.	42°49'13.1386"	0°00'00.0095"	0.048114	0.048114
		ΔHt.	3.715m	0.076m		
		ΔElev.	4.421m	0.077m		
		Dist.	167275.702m	0.008m		
M005	VAND	Az.	291°33'27.5797"	0°00'00.0158"	0.075566	0.075566
		ΔHt.	8.848m	0.032m		
		ΔElev.	9.575m	0.081m		
		Dist.	66830.509m	0.005m		
M005	2050	Az.	253°42'19.7624"	0°00'00.0153"	0.076688	0.076688
		ΔHt.	0.768m	0.026m		
		ΔElev.	1.216m	0.099m		
		Dist.	75063.607m	0.006m		
M005	FREE	Az.	61°00'22.6391"	0°00'00.0130"	0.065130	0.065130
		ΔHt.	0.411m	0.025m		
		ΔElev.	0.234m	0.080m		
		Dist.	70416.316m	0.005m		
VAND	2050	Az.	191°55'53.4627"	0°00'00.0267"	0.131062	0.131062
		ΔHt.	-8.080m	0.041m		
		ΔElev.	-8.358m	0.091m		
		Dist.	46676.549m	0.006m		
VAND	EDNA	Az.	9°59'43.8820"	0°00'00.0699"	0.342334	0.342334

		ΔHt.	7.192m	0.038m		
		ΔElev.	7.302m	0.061m		
		Dist.	19914.919m	0.007m		
VAND	FREE	Az.	85°16'04.7160"	0°00'00.0097"	0.048351	0.048351
		ΔHt.	-8.437m	0.028m		
		ΔElev.	-9.341m	0.071m		
		Dist.	124116.342m	0.006m		
FREE	TXAG	Az.	346°11'26.8870"	0°00'00.0324"	0.149575	0.149575
		ΔHt.	10.240m	0.028m		
		ΔElev.	10.650m	0.065m		
		Dist.	29369.398m	0.004m		
FREE	CLOVPORT	Az.	8°48'16.6585"	0°00'00.0119"	0.058724	0.058724
		ΔHt.	9.127m	0.035m		
		ΔElev.	9.866m	0.060m		
		Dist.	68421.979m	0.004m		
FREE	TOWNSEND	Az.	51°25'32.6972"	0°00'00.0106"	0.053950	0.053950
		ΔHt.	-0.395m	0.035m		
		ΔElev.	-0.111m	0.060m		
		Dist.	75739.806m	0.004m		
FREE	TXLM	Az.	30°14'07.3657"	0°00'00.0154"	0.079996	0.079996
		ΔHt.	8.722m	0.038m		
		ΔElev.	9.265m	0.063m		
		Dist.	62316.882m	0.005m		
FREE	TXLI	Az.	23°32'20.4098"	0°00'00.0104"	0.052365	0.052365
		ΔHt.	15.041m	0.082m		
		ΔElev.	16.257m	0.078m		
		Dist.	139071.244m	0.007m		
TXAG	CLOVPORT	Az.	24°03'30.8522"	0°00'00.0209"	0.107404	0.107404
		ΔHt.	-1.113m	0.026m		
		ΔElev.	-0.785m	0.055m		
		Dist.	42826.300m	0.005m		

TXAG	TOWNSEND	Az.	74°11'28.6427"	0°00'00.0131"	0.066776	0.066776
		ΔHt.	-10.635m	0.026m		
		ΔElev.	-10.762m	0.055m		
		Dist.	68814.416m	0.005m		
TXAG	TXLM	Az.	56°33'31.2278"	0°00'00.0218"	0.114572	0.114572
		ΔHt.	-1.518m	0.028m		
		ΔElev.	-1.386m	0.058m		
		Dist.	45987.348m	0.005m		
TXAG	TXLI	Az.	32°15'19.6584"	0°00'00.0119"	0.060662	0.060662
		ΔHt.	4.801m	0.067m		
		ΔElev.	5.606m	0.074m		
		Dist.	117086.988m	0.007m		
CLOVPORT	TOWNSEND	Az.	112°45'09.2135"	0°00'00.0000"	0.000000	0.000000
		ΔHt.	-9.522m	0.000m		
		ΔElev.	-9.977m	0.048m		
		Dist.	52832.440m	0.000m		
CLOVPORT	TXLM	Az.	123°26'04.2508"	0°00'00.0335"	0.149679	0.149679
		ΔHt.	-0.405m	0.019m		
		ΔElev.	-0.601m	0.052m		
		Dist.	25037.131m	0.004m		
CLOVPORT	TXLI	Az.	37°00'58.8079"	0°00'00.0142"	0.072407	0.072407
		ΔHt.	5.914m	0.051m		
		ΔElev.	6.391m	0.070m		
		Dist.	74947.314m	0.005m		
TOWNSEND	TXLM	Az.	283°39'47.5229"	0°00'00.0288"	0.133621	0.133621
		ΔHt.	9.117m	0.019m		
		ΔElev.	9.376m	0.052m		
		Dist.	28608.089m	0.004m		
TOWNSEND	TXLI	Az.	357°40'49.6118"	0°00'00.0134"	0.066808	0.066808
		ΔHt.	15.436m	0.051m		
		ΔElev.	16.368m	0.070m		

		Dist.	80355.704m	0.005m		
WALL	EATX	Az.	102°23'12.0222"	0°00'00.0167"	0.080135	0.080135
		ΔHt.	-2.683m	0.027m		
		ΔElev.	-3.102m	0.070m		
		Dist.	64600.995m	0.005m		
WALL	EAFY	Az.	185°12'32.1533"	0°00'00.0201"	0.098280	0.098280
		ΔHt.	-1.763m	0.037m		
		ΔElev.	-2.460m	0.066m		
		Dist.	50055.078m	0.005m		
WALL	TXLM	Az.	211°24'08.4460"	0°00'00.0190"	0.095154	0.095154
		ΔHt.	7.479m	0.034m		
		ΔElev.	6.957m	0.064m		
		Dist.	54472.712m	0.005m		
WALL	TXLI	Az.	351°55'56.6866"	0°00'00.0355"	0.171144	0.171144
		ΔHt.	13.798m	0.026m		
		ΔElev.	13.950m	0.079m		
		Dist.	27306.805m	0.005m		
EATX	EAFY	Az.	242°18'20.8450"	0°00'00.0147"	0.073528	0.073528
		ΔHt.	0.920m	0.030m		
		ΔElev.	0.642m	0.065m		
		Dist.	76620.168m	0.006m		
EATX	TXLM	Az.	250°41'16.2693"	0°00'00.0132"	0.065444	0.065444
		ΔHt.	10.162m	0.031m		
		ΔElev.	10.060m	0.062m		
		Dist.	97126.912m	0.006m		
EATX	TXLI	Az.	301°44'56.1336"	0°00'00.0154"	0.072736	0.072736
		ΔHt.	16.481m	0.041m		
		ΔElev.	17.052m	0.078m		
		Dist.	78433.753m	0.006m		
EAFY	TXLM	Az.	277°59'09.1545"	0°00'00.0405"	0.194313	0.194313
		ΔHt.	9.242m	0.020m		

		ΔElev.	9.418m	0.058m		
		Dist.	24072.907m	0.005m		
EAFY	TXLI	Az.	0°30'26.8603"	0°00'00.0152"	0.074638	0.074638
		ΔHt.	15.561m	0.055m		
		ΔElev.	16.410m	0.074m		
		Dist.	76888.211m	0.006m		
TXLM	TXLI	Az.	18°19'06.3590"	0°00'00.0128"	0.064134	0.064134
		ΔHt.	6.319m	0.049m		
		ΔElev.	6.992m	0.072m		
		Dist.	77520.766m	0.005m		

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