

Benton County Iowa

Countywide G.P.S. Survey Control Network

2003

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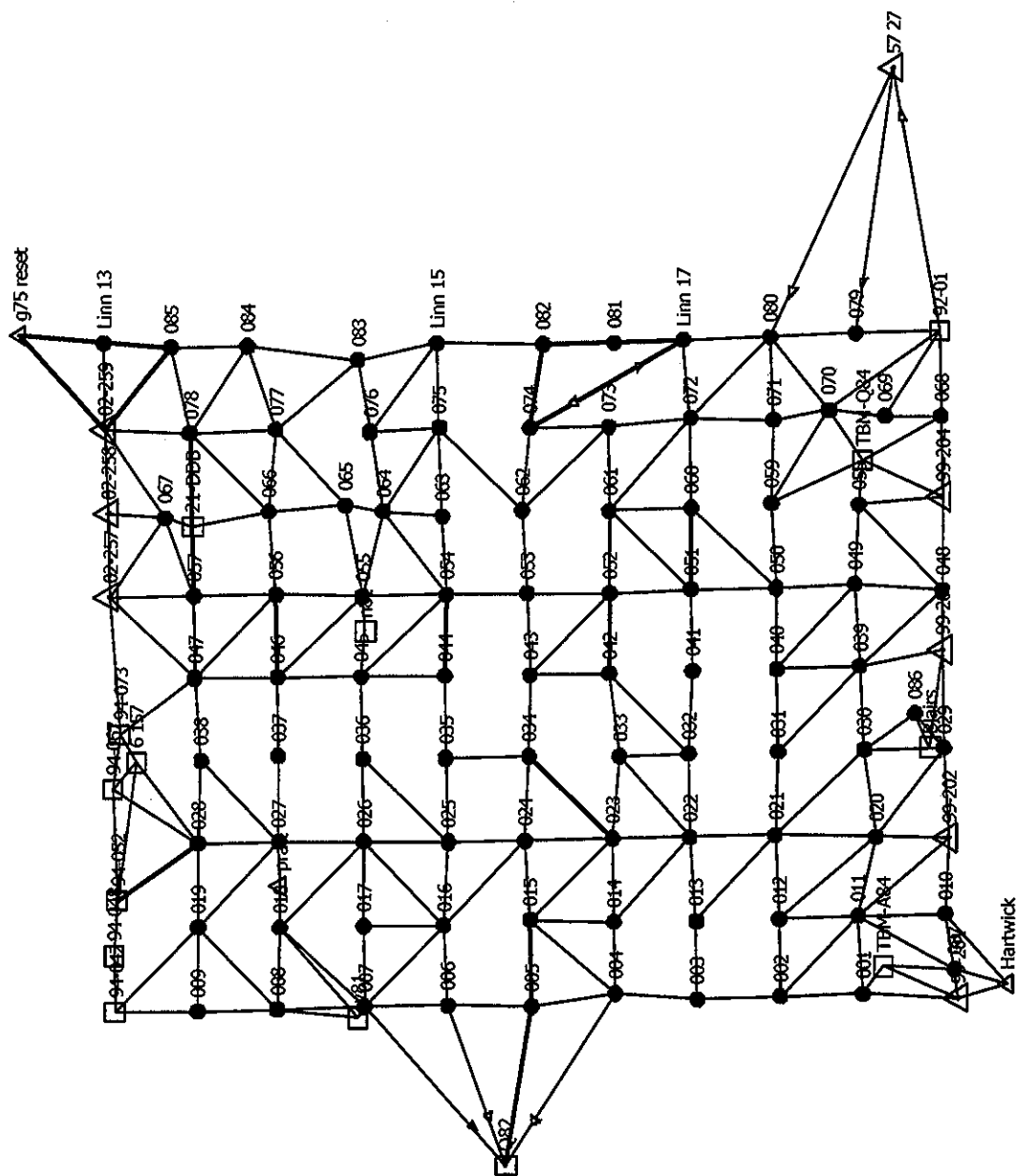
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Field surveyor:
DBC & GGB
Computer operator:
Gary Brown
Reference:
Benton Co Final Adj.

Scale 1" to 33333 ft
0 62500 sft
US survey feet



Site: Not selected, System: US State Plane 1983
Zone: Iowa North 1401, Datum: NAD 1983 (Conus)

Project: BentonCoFinal
USFeet Template

Plot Scale: 1" to 33333 ft
Printed on 1/22/2004, at 1:45:02 PM

Printed from Trimble Geomatics Office



0°00'00"

INTRODUCTION

In 2003 Benton County, Iowa, contracted with DC Inc. to complete a high accuracy GPS control survey for the purpose of establishing a county-wide survey control system and for future use in a county wide GIS system.

Eighty Seven (87) new control stations were added within the County along with , four (4) existing Iowa County GPS control points, five (5) existing Black Hawk County GPS control points, three (3) Buchanan County GPS control points, one (1) Johnson County GPS control point, and three (3) Linn County GPS control points were recovered and tied into the GPS network. An additional eight (8) NGS and USGS first, second and third order benchmarks were included in the network along with four (4) existing HARN positions. A total of one hundred fifteen (115) points were measured.

PROJECT REQUIREMENTS

The purpose of this survey was to establish new state plane control throughout the project area, using a new horizontal and vertical control network with GPS survey equipment and techniques. This network was horizontally referenced to the Iowa High Accuracy Reference Network (HARN) of 1996. Vertically the network was referenced to the North American Vertical Datum of 1988 (NAVD88). Because this control would be utilized for many different purposes, it was important that the network geometry be ideal for a strong GPS survey. All new point locations for control were selected with the needs of future multiple uses and GPS survey requirements in mind. In some instances, it was necessary to adjust locations because of physical obstructions or existing land features. In these instances, the network was constructed with the coverage of the county held as primary and the GPS survey needs satisfied secondly. Because both of these philosophies support good geometry the network structure was not compromised.

MONUMENTATION

To perpetuate the GPS control measurements, 87 new permanent monuments were set for Benton County. BERNTSEN driven aluminum rod monuments were selected for the permanent monuments. Each BERNTSEN station monument consists of one three-foot smooth rod section and one three-foot top security fluted rod section with a stamped cap fastened to the top, all constructed of aluminum material. There is a permanent magnet mounted on the underside of the monument cap for future recovery with a magnetic locator. These monuments were driven to approximately 6" below the existing ground surface. For easy access and protection, a 24" long 5" diameter PVC pipe was placed over each rod monument along with a pre-cast aluminum access cover and backfilled with sand to facilitate drainage and to minimize frost movement. For temporary positions rebar points that consist of 1/2" diameter 30" long deformed rebar were set. A Carsonite marker was placed as a witness point at each new permanent monument position.

The Engineer's Office from Benton County handled the coordination of marking the various underground utility locations for each new permanent monument site.

RECONNAISSANCE

The most important criterion for GPS observations at any given location is a clear view to the sky. In terms of network design, it is desirable that the horizontal control be located near the perimeter and also throughout the project site if possible. With this in mind, existing HARN horizontal stations were recovered in and/or near Benton County along with other control that has been adjusted to the HARN. All positions in and near the county were chosen to be included in the network.

Vertical control was selected to provide as much coverage as possible, both at the periphery and in the interior of the project area. In addition, one (1) HARN station with vertical control and eight (8) existing NGS and USGS benchmarks were recovered and included in this survey. Three of the benchmarks were measured using offset points with the remaining benchmarks occupied directly.

FIELD SURVEY

Four Trimble 24 channel dual frequency Geodetic GPS receivers with Everest multi-path mitigation and high performance low elevation satellite tracking were used in this survey. Three Trimble model 5700 receivers and one model 5800 receiver were used for the survey. GPS observations began Sunday, December 14, 2003. GPS observations were made during daylight and evening hours from Sunday, December 14, 2003, through Friday, December 19, 2003.

Rapid static GPS techniques were utilized to minimize the time and cost of the survey. The satellite "window", where at least six satellites were observable, was open for much of the day with only a few short periods of unacceptable coverage because of the number of satellites or bad geometry. Each measurement period during which all receivers observe satellites simultaneously lasted from 10 minutes to 100 minutes, depending on the distance being measured and the geometry of the satellite constellation.

DATA ADJUSTMENT

A total number of 339 vectors were observed and processed. Based on statistical indicators from the Trimble Geomatics Office processing software, there were no vectors flagged as outliers. After removal of trivial vectors the final network is comprised of 115 stations and 265 baselines. All data adjustment was performed using the Trimble Geomatics Office least squares adjustment software. An initial free adjustment was performed in NAD83 to check the overall quality of the GPS data and the nature of the control. The initial unconstrained (free) adjustment yielded baseline precisions which ranged from 1:102,000 to 1:2,027,000. Once the horizontal and vertical control was verified, subsequent adjustments were performed to arrive at the optimal solutions for each datum.

NAD83 (1996)

The initial free adjustment was performed holding HARN point Pratt fixed horizontally with the vertical adjustment disabled. Coordinate values on the other HARN control stations were then checked against the published values. The network fit the published HARN values within a few hundredths of a foot. Because all data fit so well the other HARN-referenced stations from other counties were added to the network and a new adjustment performed. After each adjustment a comparison of adjusted coordinates vs. published values was made. By holding all of the existing HARN stations fixed, and the control that

was adjusted to the HARN, the precision of the "free" adjustment degraded very little. The horizontal position on the Johnson county control point was not adjusted to HARN point 57 27 during the readjustment of the Johnson County project to the HARN. Since this was not done this point was held only in vertical with a new horizontal position derived using HARN point 57 27 to control the point. The three Linn county points were suspect when viewed in the field. These points could be easily moved in both horizontal and vertical position. It was observed that they were rebar monuments and accordingly are in questionable condition for stability. For this reason and also because all three of these monuments did not fit the adjustment in horizontal or vertical, the points were not used in the adjustment and new positions were derived for these points.

Once we were satisfied with the horizontal adjustment, we locked the horizontal positions and concentrated on the vertical adjustment. The Geoid 99 Central zone was utilized to provide a model of the height of the Geoid. Adjustments were then performed locking on to the vertical control stations one at a time beginning with N81. Vertical control was added station by station with the elevations on the benchmarks being then checked against the published values. No other vertical control was excluded from the network other than the Linn county points referenced above.

A final adjustment of both horizontal and vertical was then performed. All of the horizontal control points were held fixed in x and y and all vertical control were held fixed in z. This fully constrained adjustment solved for scale and rotation. In the final adjusted network, 100% of the adjusted vectors have an estimated error of x, y and z baseline precision after adjustment was between 1:82,000 to 1:2,251,000. All of the processed data and error factors were computed using a 95% confidence level factor. The results are well in excess of the first-order precision.

CONCLUSION

All measured point accuracies exceed first-order standards. The control point locations are within (± 0.05 ft) horizontal position and within ± 0.10 ft. vertically for benchmark use.

Network Adjustment Report

Project : BentonCoFinal

User name	gbrown	Date & Time	1:32:21 PM 1/22/2004
Coordinate System	US State Plane 1983	Zone	Iowa North 1401
Project Datum	NAD 1983 (Conus)		
Vertical Datum	NAVD88	Geoid Model	GEOID99 (Conus)
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

Adjustment Style Settings - 95% Confidence Limits

Residual Tolerances

To End Iterations : 0.000033sft

Final Convergence Cutoff : 0.016404sft

Covariance Display

Horizontal

Propagated Linear Error [E] : U.S.

Constant Term [C] : 0.00000000sft

Scale on Linear Error [S] : 1.96

Three-Dimensional

Propagated Linear Error [E] : U.S.

Constant Term [C] : 0.00000000sft

Scale on Linear Error [S] : 1.96

Height Errors were used in the calculations.

Adjustment Controls

Compute Correlations for Geoid : True

Horizontal and Vertical adjustment performed

Set-up Errors

GPS

Error in Height of Antenna : 0.015sft

Centering Error : 0.015sft

Statistical Summary

Successful Adjustment in 1 iteration(s)

Network Reference Factor : 1.00

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

Degrees of Freedom : 490.00

GPS Observation Statistics

Reference Factor : 1.00

Redundancy Number (r) : 473.08

Geoid Model Statistics

Reference Factor : 1.00

Redundancy Number (r) : 16.92

Weighting Strategies

GPS Observations

User-defined Scalar Applied to All Observations

Scalar : 1.73

Geoid Observations

User-defined Scalar Applied to All Observations

Scalar : 0.16

Adjusted Coordinates

Adjustment performed in NAD 1983 (Conus)

Number of Points : 115

Number of Constrained Points : 25

Horizontal Only : 3

Elevation Only : 14

Horizontal and Elevation Only : 8

Adjusted Grid Coordinates

Errors are reported using 1.96σ .

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
001	3431324.438sft	0.029sft	5249559.673sft	0.029sft	786.530sft	0.078sft	
011	3432189.898sft	0.022sft	5264333.520sft	0.021sft	862.852sft	0.087sft	
012	3447248.386sft	0.029sft	5263808.227sft	0.029sft	929.382sft	0.119sft	
002	3447055.953sft	0.032sft	5249081.929sft	0.032sft	849.910sft	0.120sft	
040	3447847.854sft	0.030sft	5311363.208sft	0.029sft	849.470sft	0.129sft	
050	3448055.290sft	0.029sft	5326769.512sft	0.028sft	899.008sft	0.125sft	
049	3433132.920sft	0.026sft	5327502.664sft	0.026sft	866.190sft	0.102sft	
020	3428991.963sft	0.024sft	5279421.085sft	0.023sft	938.835sft	0.093sft	
021	3448095.914sft	0.027sft	5279849.385sft	0.026sft	916.882sft	0.127sft	
030	3431127.135sft	0.028sft	5296040.754sft	0.027sft	946.753sft	0.095sft	
031	3447553.931sft	0.033sft	5295650.792sft	0.032sft	862.126sft	0.130sft	
039	3432087.899sft	0.024sft	5311882.045sft	0.023sft	826.811sft	0.100sft	
92-01	3417121.624sft	0.027sft	5375731.086sft	0.026sft	780.830sft	0.000sft	e
57 27	3426048.720sft	0.000sft	5425898.440sft	0.000sft	810.720sft	0.000sft	N E e
080	3449322.711sft	0.026sft	5374654.299sft	0.025sft	809.070sft	0.128sft	
079	3433074.362sft	0.031sft	5375315.902sft	0.030sft	822.402sft	0.101sft	
068	3416814.001sft	0.028sft	5359451.359sft	0.028sft	845.242sft	0.087sft	
99-204	3416526.250sft	0.000sft	5344120.370sft	0.000sft	871.200sft	0.000sft	N E e
069	3427454.889sft	0.033sft	5359553.287sft	0.032sft	832.802sft	0.081sft	
TBM-Q84	3431666.098sft	0.026sft	5351034.729sft	0.025sft	810.100sft	0.000sft	e

048	3416494.159sft	0.023sft	5326379.575sft	0.022sft	884.204sft	0.081sft	
99-203	3416337.540sft	0.000sft	5314981.080sft	0.000sft	911.160sft	0.000sft	N E e
058	3432385.843sft	0.025sft	5342664.204sft	0.025sft	841.723sft	0.079sft	
029	3416096.929sft	0.025sft	5296312.791sft	0.024sft	930.609sft	0.052sft	
086	3421514.318sft	0.033sft	5302890.438sft	0.032sft	922.113sft	0.071sft	
Blairs	3418627.988sft	0.028sft	5296356.749sft	0.027sft	933.500sft	0.000sft	e
99-202	3415048.250sft	0.000sft	5279198.280sft	0.000sft	843.560sft	0.000sft	N E e
087	3413896.849sft	0.022sft	5254179.637sft	0.022sft	775.749sft	0.064sft	
010	3415678.404sft	0.024sft	5264780.263sft	0.024sft	761.738sft	0.081sft	
Hartwick	3403708.800sft	0.000sft	5251433.200sft	0.000sft	935.589sft	0.093sft	N E
99-201	3413178.870sft	0.000sft	5248688.780sft	0.000sft	770.300sft	0.000sft	N E e
TBM-A84	3427432.151sft	0.029sft	5254754.248sft	0.029sft	820.030sft	0.000sft	e
070	3438081.099sft	0.026sft	5360682.888sft	0.026sft	846.198sft	0.092sft	
006	3510310.874sft	0.039sft	5247440.923sft	0.037sft	932.112sft	0.108sft	
Q82	3499208.825sft	0.044sft	5217091.545sft	0.041sft	865.280sft	0.000sft	e
007	3526173.117sft	0.034sft	5247211.867sft	0.033sft	945.961sft	0.056sft	
005	3494409.133sft	0.038sft	5247291.323sft	0.037sft	859.098sft	0.125sft	
082	3492677.877sft	0.036sft	5373309.045sft	0.035sft	851.414sft	0.166sft	
Linn 17	3465871.038sft	0.033sft	5374046.594sft	0.032sft	854.902sft	0.150sft	
074	3495171.971sft	0.034sft	5357416.777sft	0.033sft	852.305sft	0.157sft	
081	3479161.065sft	0.046sft	5373552.069sft	0.045sft	841.487sft	0.166sft	
062	3496631.761sft	0.034sft	5341720.934sft	0.034sft	887.453sft	0.146sft	
073	3480105.135sft	0.035sft	5357642.725sft	0.034sft	833.676sft	0.156sft	
052	3479815.922sft	0.032sft	5325877.172sft	0.031sft	893.307sft	0.147sft	
042	3479962.130sft	0.034sft	5310550.635sft	0.033sft	960.743sft	0.147sft	
043	3494955.769sft	0.035sft	5310359.733sft	0.034sft	908.813sft	0.140sft	
053	3495678.498sft	0.033sft	5325858.160sft	0.032sft	918.258sft	0.139sft	
034	3495069.456sft	0.033sft	5294834.568sft	0.033sft	889.919sft	0.142sft	
023	3479125.996sft	0.032sft	5279171.522sft	0.031sft	952.355sft	0.146sft	
015	3494682.765sft	0.036sft	5263749.712sft	0.035sft	927.517sft	0.138sft	
014	3478909.081sft	0.037sft	5263266.804sft	0.036sft	931.697sft	0.143sft	
059	3448979.330sft	0.031sft	5342946.203sft	0.030sft	895.635sft	0.117sft	

071	3448686.552sft	0.030sft	5358845.500sft	0.030sft	867.094sft	0.116sft	
072	3464486.723sft	0.030sft	5359114.024sft	0.029sft	832.270sft	0.143sft	
060	3464191.839sft	0.032sft	5342023.336sft	0.032sft	900.000sft	0.142sft	
032	3464696.381sft	0.036sft	5295290.903sft	0.035sft	926.333sft	0.146sft	
041	3463903.961sft	0.042sft	5311022.784sft	0.041sft	906.727sft	0.149sft	
022	3464384.298sft	0.031sft	5279381.494sft	0.031sft	896.676sft	0.143sft	
013	3463081.628sft	0.036sft	5263477.533sft	0.035sft	917.711sft	0.140sft	
003	3462771.864sft	0.037sft	5248599.155sft	0.037sft	929.535sft	0.136sft	
004	3478574.833sft	0.037sft	5249722.024sft	0.036sft	952.352sft	0.136sft	
033	3477919.465sft	0.036sft	5294845.118sft	0.035sft	948.654sft	0.148sft	
051	3464368.158sft	0.032sft	5326550.281sft	0.031sft	932.445sft	0.143sft	
061	3480028.296sft	0.034sft	5341574.132sft	0.032sft	887.615sft	0.151sft	
008	3542907.729sft	0.036sft	5246693.100sft	0.034sft	1013.146sft	0.097sft	
018	3542415.551sft	0.030sft	5262232.287sft	0.029sft	950.916sft	0.108sft	
y81	3527520.742sft	0.040sft	5245052.122sft	0.039sft	971.570sft	0.000sft	e
pratt	3542469.900sft	0.000sft	5270220.050sft	0.000sft	978.388sft	0.116sft	NE
026	3526513.178sft	0.030sft	5278599.717sft	0.029sft	966.117sft	0.124sft	
024	3495798.992sft	0.034sft	5278742.828sft	0.033sft	979.330sft	0.143sft	
016	3511302.991sft	0.033sft	5262658.689sft	0.032sft	954.036sft	0.122sft	
035	3510978.480sft	0.037sft	5294484.836sft	0.036sft	890.314sft	0.133sft	
044	3511195.907sft	0.035sft	5310144.359sft	0.034sft	836.613sft	0.116sft	
025	3510332.262sft	0.033sft	5278524.620sft	0.033sft	975.567sft	0.134sft	
036	3526662.650sft	0.037sft	5294380.584sft	0.037sft	971.419sft	0.122sft	
017	3526405.241sft	0.038sft	5262507.696sft	0.037sft	983.666sft	0.111sft	
027	3542613.472sft	0.026sft	5278589.369sft	0.026sft	949.178sft	0.116sft	
075	3512371.622sft	0.034sft	5357459.750sft	0.033sft	902.474sft	0.151sft	
Linn 15	3512931.402sft	0.036sft	5373540.195sft	0.035sft	880.818sft	0.166sft	
083	3527958.196sft	0.034sft	5370324.098sft	0.033sft	826.314sft	0.156sft	
076	3525558.483sft	0.035sft	5356635.252sft	0.034sft	955.807sft	0.142sft	
063	3511710.428sft	0.038sft	5340611.740sft	0.036sft	861.145sft	0.134sft	
054	3510936.575sft	0.031sft	5325670.773sft	0.030sft	873.044sft	0.115sft	
064	3523069.118sft	0.032sft	5341522.391sft	0.031sft	853.106sft	0.123sft	

n81	3526344.132sft	0.042sft	5318541.293sft	0.042sft	797.480sft	0.000sft	e
045	3527043.728sft	0.033sft	5310052.912sft	0.032sft	807.645sft	0.086sft	
055	3526947.219sft	0.032sft	5325244.204sft	0.030sft	805.640sft	0.079sft	
02-259	3575924.770sft	0.000sft	5356994.700sft	0.000sft	972.080sft	0.000sft	N E e
02-258	3575338.180sft	0.000sft	5341042.780sft	0.000sft	866.160sft	0.000sft	N E e
g75 reset	3592385.070sft	0.000sft	5375141.820sft	0.000sft	940.985sft	0.151sft	N E
067	3564616.644sft	0.021sft	5340180.933sft	0.021sft	911.670sft	0.060sft	
085	3563602.519sft	0.020sft	5372774.516sft	0.019sft	854.361sft	0.124sft	
Linn 13	3576446.198sft	0.028sft	5373557.495sft	0.026sft	921.468sft	0.123sft	
94-073	3573093.421sft	0.030sft	5298987.697sft	0.030sft	852.590sft	0.000sft	e
6 157	3569867.642sft	0.038sft	5293663.857sft	0.038sft	817.280sft	0.000sft	e
047	3558866.150sft	0.025sft	5309780.209sft	0.024sft	827.586sft	0.094sft	
02-257	3575110.960sft	0.000sft	5325199.540sft	0.000sft	841.240sft	0.000sft	N E e
94-067	3574340.984sft	0.037sft	5288518.707sft	0.036sft	824.310sft	0.000sft	e
037	3542869.502sft	0.038sft	5294922.301sft	0.037sft	933.529sft	0.115sft	
056	3543298.600sft	0.027sft	5325567.592sft	0.027sft	873.073sft	0.095sft	
046	3542977.365sft	0.029sft	5309867.032sft	0.028sft	848.952sft	0.101sft	
065	3530197.224sft	0.033sft	5342599.675sft	0.032sft	860.288sft	0.122sft	
077	3543543.431sft	0.030sft	5357073.998sft	0.030sft	872.200sft	0.125sft	
066	3544874.729sft	0.028sft	5341438.253sft	0.028sft	888.263sft	0.101sft	
057	3559014.756sft	0.023sft	5325400.529sft	0.023sft	842.558sft	0.083sft	
21-DDB	3559327.431sft	0.025sft	5338557.131sft	0.025sft	901.280sft	0.000sft	e
038	3557573.967sft	0.034sft	5294009.488sft	0.033sft	858.442sft	0.096sft	
028	3558116.112sft	0.032sft	5278294.169sft	0.031sft	895.330sft	0.097sft	
019	3557931.434sft	0.035sft	5262314.308sft	0.034sft	932.361sft	0.097sft	
009	3558087.546sft	0.042sft	5246349.911sft	0.041sft	844.690sft	0.097sft	
94-042	3573740.719sft	0.045sft	5246262.395sft	0.044sft	982.720sft	0.000sft	e
94-052	3573397.925sft	0.038sft	5267463.228sft	0.038sft	841.730sft	0.000sft	e
94-048	3573939.030sft	0.048sft	5256874.323sft	0.047sft	882.040sft	0.000sft	e
078	3559920.494sft	0.024sft	5356343.325sft	0.023sft	925.405sft	0.096sft	
084	3549011.729sft	0.031sft	5372932.965sft	0.030sft	830.935sft	0.142sft	

Adjusted Geodetic Coordinates

Errors are reported using 1.96σ .

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
001	41°54'23.49867"N	0.029sft	92°17'38.18410"W	0.029sft	682.665sft	0.305sft	
011	41°54'29.91849"N	0.022sft	92°14'22.66124"W	0.021sft	759.008sft	0.291sft	
012	41°56'58.73834"N	0.029sft	92°14'26.64102"W	0.029sft	825.844sft	0.282sft	
002	41°56'58.95788"N	0.032sft	92°17'41.53573"W	0.032sft	746.330sft	0.295sft	
040	41°56'57.17640"N	0.030sft	92°03'57.28507"W	0.029sft	745.749sft	0.260sft	
050	41°56'56.59267"N	0.029sft	92°00'33.39280"W	0.028sft	795.139sft	0.258sft	
049	41°54'29.07346"N	0.026sft	92°00'27.17833"W	0.026sft	761.932sft	0.269sft	
020	41°53'56.05989"N	0.024sft	92°11'03.81525"W	0.023sft	834.894sft	0.284sft	
021	41°57'04.69421"N	0.027sft	92°10'54.21375"W	0.026sft	813.351sft	0.270sft	
030	41°54'14.53573"N	0.028sft	92°07'23.62748"W	0.027sft	842.743sft	0.275sft	
031	41°56'56.85313"N	0.033sft	92°07'25.24725"W	0.032sft	758.507sft	0.264sft	
039	41°54'21.42319"N	0.024sft	92°03'53.96013"W	0.023sft	722.689sft	0.270sft	
92-01	41°51'42.02346"N	0.027sft	91°49'53.67749"W	0.026sft	675.564sft	0.298sft	e
57 27	41°52'59.87090"N	0.000sft	91°38'48.29258"W	0.000sft	704.758sft	0.334sft	Lat Long e
080	41°57'00.27749"N	0.026sft	91°49'59.51490"W	0.025sft	704.475sft	0.275sft	
079	41°54'19.66643"N	0.031sft	91°49'55.00369"W	0.030sft	717.453sft	0.286sft	
068	41°51'42.10199"N	0.028sft	91°53'28.85125"W	0.028sft	740.235sft	0.292sft	
99-204	41°51'42.09118"N	0.000sft	91°56'51.48484"W	0.000sft	766.414sft	0.285sft	Lat Long e
069	41°53'27.18215"N	0.033sft	91°53'24.82705"W	0.032sft	728.000sft	0.282sft	
TBM-Q84	41°54'10.36306"N	0.026sft	91°55'16.39185"W	0.025sft	705.497sft	0.276sft	e
048	41°51'44.92472"N	0.023sft	92°00'45.89935"W	0.022sft	779.610sft	0.283sft	
99-203	41°51'45.33076"N	0.000sft	92°03'16.54489"W	0.000sft	806.684sft	0.284sft	Lat Long e
058	41°54'19.00118"N	0.025sft	91°57'06.88704"W	0.025sft	737.259sft	0.272sft	
029	41°51'46.03236"N	0.025sft	92°07'23.26757"W	0.024sft	826.261sft	0.289sft	
086	41°52'38.47434"N	0.033sft	92°05'55.16821"W	0.032sft	817.830sft	0.282sft	
Blairs	41°52'11.02559"N	0.028sft	92°07'22.14186"W	0.027sft	829.198sft	0.286sft	e
99-202	41°51'38.36469"N	0.000sft	92°11'09.62660"W	0.000sft	739.346sft	0.297sft	Lat Long e
087	41°51'30.69865"N	0.022sft	92°16'40.42619"W	0.022sft	671.589sft	0.315sft	

010	41°51'46.75827"N	0.024sft	92°14'20.01111"W	0.024sft	657.579sft	0.305sft	
Hartwick	41°49'50.45489"N	0.000sft	92°17'18.64383"W	0.000sft	831.284sft	0.328sft	Lat Long
99-201	41°51'24.38431"N	0.000sft	92°17'53.11138"W	0.000sft	666.150sft	0.319sft	Lat Long e
TBM-A84	41°53'44.31398"N	0.029sft	92°16'30.24243"W	0.029sft	716.091sft	0.303sft	e
070	41°55'11.92381"N	0.026sft	91°53'07.21215"W	0.026sft	741.616sft	0.274sft	
006	42°07'24.00685"N	0.039sft	92°17'51.34416"W	0.037sft	829.352sft	0.284sft	
Q82	42°05'38.40701"N	0.044sft	92°24'35.94247"W	0.041sft	762.194sft	0.313sft	e
007	42°10'00.72285"N	0.034sft	92°17'51.38970"W	0.033sft	843.315sft	0.289sft	
005	42°04'46.95380"N	0.038sft	92°17'56.32685"W	0.037sft	756.188sft	0.282sft	
082	42°04'08.75223"N	0.036sft	91°50'06.01474"W	0.035sft	747.800sft	0.269sft	
Linn 17	41°59'43.84114"N	0.033sft	91°50'03.24062"W	0.032sft	750.682sft	0.270sft	
074	42°04'36.42393"N	0.034sft	91°53'36.05497"W	0.033sft	749.127sft	0.259sft	
081	42°01'55.20115"N	0.046sft	91°50'06.32241"W	0.045sft	737.557sft	0.271sft	
062	42°04'53.73611"N	0.034sft	91°57'03.79321"W	0.034sft	784.609sft	0.252sft	
073	42°02'07.56633"N	0.035sft	91°53'36.85560"W	0.034sft	730.124sft	0.259sft	
052	42°02'10.45540"N	0.032sft	92°00'37.79465"W	0.031sft	790.285sft	0.248sft	
042	42°02'14.51658"N	0.034sft	92°04'00.83267"W	0.033sft	857.838sft	0.248sft	
043	42°04'42.64623"N	0.035sft	92°03'59.99347"W	0.034sft	806.215sft	0.248sft	
053	42°04'47.13738"N	0.033sft	92°00'34.34076"W	0.032sft	815.610sft	0.248sft	
034	42°04'46.31753"N	0.033sft	92°07'25.81192"W	0.033sft	787.306sft	0.251sft	
023	42°02'11.30052"N	0.032sft	92°10'56.78358"W	0.031sft	849.439sft	0.259sft	
015	42°04'47.28859"N	0.036sft	92°14'18.04766"W	0.035sft	824.742sft	0.268sft	
014	42°02'11.55215"N	0.037sft	92°14'27.56562"W	0.036sft	828.718sft	0.270sft	
059	41°57'02.84551"N	0.031sft	91°56'59.13485"W	0.030sft	791.579sft	0.261sft	
071	41°56'57.01944"N	0.030sft	91°53'28.84194"W	0.030sft	762.793sft	0.267sft	
072	41°59'33.02686"N	0.030sft	91°53'21.30558"W	0.029sft	728.334sft	0.261sft	
060	41°59'33.26818"N	0.032sft	91°57'07.65983"W	0.032sft	796.346sft	0.255sft	
032	41°59'46.23485"N	0.036sft	92°07'26.31689"W	0.035sft	823.136sft	0.256sft	
041	41°59'35.82517"N	0.042sft	92°03'58.18579"W	0.041sft	803.436sft	0.255sft	
022	41°59'45.65588"N	0.031sft	92°10'57.04576"W	0.031sft	793.487sft	0.263sft	
013	41°59'35.18257"N	0.036sft	92°14'27.89666"W	0.035sft	814.480sft	0.275sft	
003	41°59'34.26390"N	0.037sft	92°17'44.96150"W	0.037sft	826.234sft	0.287sft	

004	42°02'10.20373"N	0.037sft	92°17'27.10051"W	0.036sft	849.288sft	0.281sft	
033	42°01'56.91716"N	0.036sft	92°07'29.37126"W	0.035sft	845.737sft	0.252sft	
051	41°59'37.75683"N	0.032sft	92°00'32.48645"W	0.031sft	829.012sft	0.252sft	
061	42°02'09.76807"N	0.034sft	91°57'09.76927"W	0.032sft	784.362sft	0.252sft	
008	42°12'46.09644"N	0.036sft	92°17'55.11996"W	0.034sft	910.661sft	0.299sft	
018	42°12'39.00142"N	0.030sft	92°14'28.74372"W	0.029sft	848.671sft	0.287sft	
y81	42°10'14.33685"N	0.040sft	92°18'19.81337"W	0.039sft	868.902sft	0.293sft	e
pratt	42°12'38.34968"N	0.000sft	92°12'42.60092"W	0.000sft	876.270sft	0.283sft	Lat Long
026	42°09'59.45954"N	0.030sft	92°10'54.56897"W	0.029sft	863.876sft	0.267sft	
024	42°04'56.05549"N	0.034sft	92°10'59.02207"W	0.033sft	876.669sft	0.259sft	
016	42°07'31.61868"N	0.033sft	92°14'29.23281"W	0.032sft	851.440sft	0.272sft	
035	42°07'23.51482"N	0.037sft	92°07'27.01580"W	0.036sft	787.972sft	0.256sft	
044	42°07'23.09212"N	0.035sft	92°03'59.19741"W	0.034sft	734.322sft	0.252sft	
025	42°07'19.64274"N	0.033sft	92°10'58.91316"W	0.033sft	873.107sft	0.262sft	
036	42°09'58.45158"N	0.037sft	92°07'25.01064"W	0.037sft	869.339sft	0.263sft	
017	42°10'00.81622"N	0.038sft	92°14'28.25221"W	0.037sft	881.233sft	0.278sft	
027	42°12'38.49295"N	0.026sft	92°10'51.37064"W	0.026sft	847.182sft	0.277sft	
075	42°07'26.29685"N	0.034sft	91°53'31.14743"W	0.033sft	799.787sft	0.264sft	
Linn 15	42°07'28.74865"N	0.036sft	91°49'57.65490"W	0.035sft	777.796sft	0.275sft	
083	42°09'57.79095"N	0.034sft	91°50'36.41761"W	0.033sft	723.825sft	0.280sft	
076	42°09'36.69830"N	0.035sft	91°53'38.76264"W	0.034sft	853.540sft	0.270sft	
063	42°07'22.87067"N	0.038sft	91°57'14.84360"W	0.036sft	758.705sft	0.257sft	
054	42°07'17.87790"N	0.031sft	92°00'33.25750"W	0.030sft	770.723sft	0.252sft	
064	42°09'14.89720"N	0.032sft	91°56'59.99808"W	0.031sft	750.954sft	0.261sft	
n81	42°09'51.29394"N	0.042sft	92°02'04.30403"W	0.042sft	695.501sft	0.262sft	e
045	42°09'59.64212"N	0.033sft	92°03'56.84316"W	0.032sft	705.661sft	0.260sft	
055	42°09'56.09330"N	0.032sft	92°00'35.17210"W	0.030sft	703.680sft	0.260sft	
02-259	42°17'54.09700"N	0.000sft	91°53'21.24969"W	0.000sft	870.922sft	0.311sft	Lat Long e
02-258	42°17'51.25064"N	0.000sft	91°56'53.62740"W	0.000sft	765.102sft	0.304sft	Lat Long e
g75 reset	42°20'33.18484"N	0.000sft	91°49'15.46587"W	0.000sft	839.814sft	0.343sft	Lat Long
067	42°16'05.50933"N	0.021sft	91°57'07.70586"W	0.021sft	810.471sft	0.293sft	
085	42°15'49.36875"N	0.020sft	91°49'54.54592"W	0.019sft	752.747sft	0.309sft	

Linn 13	42°17'56.07048"N	0.028sft	91°49'40.75654"W	0.026sft	820.077sft	0.324sft	
94-073	42°17'36.32192"N	0.030sft	92°06'13.65930"W	0.030sft	751.281sft	0.298sft	e
6 157	42°17'05.32198"N	0.038sft	92°07'25.18677"W	0.038sft	715.836sft	0.297sft	e
047	42°15'14.00881"N	0.025sft	92°03'53.29035"W	0.024sft	726.193sft	0.283sft	
02-257	42°17'51.82486"N	0.000sft	92°00'24.46926"W	0.000sft	740.227sft	0.300sft	Lat Long e
94-067	42°17'50.32897"N	0.037sft	92°08'32.67334"W	0.036sft	722.902sft	0.302sft	e
037	42°12'38.44692"N	0.038sft	92°07'14.30692"W	0.037sft	831.728sft	0.273sft	
056	42°12'37.54341"N	0.027sft	92°00'27.04552"W	0.027sft	771.485sft	0.270sft	
046	42°12'37.05541"N	0.029sft	92°03'55.72098"W	0.028sft	747.274sft	0.270sft	
065	42°10'25.10693"N	0.033sft	91°56'43.95807"W	0.032sft	758.313sft	0.267sft	
077	42°12'34.25303"N	0.030sft	91°53'28.39412"W	0.030sft	770.392sft	0.283sft	
066	42°12'50.28892"N	0.028sft	91°56'55.80334"W	0.028sft	786.667sft	0.276sft	
057	42°15'12.80444"N	0.023sft	92°00'25.57737"W	0.023sft	741.273sft	0.284sft	
21-DDB	42°15'13.56035"N	0.025sft	91°57'30.58230"W	0.025sft	800.002sft	0.288sft	e
038	42°15'03.83647"N	0.034sft	92°07'23.25278"W	0.033sft	756.857sft	0.285sft	
028	42°15'11.66663"N	0.032sft	92°10'52.07919"W	0.031sft	793.553sft	0.289sft	
019	42°15'12.24999"N	0.035sft	92°14'24.58144"W	0.034sft	830.300sft	0.298sft	
009	42°15'16.08720"N	0.042sft	92°17'56.81469"W	0.041sft	742.318sft	0.309sft	
94-042	42°17'50.71743"N	0.045sft	92°17'55.02041"W	0.044sft	880.464sft	0.322sft	e
94-052	42°17'44.25820"N	0.038sft	92°13'13.00916"W	0.038sft	739.954sft	0.310sft	e
94-048	42°17'51.16224"N	0.048sft	92°15'33.78742"W	0.047sft	780.023sft	0.316sft	e
078	42°15'16.14609"N	0.024sft	91°53'33.96452"W	0.023sft	823.985sft	0.296sft	
084	42°13'25.22712"N	0.031sft	91°49'56.26684"W	0.030sft	728.986sft	0.297sft	

Control Coordinate Comparisons

Values shown are control coord minus adjusted coord.

Point Name	Δ Northing	Δ Easting	Δ Elevation	Δ Height
92-01	-0.044sft	-0.076sft	N/A	N/A
Linn 17	0.402sft	0.426sft	0.098sft	N/A
Linn 15	0.208sft	0.125sft	-0.718sft	N/A
Linn 13	0.122sft	0.025sft	-0.248sft	N/A

Adjusted Observations

Adjustment performed in NAD 1983 (Conus)

GPS Observations

GPS Transformation Group:

Deflection in Longitude : 0°00'00.0652" (1.96 σ) : 0°00'00.3987"

Deflection in Latitude : 0°00'00.2113" (1.96 σ) : 0°00'00.4091"

Azimuth Rotation : -0°00'00.0176" (1.96 σ) : 0°00'00.0430"

Network Scale : 0.99999952 (1.96 σ) : 0.00000021

Number of Observations : 265

Number of Outliers : 0

Observation Adjustment (Critical Tau = 4.00). Any outliers are in red.

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96 σ)	Residual	Stand. Residual
B104	074	062	Az.	276°24'07.8431"	0°00'00.3967"	-0°00'00.0523"	-0.26
			Δ Ht.	35.489sft	0.034sft	0.055sft	3.51
			Dist.	15763.609sft	0.030sft	0.004sft	0.26
B90	074	073	Az.	180°13'47.0234"	0°00'00.4080"	0°00'00.0930"	0.41

			ΔHt.	-19.018sft	0.035sft	-0.053sft	-3.22
			Dist.	15068.493sft	0.030sft	0.051sft	3.14
B140	073	072	Az.	175°42'25.9870"	0°00'00.3917"	0°00'00.1141"	0.48
			ΔHt.	-1.806sft	0.041sft	-0.037sft	-1.34
			Dist.	15687.395sft	0.031sft	0.057sft	3.07
B1013	02-259	g75 reset	Az.	48°52'56.3351"	0°00'00.0430"	-0°00'00.6851"	-2.99
			ΔHt.	-31.098sft	0.030sft	0.040sft	1.21
			Dist.	24501.072sft	0.005sft	0.051sft	2.12
B1014	02-259	g75 reset	Az.	48°52'56.3351"	0°00'00.0430"	-0°00'00.5571"	-2.92
			ΔHt.	-31.098sft	0.030sft	0.006sft	0.29
			Dist.	24501.072sft	0.005sft	0.043sft	1.95
B127	013	022	Az.	86°10'15.2993"	0°00'00.4057"	0°00'00.0716"	0.35
			ΔHt.	-20.997sft	0.042sft	0.062sft	2.81
			Dist.	15956.993sft	0.031sft	0.007sft	0.44
B129	004	003	Az.	184°53'01.4725"	0°00'00.4493"	-0°00'00.0740"	-0.40
			ΔHt.	-23.070sft	0.043sft	0.043sft	2.74
			Dist.	15842.647sft	0.035sft	-0.009sft	-0.64
B118	072	Linn 17	Az.	85°47'43.7184"	0°00'00.4014"	0°00'00.6219"	2.67
			ΔHt.	22.345sft	0.035sft	0.012sft	0.68
			Dist.	14996.382sft	0.029sft	-0.007sft	-0.40
B1044	038	047	Az.	86°14'57.2045"	0°00'00.4193"	0°00'00.4686"	2.38
			ΔHt.	-30.668sft	0.038sft	-0.041sft	-2.63
			Dist.	15824.014sft	0.031sft	0.015sft	0.99
B16	57 27	079	Az.	279°09'45.2944"	0°00'00.1276"	-0°00'00.2156"	-2.52
			ΔHt.	12.720sft	0.040sft	0.029sft	1.14
			Dist.	51066.270sft	0.030sft	0.014sft	0.71
B1066	047	02-257	Az.	44°28'46.1584"	0°00'00.2268"	0°00'00.4612"	2.48
			ΔHt.	14.046sft	0.035sft	-0.070sft	-2.34
			Dist.	22398.228sft	0.025sft	-0.040sft	-1.90
B18	99-204	068	Az.	89°58'37.6428"	0°00'00.3799"	-0°00'00.2852"	-1.30
			ΔHt.	-26.183sft	0.043sft	-0.017sft	-1.01

			Dist.	15333.014sft	0.028sft	0.040sft	2.43
B1024	067	02-258	Az.	5°38'41.5665"	0°00'00.4043"	-0°00'00.8356"	-2.34
			ΔHt.	-45.358sft	0.030sft	0.019sft	1.17
			Dist.	10756.461sft	0.021sft	0.018sft	0.96
B145	Linn 17	080	Az.	179°01'32.9949"	0°00'00.3814"	0°00'00.0078"	0.04
			ΔHt.	-46.224sft	0.039sft	0.013sft	0.61
			Dist.	16559.169sft	0.031sft	-0.040sft	-2.26
B1086	056	057	Az.	0°24'08.9650"	0°00'00.3543"	-0°00'00.2551"	-1.14
			ΔHt.	-30.196sft	0.032sft	0.011sft	0.67
			Dist.	15717.443sft	0.027sft	0.038sft	2.26
B963	054	063	Az.	88°02'44.2145"	0°00'00.4252"	-0°00'00.2557"	-1.18
			ΔHt.	-12.022sft	0.034sft	-0.035sft	-2.26
			Dist.	14961.131sft	0.030sft	-0.002sft	-0.14
B15	57 27	080	Az.	295°40'53.9083"	0°00'00.1041"	-0°00'00.1736"	-2.26
			ΔHt.	-0.242sft	0.040sft	0.016sft	0.72
			Dist.	56280.045sft	0.027sft	0.002sft	0.08
B47	021	030	Az.	137°14'12.2113"	0°00'00.2566"	-0°00'00.0163"	-0.10
			ΔHt.	29.370sft	0.037sft	-0.056sft	-2.26
			Dist.	23453.537sft	0.030sft	0.018sft	0.92
B79	99-201	Hartwick	Az.	164°39'11.0988"	0°00'00.0430"	0°00'01.0381"	2.24
			ΔHt.	165.124sft	0.034sft	0.006sft	0.34
			Dist.	9859.242sft	0.002sft	-0.037sft	-1.66
B114	070	TBM-Q84	Az.	237°28'28.0695"	0°00'00.4856"	0°00'00.1045"	0.34
			ΔHt.	-36.122sft	0.035sft	0.020sft	1.17
			Dist.	11585.790sft	0.027sft	0.038sft	2.24
B1012	02-259	02-258	Az.	268°59'08.1177"	0°00'00.0430"	0°00'00.0135"	0.05
			ΔHt.	-105.815sft	0.033sft	-0.003sft	-0.16
			Dist.	15963.236sft	0.003sft	0.049sft	2.24
B988	044	054	Az.	91°55'43.2517"	0°00'00.3537"	0°00'00.0759"	0.31
			ΔHt.	36.396sft	0.031sft	-0.046sft	-2.23
			Dist.	15528.722sft	0.026sft	0.001sft	0.04

B962	063	075	Az.	88°48'01.8926"	0°00'00.3941"	-0°00'00.2413"	-1.03
			ΔHt.	41.078sft	0.039sft	-0.068sft	-2.22
			Dist.	16861.137sft	0.031sft	0.009sft	0.48
B1027	g75 reset	085	Az.	185°50'23.2894"	0°00'00.1359"	0°00'00.0355"	0.25
			ΔHt.	-87.095sft	0.029sft	0.010sft	0.48
			Dist.	28880.720sft	0.020sft	0.046sft	2.22
B89	062	073	Az.	137°07'04.3356"	0°00'00.2870"	0°00'00.0817"	0.48
			ΔHt.	-54.508sft	0.039sft	0.054sft	2.22
			Dist.	22948.436sft	0.032sft	0.003sft	0.14
B1026	g75 reset	085	Az.	185°50'23.2894"	0°00'00.1359"	0°00'00.0151"	0.10
			ΔHt.	-87.095sft	0.029sft	0.005sft	0.16
			Dist.	28880.720sft	0.020sft	0.054sft	2.21
B970	n81	045	Az.	275°42'16.8083"	0°00'00.8580"	-0°00'00.0637"	-0.20
			ΔHt.	10.164sft	0.040sft	-0.033sft	-2.21
			Dist.	8517.297sft	0.035sft	0.012sft	0.91
B22	048	99-204	Az.	90°54'16.8019"	0°00'00.2653"	0°00'00.1193"	0.54
			ΔHt.	-13.202sft	0.037sft	-0.028sft	-1.41
			Dist.	17740.045sft	0.023sft	-0.040sft	-2.14
B1112	078	085	Az.	78°27'31.8161"	0°00'00.3251"	-0°00'00.5041"	-2.13
			ΔHt.	-71.239sft	0.034sft	0.027sft	1.30
			Dist.	16839.172sft	0.026sft	0.023sft	1.22
B165	051	050	Az.	180°14'25.9141"	0°00'00.3779"	0°00'00.5127"	2.10
			ΔHt.	-33.890sft	0.044sft	-0.044sft	-1.25
			Dist.	16314.028sft	0.031sft	0.012sft	0.61
B81	006	Q82	Az.	250°43'17.7174"	0°00'00.2173"	-0°00'00.1002"	-0.64
			ΔHt.	-67.159sft	0.044sft	0.074sft	2.06
			Dist.	32316.476sft	0.030sft	-0.017sft	-0.87
B1102	02-259	085	Az.	129°04'39.4771"	0°00'00.1968"	-0°00'00.5018"	-2.05
			ΔHt.	-118.193sft	0.027sft	-0.031sft	-1.04
			Dist.	20021.631sft	0.019sft	0.001sft	0.03
B85	074	Linn 17	Az.	151°30'43.0050"	0°00'00.1413"	-0°00'00.0317"	-0.27

			Δ Ht.	1.520sft	0.030sft	0.053sft	2.04
			Dist.	33690.968sft	0.024sft	-0.020sft	-1.00
B931	004	Q82	Az.	303°07'34.9085"	0°00'00.1797"	-0°00'00.1213"	-0.92
			Δ Ht.	-87.062sft	0.043sft	-0.064sft	-2.04
			Dist.	38607.090sft	0.032sft	0.021sft	0.99
B1058	027	038	Az.	46°45'39.2424"	0°00'00.2933"	0°00'00.2883"	1.58
			Δ Ht.	-90.314sft	0.040sft	-0.063sft	-2.01
			Dist.	21485.339sft	0.032sft	-0.020sft	-0.99
B951	027	pratt	Az.	269°54'39.9735"	0°00'00.6608"	0°00'00.8311"	2.00
			Δ Ht.	29.092sft	0.036sft	0.005sft	0.39
			Dist.	8370.739sft	0.026sft	-0.001sft	-0.05
B1111	084	085	Az.	0°30'29.1373"	0°00'00.4225"	0°00'00.2581"	1.05
			Δ Ht.	23.776sft	0.040sft	-0.039sft	-2.00
			Dist.	14592.043sft	0.031sft	-0.014sft	-0.79
B1075	057	21-DDB	Az.	89°39'01.8476"	0°00'00.3764"	-0°00'00.6253"	-1.99
			Δ Ht.	58.726sft	0.028sft	-0.031sft	-1.41
			Dist.	13160.688sft	0.023sft	-0.005sft	-0.27
B8	012	020	Az.	140°19'00.2099"	0°00'00.2401"	0°00'00.3181"	1.98
			Δ Ht.	9.026sft	0.035sft	0.025sft	0.96
			Dist.	24021.332sft	0.029sft	0.013sft	0.65
B142	059	050	Az.	267°46'51.9905"	0°00'00.3940"	-0°00'00.1325"	-0.71
			Δ Ht.	3.565sft	0.035sft	-0.026sft	-1.97
			Dist.	16202.676sft	0.031sft	-0.009sft	-0.64
B1025	02-257	02-258	Az.	90°11'25.7230"	0°00'00.0430"	-0°00'00.5481"	-1.94
			Δ Ht.	24.871sft	0.032sft	-0.010sft	-0.62
			Dist.	15845.399sft	0.003sft	-0.013sft	-0.59
B1020	94-073	047	Az.	143°45'47.4023"	0°00'00.3554"	-0°00'00.1727"	-0.82
			Δ Ht.	-25.105sft	0.038sft	0.042sft	1.53
			Dist.	17858.138sft	0.030sft	-0.034sft	-1.93
B34	99-202	029	Az.	87°23'04.2092"	0°00'00.3034"	-0°00'00.0800"	-0.35
			Δ Ht.	86.910sft	0.037sft	0.035sft	1.66

			Dist.	17145.855sft	0.024sft	-0.036sft	-1.93
B971	055	n81	Az.	265°52'07.0434"	0°00'01.0937"	-0°00'00.0092"	-0.02
			ΔHt.	-8.177sft	0.041sft	-0.032sft	-1.91
			Dist.	6730.094sft	0.036sft	0.013sft	0.93
B39	010	Hartwick	Az.	228°58'07.6398"	0°00'00.2779"	0°00'00.3800"	1.51
			ΔHt.	173.698sft	0.037sft	-0.043sft	-1.90
			Dist.	17927.211sft	0.024sft	-0.027sft	-1.34
B71	039	049	Az.	87°08'43.6460"	0°00'00.3403"	0°00'00.0431"	0.19
			ΔHt.	39.239sft	0.029sft	0.032sft	1.88
			Dist.	15655.015sft	0.025sft	0.007sft	0.39
B1016	02-259	085	Az.	129°04'39.4771"	0°00'00.1968"	-0°00'00.1171"	-0.57
			ΔHt.	-118.193sft	0.027sft	0.019sft	0.91
			Dist.	20021.631sft	0.019sft	-0.038sft	-1.88
B1054	94-052	6 157	Az.	98°32'29.0111"	0°00'00.2564"	-0°00'00.3310"	-1.86
			ΔHt.	-24.129sft	0.040sft	0.001sft	0.03
			Dist.	26438.257sft	0.033sft	-0.026sft	-1.11
B1021	94-073	02-257	Az.	86°32'42.3308"	0°00'00.2329"	0°00'00.2258"	1.84
			ΔHt.	-11.060sft	0.036sft	-0.016sft	-1.10
			Dist.	26290.246sft	0.030sft	0.002sft	0.13
B14	92-01	57 27	Az.	81°02'30.3167"	0°00'00.1144"	-0°00'00.1090"	-1.35
			ΔHt.	29.187sft	0.039sft	0.024sft	1.10
			Dist.	50953.327sft	0.028sft	0.035sft	1.84
B992	Linn 15	082	Az.	181°47'01.9811"	0°00'00.3504"	0°00'00.1139"	0.72
			ΔHt.	-30.017sft	0.046sft	0.017sft	0.69
			Dist.	20254.942sft	0.036sft	-0.031sft	-1.83
B97	015	014	Az.	182°36'31.0093"	0°00'00.3634"	0°00'00.1556"	0.73
			ΔHt.	3.960sft	0.032sft	-0.030sft	-1.83
			Dist.	15781.042sft	0.029sft	0.002sft	0.12
B1096	078	21-DDB	Az.	269°10'45.6524"	0°00'00.2878"	-0°00'00.1822"	-0.72
			ΔHt.	-23.977sft	0.037sft	0.062sft	1.19
			Dist.	17796.582sft	0.024sft	0.039sft	1.81

B66	087	Hartwick	Az.	195°54'54.2074"	0°00'00.4262"	0°00'00.6737"	1.81
			ΔHt.	159.686sft	0.032sft	0.014sft	0.82
			Dist.	10551.234sft	0.022sft	-0.010sft	-0.50
B153	003	002	Az.	179°03'23.8324"	0°00'00.4539"	0°00'00.0124"	0.07
			ΔHt.	-79.919sft	0.043sft	0.028sft	1.80
			Dist.	15723.022sft	0.035sft	0.003sft	0.19
B125	013	021	Az.	133°19'20.6941"	0°00'00.2881"	-0°00'00.1215"	-0.85
			ΔHt.	-1.149sft	0.040sft	-0.034sft	-1.78
			Dist.	22194.379sft	0.031sft	-0.011sft	-0.69
B86	082	Linn 17	Az.	179°33'08.7538"	0°00'00.1773"	0°00'00.0732"	0.47
			ΔHt.	2.855sft	0.031sft	-0.049sft	-1.78
			Dist.	26816.796sft	0.024sft	-0.025sft	-1.16
B54	99-204	TBM-Q84	Az.	25°35'54.1993"	0°00'00.3142"	0°00'00.2157"	0.87
			ΔHt.	-60.903sft	0.039sft	-0.005sft	-0.12
			Dist.	16643.368sft	0.026sft	0.036sft	1.77
B1036	065	066	Az.	356°31'44.9587"	0°00'00.4137"	0°00'00.0091"	0.04
			ΔHt.	28.370sft	0.043sft	0.008sft	0.34
			Dist.	14723.681sft	0.030sft	-0.030sft	-1.77
B122	032	041	Az.	93°48'59.0670"	0°00'00.4623"	0°00'00.2926"	1.76
			ΔHt.	-19.706sft	0.047sft	-0.015sft	-0.81
			Dist.	15751.601sft	0.035sft	-0.009sft	-0.68
B1092	047	046	Az.	180°39'34.5715"	0°00'00.3571"	0°00'00.2203"	0.96
			ΔHt.	21.065sft	0.034sft	-0.015sft	-0.72
			Dist.	15889.426sft	0.028sft	-0.032sft	-1.76
B980	Q82	005	Az.	99°46'11.0274"	0°00'00.2016"	0°00'00.0792"	0.44
			ΔHt.	-6.020sft	0.039sft	0.058sft	1.74
			Dist.	30578.906sft	0.026sft	0.034sft	1.47
B7	020	021	Az.	2°10'33.5128"	0°00'00.2980"	-0°00'00.2654"	-1.12
			ΔHt.	-21.524sft	0.037sft	0.057sft	1.73
			Dist.	19108.193sft	0.029sft	-0.006sft	-0.28
B149	041	051	Az.	89°15'34.7835"	0°00'00.4647"	0°00'00.2749"	1.69

			Δ Ht.	25.572sft	0.044sft	-0.011sft	-0.78
			Dist.	15534.207sft	0.035sft	-0.010sft	-0.80
B943	025	036	Az.	45°02'53.8473"	0°00'00.2955"	-0°00'00.1076"	-0.64
			Δ Ht.	-3.756sft	0.044sft	0.052sft	1.68
			Dist.	22761.948sft	0.033sft	-0.016sft	-0.85
B1035	065	055	Az.	260°26'48.7764"	0°00'00.3936"	0°00'00.4839"	1.68
			Δ Ht.	-54.631sft	0.047sft	-0.033sft	-0.86
			Dist.	17657.443sft	0.032sft	-0.011sft	-0.48
B945	025	026	Az.	1°09'30.5248"	0°00'00.3427"	0°00'00.3776"	1.66
			Δ Ht.	-9.214sft	0.034sft	-0.029sft	-1.33
			Dist.	16181.296sft	0.027sft	0.017sft	0.93
B1082	057	02-257	Az.	0°17'47.0280"	0°00'00.2963"	-0°00'00.1007"	-0.39
			Δ Ht.	-1.029sft	0.032sft	0.042sft	1.63
			Dist.	16097.955sft	0.024sft	0.003sft	0.13
B1062	94-042	94-048	Az.	89°44'37.4114"	0°00'00.7260"	-0°00'00.1799"	-0.78
			Δ Ht.	-100.444sft	0.040sft	-0.027sft	-1.61
			Dist.	10614.135sft	0.037sft	0.000sft	0.04
B1042	067	21-DDB	Az.	198°06'56.3334"	0°00'00.9792"	-0°00'00.1467"	-0.23
			Δ Ht.	-10.473sft	0.031sft	-0.029sft	-1.53
			Dist.	5533.018sft	0.027sft	-0.029sft	-1.60
B1083	057	21-DDB	Az.	89°39'01.8476"	0°00'00.3764"	0°00'00.2380"	0.79
			Δ Ht.	58.726sft	0.028sft	0.032sft	1.42
			Dist.	13160.688sft	0.023sft	0.030sft	1.60
B1097	077	084	Az.	72°03'57.2757"	0°00'00.3586"	-0°00'00.1893"	-0.89
			Δ Ht.	-41.405sft	0.040sft	-0.034sft	-1.60
			Dist.	16775.644sft	0.029sft	0.007sft	0.41
B23	99-203	048	Az.	90°11'33.4194"	0°00'00.4137"	0°00'00.1364"	0.41
			Δ Ht.	-27.078sft	0.033sft	-0.024sft	-1.59
			Dist.	11399.072sft	0.023sft	-0.012sft	-0.65
B1095	066	21-DDB	Az.	349°46'38.0497"	0°00'00.3845"	0°00'00.0532"	0.21
			Δ Ht.	13.351sft	0.041sft	0.019sft	0.61

			Dist.	14737.455sft	0.028sft	-0.028sft	-1.57
B87	Linn 17	074	Az.	331°33'05.5053"	0°00'00.1411"	0°00'00.0027"	0.02
			ΔHt.	-1.519sft	0.030sft	0.031sft	1.03
			Dist.	33690.967sft	0.024sft	-0.035sft	-1.56
B64	087	99-201	Az.	263°22'42.5643"	0°00'00.8116"	-0°00'00.0169"	-0.02
			ΔHt.	-5.438sft	0.029sft	0.011sft	0.66
			Dist.	5537.350sft	0.022sft	-0.029sft	-1.56
B1104	047	056	Az.	135°34'16.1328"	0°00'00.2573"	-0°00'00.3411"	-1.56
			ΔHt.	45.271sft	0.034sft	0.014sft	0.46
			Dist.	22172.394sft	0.028sft	-0.025sft	-1.03
B1110	078	084	Az.	124°25'01.0954"	0°00'00.2972"	0°00'00.2941"	1.56
			ΔHt.	-95.015sft	0.040sft	-0.019sft	-0.68
			Dist.	19855.429sft	0.029sft	0.022sft	1.17
B1019	94-073	6 157	Az.	239°44'02.5392"	0°00'01.0807"	-0°00'00.8899"	-1.54
			ΔHt.	-35.445sft	0.034sft	0.000sft	-0.01
			Dist.	6225.066sft	0.033sft	0.013sft	0.74
B113	070	059	Az.	302°39'44.9534"	0°00'00.2751"	-0°00'00.0444"	-0.27
			ΔHt.	49.980sft	0.031sft	-0.026sft	-1.53
			Dist.	20816.775sft	0.027sft	-0.013sft	-0.76
B133	023	014	Az.	270°06'40.8638"	0°00'00.3753"	0°00'00.1182"	0.54
			ΔHt.	-20.716sft	0.033sft	0.026sft	1.53
			Dist.	15906.101sft	0.028sft	0.015sft	0.92
B46	021	031	Az.	92°51'29.4217"	0°00'00.4236"	-0°00'00.0905"	-0.46
			ΔHt.	-54.849sft	0.037sft	0.023sft	1.52
			Dist.	15810.326sft	0.032sft	-0.011sft	-0.74
B1018	02-259	Linn 13	Az.	89°17'19.1190"	0°00'00.3513"	-0°00'00.4655"	-1.50
			ΔHt.	-50.850sft	0.037sft	-0.051sft	-1.51
			Dist.	16571.557sft	0.026sft	0.004sft	0.20
B1101	078	02-259	Az.	3°25'11.8253"	0°00'00.3041"	0°00'00.3956"	1.51
			ΔHt.	46.954sft	0.034sft	-0.027sft	-1.02
			Dist.	16018.021sft	0.025sft	-0.012sft	-0.55

B1028	g75 reset	Linn 13	Az.	186°48'52.1845"	0°00'00.3399"	0°00'00.1373"	0.63
			ΔHt.	-19.752sft	0.034sft	0.015sft	0.92
			Dist.	16017.995sft	0.028sft	0.026sft	1.51
B1051	94-052	94-048	Az.	273°47'33.2040"	0°00'00.7311"	-0°00'00.1924"	-0.81
			ΔHt.	40.073sft	0.040sft	0.027sft	1.50
			Dist.	10603.075sft	0.037sft	-0.001sft	-0.06
B33	029	Blairs	Az.	1°55'41.3436"	0°00'02.1843"	-0°00'01.3044"	-0.98
			ΔHt.	2.941sft	0.030sft	0.023sft	1.50
			Dist.	2531.333sft	0.027sft	0.004sft	0.25
B28	029	99-203	Az.	90°11'42.3099"	0°00'00.2786"	0°00'00.2058"	0.74
			ΔHt.	-19.582sft	0.038sft	-0.025sft	-0.81
			Dist.	18669.023sft	0.024sft	-0.032sft	-1.45
B17	068	92-01	Az.	90°00'28.8897"	0°00'00.3779"	-0°00'00.0796"	-0.29
			ΔHt.	-64.676sft	0.047sft	0.004sft	0.07
			Dist.	16281.917sft	0.029sft	0.031sft	1.44
B57	99-203	039	Az.	349°50'53.7110"	0°00'00.3022"	-0°00'00.0156"	-0.06
			ΔHt.	-83.978sft	0.033sft	0.030sft	1.43
			Dist.	16051.727sft	0.024sft	0.000sft	-0.02
B1000	024	025	Az.	0°01'56.4558"	0°00'00.4172"	0°00'00.0378"	0.15
			ΔHt.	-3.546sft	0.039sft	0.034sft	1.42
			Dist.	14534.991sft	0.030sft	0.023sft	1.24
B1022	94-073	94-067	Az.	277°44'30.9085"	0°00'00.6157"	0°00'00.4655"	1.42
			ΔHt.	-28.374sft	0.034sft	0.001sft	0.08
			Dist.	10543.412sft	0.031sft	0.002sft	0.15
B132	033	023	Az.	275°20'01.1042"	0°00'00.3957"	0°00'00.3144"	1.41
			ΔHt.	3.708sft	0.034sft	0.017sft	0.96
			Dist.	15719.864sft	0.029sft	0.010sft	0.61
B960	Linn 15	083	Az.	349°02'58.3573"	0°00'00.4072"	-0°00'00.0983"	-0.47
			ΔHt.	-53.954sft	0.036sft	-0.025sft	-1.41
			Dist.	15367.299sft	0.031sft	-0.001sft	-0.08
B42	001	99-201	Az.	183°33'54.5928"	0°00'00.3337"	0°00'00.2459"	0.72

			ΔHt.	-16.533sft	0.041sft	-0.064sft	-1.41
			Dist.	18165.742sft	0.029sft	-0.035sft	-1.16
B58	99-203	Blairs	Az.	277°59'25.3438"	0°00'00.3084"	0°00'00.2099"	1.00
			ΔHt.	22.523sft	0.035sft	-0.004sft	-0.20
			Dist.	18763.838sft	0.027sft	-0.025sft	-1.40
B994	075	064	Az.	304°57'35.9168"	0°00'00.2943"	-0°00'00.0584"	-0.30
			ΔHt.	-48.817sft	0.033sft	-0.006sft	-0.30
			Dist.	19194.910sft	0.027sft	-0.025sft	-1.40
B998	024	015	Az.	266°38'04.4085"	0°00'00.4154"	-0°00'00.1240"	-0.53
			ΔHt.	-51.923sft	0.037sft	-0.027sft	-1.40
			Dist.	15034.642sft	0.029sft	-0.006sft	-0.34
B1071	046	055	Az.	137°09'48.3856"	0°00'00.2783"	0°00'00.0467"	0.21
			ΔHt.	-43.615sft	0.037sft	-0.032sft	-1.05
			Dist.	22213.555sft	0.029sft	-0.031sft	-1.40
B1098	077	078	Az.	358°32'08.6626"	0°00'00.3533"	-0°00'00.4001"	-1.39
			ΔHt.	53.611sft	0.043sft	0.018sft	0.41
			Dist.	16393.771sft	0.029sft	-0.013sft	-0.56
B44	001	TBM-A84	Az.	127°39'41.9472"	0°00'01.0262"	-0°00'00.4397"	-0.86
			ΔHt.	33.420sft	0.038sft	0.019sft	1.10
			Dist.	6490.808sft	0.032sft	0.022sft	1.38
B53	99-204	058	Az.	355°48'22.0089"	0°00'00.3244"	0°00'00.2496"	1.13
			ΔHt.	-29.137sft	0.033sft	0.006sft	0.38
			Dist.	15925.685sft	0.025sft	0.024sft	1.38
B156	022	014	Az.	312°55'19.9400"	0°00'00.2954"	-0°00'00.0351"	-0.18
			ΔHt.	35.251sft	0.038sft	0.006sft	0.22
			Dist.	21694.311sft	0.031sft	-0.028sft	-1.38
B1105	054	055	Az.	359°29'03.0768"	0°00'00.3703"	0°00'00.1271"	0.49
			ΔHt.	-67.027sft	0.039sft	0.034sft	1.10
			Dist.	16016.527sft	0.030sft	-0.029sft	-1.37
B1059	019	008	Az.	226°58'14.4200"	0°00'00.2898"	0°00'00.0070"	0.04
			ΔHt.	80.352sft	0.038sft	0.002sft	0.05

			Dist.	21673.897sft	0.031sft	-0.026sft	-1.34
B1090	044	054	Az.	91°55'43.2517"	0°00'00.3537"	-0°00'00.0718"	-0.29
			ΔHt.	36.396sft	0.031sft	0.026sft	1.34
			Dist.	15528.722sft	0.026sft	-0.003sft	-0.17
B1080	94-067	028	Az.	213°08'17.4396"	0°00'00.3246"	0°00'00.2926"	1.34
			ΔHt.	70.639sft	0.036sft	-0.005sft	-0.20
			Dist.	19178.382sft	0.029sft	-0.019sft	-0.99
B5	050	049	Az.	178°11'51.3335"	0°00'00.3851"	0°00'00.1585"	0.71
			ΔHt.	-33.221sft	0.032sft	-0.017sft	-1.02
			Dist.	14939.945sft	0.029sft	0.022sft	1.33
B937	034	035	Az.	359°40'24.0132"	0°00'00.4136"	0°00'00.2504"	1.33
			ΔHt.	0.683sft	0.042sft	-0.022sft	-1.20
			Dist.	15912.957sft	0.032sft	-0.012sft	-0.85
B2	011	012	Az.	358°51'22.7928"	0°00'00.3691"	-0°00'00.1079"	-0.47
			ΔHt.	66.852sft	0.032sft	-0.015sft	-0.91
			Dist.	15067.220sft	0.027sft	-0.022sft	-1.32
B80	TBM-A84	99-201	Az.	203°52'55.9020"	0°00'00.3799"	-0°00'00.2958"	-1.31
			ΔHt.	-49.953sft	0.033sft	0.002sft	0.13
			Dist.	15489.560sft	0.029sft	-0.014sft	-0.81
B930	023	015	Az.	316°08'32.4604"	0°00'00.2758"	0°00'00.2681"	1.03
			ΔHt.	-24.675sft	0.036sft	-0.002sft	-0.04
			Dist.	21905.327sft	0.029sft	0.036sft	1.31
B948	026	016	Az.	227°14'13.7615"	0°00'00.2462"	0°00'00.0876"	0.47
			ΔHt.	-12.447sft	0.032sft	-0.031sft	-1.29
			Dist.	22033.582sft	0.026sft	-0.007sft	-0.38
B93	052	043	Az.	315°18'13.0468"	0°00'00.2699"	-0°00'00.0160"	-0.09
			ΔHt.	15.951sft	0.033sft	-0.030sft	-1.22
			Dist.	21679.571sft	0.028sft	-0.024sft	-1.28
B20	068	069	Az.	1°38'20.6583"	0°00'00.5903"	0°00'00.1311"	0.44
			ΔHt.	-12.223sft	0.043sft	-0.005sft	-0.26
			Dist.	10640.945sft	0.031sft	0.020sft	1.28

B36	010	011	Az.	359°18'17.4875"	0°00'00.3306"	0°00'00.0766"	0.35
			ΔHt.	101.446sft	0.031sft	-0.013sft	-0.63
			Dist.	16516.905sft	0.027sft	-0.022sft	-1.28
B972	045	036	Az.	269°34'44.2084"	0°00'00.4813"	-0°00'00.1579"	-0.67
			ΔHt.	163.684sft	0.051sft	-0.022sft	-0.69
			Dist.	15677.214sft	0.036sft	-0.023sft	-1.27
B83	006	005	Az.	181°21'14.1303"	0°00'00.3771"	0°00'00.2619"	1.27
			ΔHt.	-73.180sft	0.037sft	-0.011sft	-0.71
			Dist.	15902.534sft	0.031sft	-0.006sft	-0.35
B68	012	002	Az.	270°06'16.3671"	0°00'00.4273"	0°00'00.2812"	1.26
			ΔHt.	-79.509sft	0.038sft	-0.016sft	-0.88
			Dist.	14727.206sft	0.030sft	-0.003sft	-0.21
B924	y81	018	Az.	49°53'06.7907"	0°00'00.3000"	-0°00'00.0017"	-0.01
			ΔHt.	-20.220sft	0.038sft	-0.041sft	-1.25
			Dist.	22738.377sft	0.031sft	-0.007sft	-0.36
B1072	055	064	Az.	104°24'37.7432"	0°00'00.3886"	-0°00'00.1155"	-0.36
			ΔHt.	47.265sft	0.041sft	0.032sft	0.82
			Dist.	16734.023sft	0.030sft	0.028sft	1.25
B949	y81	008	Az.	6°53'49.2100"	0°00'00.4059"	-0°00'00.0383"	-0.18
			ΔHt.	41.775sft	0.036sft	-0.013sft	-0.74
			Dist.	15474.550sft	0.032sft	0.020sft	1.23
B925	018	pratt	Az.	90°27'47.9247"	0°00'00.7717"	-0°00'00.5108"	-1.23
			ΔHt.	27.597sft	0.037sft	-0.007sft	-0.49
			Dist.	7988.128sft	0.029sft	0.006sft	0.37
B4	040	050	Az.	90°12'02.8774"	0°00'00.4008"	-0°00'00.0538"	-0.25
			ΔHt.	49.385sft	0.033sft	0.020sft	1.23
			Dist.	15407.333sft	0.029sft	0.017sft	1.09
B12	040	049	Az.	133°19'43.6586"	0°00'00.2601"	0°00'00.0089"	0.05
			ΔHt.	16.163sft	0.031sft	-0.005sft	-0.21
			Dist.	21839.969sft	0.028sft	-0.022sft	-1.22
B77	030	Blairs	Az.	179°29'05.6055"	0°00'00.4544"	0°00'00.0079"	0.03

			Δ Ht.	-13.557sft	0.030sft	-0.019sft	-1.20
			Dist.	12502.666sft	0.028sft	0.013sft	0.80
B157	033	032	Az.	179°00'04.1610"	0°00'00.4466"	-0°00'00.0154"	-0.06
			Δ Ht.	-22.614sft	0.033sft	-0.002sft	-0.15
			Dist.	13230.459sft	0.029sft	0.019sft	1.20
B120	072	071	Az.	182°03'55.1102"	0°00'00.3882"	-0°00'00.0516"	-0.23
			Δ Ht.	34.444sft	0.037sft	0.001sft	0.04
			Dist.	15802.148sft	0.031sft	0.021sft	1.19
B112	080	070	Az.	232°18'31.4060"	0°00'00.3038"	0°00'00.0888"	0.41
			Δ Ht.	37.135sft	0.031sft	0.025sft	1.19
			Dist.	17932.006sft	0.027sft	0.023sft	1.19
B137	060	051	Az.	271°42'06.0398"	0°00'00.3293"	0°00'00.2686"	1.10
			Δ Ht.	32.672sft	0.032sft	-0.023sft	-1.19
			Dist.	15473.834sft	0.024sft	0.007sft	0.37
B1088	053	054	Az.	0°18'23.4892"	0°00'00.4150"	0°00'00.2351"	1.19
			Δ Ht.	-44.871sft	0.035sft	-0.001sft	-0.06
			Dist.	15259.312sft	0.031sft	0.003sft	0.21
B51	92-01	079	Az.	359°38'23.7264"	0°00'00.3907"	0°00'00.1241"	0.64
			Δ Ht.	41.907sft	0.033sft	-0.008sft	-0.53
			Dist.	15957.521sft	0.031sft	0.018sft	1.19
B1109	066	078	Az.	45°46'56.2988"	0°00'00.2611"	0°00'00.2350"	1.18
			Δ Ht.	37.328sft	0.043sft	0.042sft	0.89
			Dist.	21179.218sft	0.027sft	0.010sft	0.47
B84	082	Linn 17	Az.	179°33'08.7538"	0°00'00.1773"	-0°00'00.1552"	-0.97
			Δ Ht.	2.855sft	0.031sft	0.037sft	1.13
			Dist.	26816.796sft	0.024sft	-0.026sft	-1.18
B117	060	072	Az.	90°03'39.0402"	0°00'00.3626"	0°00'00.2353"	1.10
			Δ Ht.	-68.017sft	0.042sft	0.033sft	1.18
			Dist.	17092.979sft	0.029sft	0.008sft	0.43
B982	024	016	Az.	314°50'24.5995"	0°00'00.2828"	-0°00'00.0814"	-0.40
			Δ Ht.	-25.208sft	0.041sft	0.041sft	1.18

			Dist.	22340.088sft	0.030sft	0.015sft	0.75
B1046	019	028	Az.	90°11'30.7210"	0°00'00.3824"	0°00'00.1589"	0.78
			ΔHt.	-36.751sft	0.034sft	0.020sft	1.18
			Dist.	15981.379sft	0.029sft	0.001sft	0.05
B95	034	023	Az.	225°25'26.8883"	0°00'00.2258"	0°00'00.1188"	0.69
			ΔHt.	62.122sft	0.029sft	-0.003sft	-0.11
			Dist.	22350.008sft	0.024sft	-0.021sft	-1.16
B27	048	039	Az.	318°05'38.5359"	0°00'00.2518"	0°00'00.2042"	1.16
			ΔHt.	-56.900sft	0.031sft	0.018sft	0.89
			Dist.	21291.034sft	0.026sft	-0.015sft	-0.83
B134	042	032	Az.	225°57'35.0640"	0°00'00.2841"	-0°00'00.0505"	-0.31
			ΔHt.	-34.712sft	0.036sft	-0.025sft	-1.13
			Dist.	21584.561sft	0.030sft	0.002sft	0.12
B1084	047	057	Az.	90°25'39.9735"	0°00'00.3551"	0°00'00.0763"	0.33
			ΔHt.	15.075sft	0.032sft	0.020sft	1.13
			Dist.	15621.468sft	0.027sft	0.018sft	1.00
B956	062	075	Az.	46°02'53.1693"	0°00'00.3000"	0°00'00.1043"	0.71
			ΔHt.	15.189sft	0.039sft	0.022sft	1.13
			Dist.	22258.916sft	0.033sft	-0.011sft	-0.67
B171	061	052	Az.	270°16'23.8039"	0°00'00.4021"	0°00'00.0110"	0.05
			ΔHt.	5.928sft	0.039sft	-0.024sft	-1.12
			Dist.	15698.301sft	0.029sft	-0.006sft	-0.39
B63	087	011	Az.	29°51'42.1610"	0°00'00.2495"	0°00'00.0324"	0.18
			ΔHt.	87.434sft	0.032sft	-0.003sft	-0.15
			Dist.	20921.353sft	0.025sft	-0.020sft	-1.12
B50	92-01	070	Az.	325°27'12.2814"	0°00'00.2140"	-0°00'00.1525"	-1.12
			ΔHt.	66.079sft	0.032sft	-0.011sft	-0.59
			Dist.	25801.133sft	0.027sft	-0.014sft	-0.83
B1093	056	066	Az.	85°20'24.7084"	0°00'00.3721"	-0°00'00.0711"	-0.34
			ΔHt.	15.179sft	0.038sft	0.022sft	1.11
			Dist.	15949.095sft	0.028sft	0.008sft	0.48

B1106	054	045	Az.	316°53'37.5175"	0°00'00.2830"	0°00'00.2730"	1.11
			ΔHt.	-65.041sft	0.039sft	0.027sft	0.70
			Dist.	22435.923sft	0.030sft	-0.027sft	-1.07
B52	92-01	069	Az.	303°41'53.1549"	0°00'00.3151"	-0°00'00.1878"	-1.09
			ΔHt.	52.453sft	0.036sft	-0.004sft	-0.23
			Dist.	19195.512sft	0.029sft	-0.005sft	-0.29
B147	051	060	Az.	91°39'49.0022"	0°00'00.3293"	-0°00'00.1472"	-0.58
			ΔHt.	-32.671sft	0.032sft	-0.006sft	-0.23
			Dist.	15473.834sft	0.024sft	-0.020sft	-1.08
B43	001	002	Az.	359°04'40.5644"	0°00'00.4191"	-0°00'00.0937"	-0.43
			ΔHt.	63.682sft	0.043sft	-0.025sft	-1.08
			Dist.	15738.319sft	0.032sft	-0.001sft	-0.09
B1040	067	057	Az.	250°17'30.5042"	0°00'00.3352"	-0°00'00.2503"	-1.08
			ΔHt.	-69.199sft	0.030sft	-0.006sft	-0.33
			Dist.	15806.835sft	0.025sft	-0.014sft	-0.77
B100	Q82	005	Az.	99°46'11.0274"	0°00'00.2016"	0°00'00.0311"	0.19
			ΔHt.	-6.020sft	0.039sft	-0.023sft	-0.68
			Dist.	30578.906sft	0.026sft	-0.022sft	-1.07
B929	023	024	Az.	359°25'12.3696"	0°00'00.3330"	0°00'00.0069"	0.03
			ΔHt.	27.248sft	0.034sft	0.024sft	0.94
			Dist.	16678.476sft	0.028sft	0.021sft	1.06
B1037	083	077	Az.	320°45'08.5422"	0°00'00.3064"	-0°00'00.0944"	-0.57
			ΔHt.	46.587sft	0.043sft	-0.029sft	-1.05
			Dist.	20456.805sft	0.030sft	0.004sft	0.25
B45	012	021	Az.	87°49'45.6319"	0°00'00.3772"	0°00'00.1924"	0.94
			ΔHt.	-12.498sft	0.035sft	-0.016sft	-1.05
			Dist.	16063.152sft	0.029sft	0.007sft	0.42
B38	010	99-202	Az.	93°21'27.2005"	0°00'00.3403"	0°00'00.2388"	0.94
			ΔHt.	81.762sft	0.033sft	0.016sft	1.03
			Dist.	14431.147sft	0.024sft	-0.001sft	-0.07
B26	048	049	Az.	4°52'10.2383"	0°00'00.3274"	0°00'00.0999"	0.45

			ΔHt.	-17.661sft	0.033sft	-0.026sft	-1.03
			Dist.	16675.982sft	0.027sft	0.006sft	0.35
B1052	028	94-052	Az.	325°34'00.3021"	0°00'00.2801"	-0°00'00.1224"	-0.60
			ΔHt.	-53.580sft	0.033sft	0.025sft	1.03
			Dist.	18731.382sft	0.027sft	0.012sft	0.61
B1073	066	077	Az.	95°55'05.3055"	0°00'00.3628"	-0°00'00.1629"	-0.76
			ΔHt.	-16.282sft	0.037sft	0.004sft	0.27
			Dist.	15692.675sft	0.027sft	-0.017sft	-1.02
B1065	94-067	6 157	Az.	131°55'29.2218"	0°00'00.8971"	0°00'00.1681"	0.35
			ΔHt.	-7.071sft	0.031sft	0.015sft	0.86
			Dist.	6818.093sft	0.030sft	0.016sft	1.02
B1030	027	037	Az.	89°59'45.8996"	0°00'00.4333"	0°00'00.1219"	0.76
			ΔHt.	-15.459sft	0.039sft	0.007sft	0.57
			Dist.	16335.307sft	0.034sft	-0.013sft	-1.02
B1070	037	046	Az.	90°31'17.3625"	0°00'00.4829"	0°00'00.1471"	0.77
			ΔHt.	-84.458sft	0.041sft	0.009sft	0.57
			Dist.	14945.457sft	0.034sft	-0.014sft	-1.02
B106	042	043	Az.	0°14'30.5289"	0°00'00.4000"	0°00'00.1312"	0.55
			ΔHt.	-51.607sft	0.034sft	0.011sft	0.54
			Dist.	14994.823sft	0.029sft	0.018sft	1.02
B1015	067	02-259	Az.	57°07'34.8217"	0°00'00.2216"	0°00'00.1280"	0.62
			ΔHt.	60.458sft	0.033sft	0.021sft	1.02
			Dist.	20263.331sft	0.021sft	-0.002sft	-0.10
B159	061	060	Az.	179°25'26.0192"	0°00'00.3606"	-0°00'00.1131"	-0.51
			ΔHt.	11.967sft	0.038sft	-0.001sft	-0.06
			Dist.	15842.661sft	0.029sft	0.018sft	1.01
B138	061	051	Az.	224°51'37.6802"	0°00'00.2644"	0°00'00.1586"	0.79
			ΔHt.	44.639sft	0.039sft	0.030sft	0.73
			Dist.	21701.299sft	0.030sft	0.026sft	1.01
B35	087	010	Az.	81°17'18.3217"	0°00'00.5093"	0°00'00.1665"	0.53
			ΔHt.	-14.012sft	0.030sft	-0.015sft	-1.00

			Dist.	10748.813sft	0.026sft	0.005sft	0.32
B1032	056	055	Az.	182°08'40.3045"	0°00'00.3588"	-0°00'00.2366"	-1.00
			ΔHt.	-67.821sft	0.037sft	-0.016sft	-0.72
			Dist.	16354.894sft	0.030sft	0.011sft	0.55
B928	034	023	Az.	225°25'26.8883"	0°00'00.2258"	0°00'00.0713"	0.41
			ΔHt.	62.122sft	0.029sft	0.022sft	1.00
			Dist.	22350.008sft	0.024sft	0.004sft	0.20
B13	040	039	Az.	179°05'10.9654"	0°00'00.3455"	0°00'00.0094"	0.04
			ΔHt.	-23.076sft	0.029sft	-0.002sft	-0.15
			Dist.	15768.042sft	0.027sft	0.016sft	0.99
B62	99-202	020	Az.	1°48'21.6020"	0°00'00.3407"	-0°00'00.2635"	-0.99
			ΔHt.	95.562sft	0.031sft	0.006sft	0.34
			Dist.	13944.940sft	0.024sft	0.018sft	0.97
B3	011	002	Az.	315°07'13.9254"	0°00'00.2870"	-0°00'00.1382"	-0.60
			ΔHt.	-12.657sft	0.040sft	0.021sft	0.47
			Dist.	21297.533sft	0.029sft	-0.023sft	-0.99
B103	082	081	Az.	180°05'54.2428"	0°00'00.5163"	-0°00'00.0827"	-0.39
			ΔHt.	-10.256sft	0.043sft	-0.014sft	-0.99
			Dist.	13518.949sft	0.035sft	-0.001sft	-0.04
B1068	067	02-257	Az.	306°03'35.1702"	0°00'00.2412"	-0°00'00.1773"	-0.80
			ΔHt.	-70.228sft	0.031sft	-0.007sft	-0.34
			Dist.	18291.912sft	0.021sft	-0.020sft	-0.99
B108	043	034	Az.	271°23'26.7682"	0°00'00.4236"	0°00'00.1989"	0.98
			ΔHt.	-18.904sft	0.038sft	-0.001sft	-0.05
			Dist.	15525.609sft	0.032sft	-0.012sft	-0.78
B88	081	Linn 17	Az.	178°59'50.5645"	0°00'00.5380"	-0°00'00.0928"	-0.35
			ΔHt.	13.112sft	0.047sft	-0.028sft	-0.98
			Dist.	13299.084sft	0.036sft	-0.003sft	-0.15
B109	005	015	Az.	89°51'42.1764"	0°00'00.3427"	0°00'00.2508"	0.97
			ΔHt.	68.549sft	0.033sft	0.007sft	0.29
			Dist.	16460.694sft	0.026sft	-0.011sft	-0.56

B126	003	013	Az.	89°37'25.1195"	0°00'00.4657"	-0°00'00.1557"	-0.81
			ΔHt.	-11.758sft	0.041sft	0.017sft	0.97
			Dist.	14881.384sft	0.033sft	0.008sft	0.54
B976	y81	007	Az.	122°46'21.6138"	0°00'02.4580"	0°00'00.7949"	0.63
			ΔHt.	-25.589sft	0.035sft	0.012sft	0.76
			Dist.	2545.743sft	0.031sft	0.015sft	0.97
B21	068	TBM-Q84	Az.	331°33'00.0978"	0°00'00.3638"	0°00'00.1030"	0.44
			ΔHt.	-34.720sft	0.047sft	-0.049sft	-0.97
			Dist.	17070.491sft	0.030sft	-0.010sft	-0.51
B163	071	059	Az.	272°08'41.7652"	0°00'00.3844"	-0°00'00.2045"	-0.97
			ΔHt.	28.791sft	0.032sft	0.005sft	0.30
			Dist.	15901.616sft	0.029sft	0.001sft	0.07
B174	053	043	Az.	268°20'24.0915"	0°00'00.4027"	0°00'00.2066"	0.95
			ΔHt.	-9.390sft	0.035sft	0.012sft	0.64
			Dist.	15515.296sft	0.030sft	0.010sft	0.61
B934	006	016	Az.	87°05'06.0522"	0°00'00.4084"	0°00'00.2091"	0.95
			ΔHt.	22.084sft	0.036sft	0.000sft	-0.01
			Dist.	15250.217sft	0.029sft	-0.001sft	-0.04
B939	035	025	Az.	268°36'49.1277"	0°00'00.4188"	-0°00'00.0205"	-0.10
			ΔHt.	85.141sft	0.045sft	-0.022sft	-0.95
			Dist.	15973.440sft	0.032sft	-0.008sft	-0.55
B72	080	079	Az.	178°47'52.7113"	0°00'00.3824"	-0°00'00.0715"	-0.38
			ΔHt.	12.962sft	0.033sft	-0.003sft	-0.21
			Dist.	16261.348sft	0.031sft	-0.014sft	-0.94
B105	062	053	Az.	267°36'37.9615"	0°00'00.4120"	0°00'00.1800"	0.94
			ΔHt.	31.005sft	0.035sft	0.009sft	0.59
			Dist.	15891.423sft	0.031sft	-0.001sft	-0.09
B102	082	074	Az.	280°02'50.3722"	0°00'00.3027"	-0°00'00.2201"	-0.94
			ΔHt.	1.336sft	0.028sft	0.014sft	0.71
			Dist.	16086.796sft	0.023sft	0.017sft	0.91
B973	036	026	Az.	270°23'23.8982"	0°00'00.4098"	-0°00'00.1343"	-0.69

			ΔHt.	-5.457sft	0.039sft	0.014sft	0.94
			Dist.	15781.829sft	0.031sft	-0.002sft	-0.13
B162	059	TBM-Q84	Az.	156°00'33.8415"	0°00'00.3279"	0°00'00.1644"	0.71
			ΔHt.	-86.102sft	0.039sft	0.019sft	0.57
			Dist.	19108.930sft	0.031sft	0.021sft	0.93
B9	020	030	Az.	83°34'15.9848"	0°00'00.3730"	0°00'00.1542"	0.46
			ΔHt.	7.846sft	0.040sft	-0.012sft	-0.29
			Dist.	16755.684sft	0.029sft	-0.022sft	-0.92
B922	008	018	Az.	92°37'42.6668"	0°00'00.3812"	-0°00'00.2070"	-0.92
			ΔHt.	-61.995sft	0.033sft	-0.006sft	-0.33
			Dist.	15547.332sft	0.027sft	0.003sft	0.17
B82	007	006	Az.	179°59'15.3540"	0°00'00.3700"	0°00'00.0439"	0.20
			ΔHt.	-13.978sft	0.037sft	0.019sft	0.92
			Dist.	15864.100sft	0.030sft	0.010sft	0.59
B952	026	027	Az.	0°51'23.6159"	0°00'00.3703"	0°00'00.1817"	0.92
			ΔHt.	-16.678sft	0.033sft	-0.011sft	-0.76
			Dist.	16100.609sft	0.030sft	0.000sft	0.00
B11	031	040	Az.	89°51'40.9731"	0°00'00.4105"	0°00'00.0033"	0.02
			ΔHt.	-12.763sft	0.035sft	0.014sft	0.90
			Dist.	15714.790sft	0.030sft	0.001sft	0.05
B957	075	Linn 15	Az.	89°05'46.6603"	0°00'00.3758"	-0°00'00.0499"	-0.24
			ΔHt.	-21.996sft	0.033sft	-0.012sft	-0.72
			Dist.	16090.339sft	0.029sft	-0.015sft	-0.90
B29	029	086	Az.	51°27'29.5675"	0°00'00.7149"	-0°00'00.1837"	-0.50
			ΔHt.	-8.427sft	0.032sft	0.014sft	0.89
			Dist.	8521.001sft	0.030sft	-0.004sft	-0.25
B1089	044	045	Az.	0°38'27.5025"	0°00'00.4069"	0°00'00.2000"	0.84
			ΔHt.	-28.645sft	0.041sft	0.020sft	0.87
			Dist.	15848.287sft	0.033sft	-0.015sft	-0.76
B135	042	033	Az.	263°33'38.6087"	0°00'00.3881"	-0°00'00.0324"	-0.16
			ΔHt.	-12.098sft	0.033sft	0.006sft	0.41

			Dist.	15837.693sft	0.029sft	0.013sft	0.86
B1004	Linn 15	076	Az.	307°53'15.1810"	0°00'00.2836"	-0°00'00.1414"	-0.84
			ΔHt.	75.763sft	0.033sft	0.003sft	0.14
			Dist.	21100.506sft	0.028sft	-0.014sft	-0.86
B99	007	Q82	Az.	228°58'44.4494"	0°00'00.1812"	-0°00'00.1200"	-0.85
			ΔHt.	-81.138sft	0.048sft	0.029sft	0.62
			Dist.	40426.983sft	0.033sft	0.002sft	0.10
B130	014	004	Az.	269°26'22.0675"	0°00'00.4555"	-0°00'00.0917"	-0.37
			ΔHt.	20.575sft	0.033sft	-0.004sft	-0.26
			Dist.	13548.820sft	0.029sft	0.014sft	0.84
B70	031	039	Az.	134°33'00.4589"	0°00'00.2708"	0°00'00.0217"	0.14
			ΔHt.	-35.839sft	0.035sft	0.011sft	0.51
			Dist.	22419.253sft	0.030sft	-0.015sft	-0.84
B1056	94-067	94-052	Az.	268°21'19.3998"	0°00'00.3072"	0°00'00.1646"	0.83
			ΔHt.	17.058sft	0.037sft	0.003sft	0.13
			Dist.	21077.290sft	0.031sft	-0.001sft	-0.04
B1033	065	064	Az.	189°38'51.6765"	0°00'00.8871"	0°00'00.3381"	0.68
			ΔHt.	-7.366sft	0.043sft	0.018sft	0.83
			Dist.	7209.166sft	0.032sft	-0.013sft	-0.74
B996	054	064	Az.	53°34'50.7463"	0°00'00.2752"	-0°00'00.1476"	-0.83
			ΔHt.	-19.762sft	0.031sft	-0.006sft	-0.32
			Dist.	19962.007sft	0.027sft	-0.007sft	-0.41
B124	022	032	Az.	89°46'09.7848"	0°00'00.3870"	-0°00'00.0288"	-0.14
			ΔHt.	29.645sft	0.037sft	0.015sft	0.75
			Dist.	15912.246sft	0.029sft	-0.013sft	-0.82
B938	035	044	Az.	90°08'13.8437"	0°00'00.4489"	0°00'00.1537"	0.82
			ΔHt.	-53.654sft	0.046sft	-0.007sft	-0.32
			Dist.	15661.178sft	0.034sft	0.011sft	0.80
B148	060	050	Az.	224°26'16.8658"	0°00'00.2788"	-0°00'00.0032"	-0.02
			ΔHt.	-1.218sft	0.044sft	0.008sft	0.23
			Dist.	22204.692sft	0.031sft	0.016sft	0.82

B30	020	029	Az.	128°14'59.5068"	0°00'00.2763"	0°00'00.1545"	0.82
			ΔHt.	-8.652sft	0.037sft	0.012sft	0.47
			Dist.	21250.319sft	0.028sft	-0.006sft	-0.36
B975	026	017	Az.	270°30'31.9873"	0°00'00.3895"	-0°00'00.1388"	-0.66
			ΔHt.	17.362sft	0.035sft	0.015sft	0.82
			Dist.	16092.643sft	0.030sft	-0.004sft	-0.24
B1034	065	077	Az.	48°22'32.6816"	0°00'00.3174"	0°00'00.1006"	0.55
			ΔHt.	12.088sft	0.046sft	-0.028sft	-0.81
			Dist.	19688.643sft	0.031sft	-0.001sft	-0.07
B1063	6 157	028	Az.	233°31'53.1823"	0°00'00.3503"	-0°00'00.1692"	-0.53
			ΔHt.	77.711sft	0.039sft	-0.034sft	-0.80
			Dist.	19348.082sft	0.031sft	0.011sft	0.42
B1047	028	038	Az.	92°52'11.2896"	0°00'00.4097"	0°00'00.1304"	0.66
			ΔHt.	-36.702sft	0.036sft	-0.012sft	-0.79
			Dist.	15725.108sft	0.030sft	0.011sft	0.75
B1099	083	084	Az.	8°11'11.7448"	0°00'00.3071"	0°00'00.1317"	0.79
			ΔHt.	5.182sft	0.042sft	0.003sft	0.16
			Dist.	21214.988sft	0.033sft	0.004sft	0.20
B995	076	075	Az.	177°30'38.4401"	0°00'00.4332"	0°00'00.0701"	0.26
			ΔHt.	-53.766sft	0.033sft	-0.006sft	-0.27
			Dist.	13212.775sft	0.028sft	0.014sft	0.79
B927	018	026	Az.	135°01'39.2818"	0°00'00.2544"	0°00'00.1143"	0.74
			ΔHt.	15.184sft	0.033sft	-0.015sft	-0.77
			Dist.	22821.009sft	0.029sft	-0.005sft	-0.31
B161	061	073	Az.	90°46'29.7112"	0°00'00.4246"	-0°00'00.1382"	-0.56
			ΔHt.	-54.244sft	0.045sft	0.010sft	0.36
			Dist.	16068.676sft	0.032sft	0.013sft	0.75
B152	021	022	Az.	359°14'52.9895"	0°00'00.3699"	-0°00'00.0778"	-0.36
			ΔHt.	-19.847sft	0.041sft	-0.019sft	-0.75
			Dist.	16294.798sft	0.030sft	-0.001sft	-0.06
B141	061	072	Az.	132°35'31.6229"	0°00'00.2704"	-0°00'00.0810"	-0.37

			ΔHt.	-56.050sft	0.044sft	0.012sft	0.25
			Dist.	23434.522sft	0.029sft	-0.017sft	-0.74
B61	011	020	Az.	102°49'18.0434"	0°00'00.3422"	0°00'00.1715"	0.72
			ΔHt.	75.878sft	0.030sft	0.005sft	0.26
			Dist.	15422.230sft	0.025sft	-0.004sft	-0.24
B139	052	051	Az.	178°30'52.2706"	0°00'00.3813"	0°00'00.1611"	0.72
			ΔHt.	38.712sft	0.037sft	0.006sft	0.32
			Dist.	15462.263sft	0.029sft	-0.007sft	-0.39
B1049	019	009	Az.	271°24'50.2290"	0°00'00.3915"	0°00'00.0073"	0.04
			ΔHt.	-87.976sft	0.036sft	-0.012sft	-0.70
			Dist.	15965.611sft	0.030sft	0.008sft	0.50
B74	058	TBM-Q84	Az.	95°57'49.9817"	0°00'00.7180"	-0°00'00.2726"	-0.70
			ΔHt.	-31.765sft	0.038sft	-0.003sft	-0.13
			Dist.	8401.127sft	0.029sft	-0.001sft	-0.07
B1069	085	Linn 13	Az.	4°37'08.9990"	0°00'00.4490"	0°00'00.1812"	0.70
			ΔHt.	67.343sft	0.034sft	0.003sft	0.17
			Dist.	12867.929sft	0.030sft	0.005sft	0.29
B961	083	076	Az.	261°10'45.8145"	0°00'00.4464"	-0°00'00.0005"	0.00
			ΔHt.	129.717sft	0.034sft	-0.011sft	-0.70
			Dist.	13897.811sft	0.030sft	0.010sft	0.67
B1	001	011	Az.	87°27'54.2695"	0°00'00.3914"	0°00'00.1367"	0.60
			ΔHt.	76.339sft	0.034sft	0.011sft	0.69
			Dist.	14798.685sft	0.028sft	-0.008sft	-0.48
B75	049	058	Az.	93°49'57.7414"	0°00'00.3831"	0°00'00.1096"	0.49
			ΔHt.	-24.679sft	0.035sft	-0.003sft	-0.19
			Dist.	15179.428sft	0.028sft	-0.011sft	-0.69
B1031	056	046	Az.	269°50'21.2432"	0°00'00.3207"	-0°00'00.0057"	-0.02
			ΔHt.	-24.206sft	0.030sft	-0.012sft	-0.67
			Dist.	15704.199sft	0.024sft	0.009sft	0.48
B101	074	082	Az.	100°00'29.6294"	0°00'00.3027"	-0°00'00.0152"	-0.06
			ΔHt.	-1.335sft	0.028sft	-0.014sft	-0.67

			Dist.	16086.796sft	0.023sft	0.008sft	0.42
B947	016	007	Az.	314°45'46.8546"	0°00'00.2494"	-0°00'00.0536"	-0.30
			ΔHt.	-8.104sft	0.032sft	0.011sft	0.46
			Dist.	21441.476sft	0.027sft	0.013sft	0.67
B1050	94-042	009	Az.	180°29'38.0073"	0°00'00.4350"	-0°00'00.0615"	-0.34
			ΔHt.	-138.162sft	0.039sft	0.008sft	0.62
			Dist.	15653.901sft	0.034sft	0.009sft	0.66
B155	033	022	Az.	229°44'11.0782"	0°00'00.2915"	-0°00'00.0229"	-0.11
			ΔHt.	-52.258sft	0.035sft	-0.011sft	-0.39
			Dist.	20550.319sft	0.029sft	0.013sft	0.65
B115	071	070	Az.	171°15'41.0027"	0°00'00.5189"	0°00'00.0074"	0.02
			ΔHt.	-21.188sft	0.030sft	-0.011sft	-0.64
			Dist.	10763.149sft	0.027sft	0.001sft	0.04
B1107	045	046	Az.	0°18'13.1320"	0°00'00.3916"	0°00'00.1316"	0.63
			ΔHt.	41.630sft	0.036sft	-0.002sft	-0.10
			Dist.	15935.030sft	0.031sft	-0.002sft	-0.13
B116	072	080	Az.	135°23'23.3812"	0°00'00.2722"	-0°00'00.0678"	-0.34
			ΔHt.	-23.880sft	0.037sft	-0.018sft	-0.63
			Dist.	21712.423sft	0.028sft	-0.009sft	-0.45
B1103	078	21-DDB	Az.	269°10'45.6524"	0°00'00.2878"	-0°00'00.0211"	-0.09
			ΔHt.	-23.977sft	0.037sft	0.001sft	0.02
			Dist.	17796.582sft	0.024sft	0.012sft	0.59
B1057	019	027	Az.	134°07'07.6135"	0°00'00.2725"	0°00'00.0971"	0.59
			ΔHt.	16.861sft	0.035sft	-0.011sft	-0.49
			Dist.	22350.458sft	0.029sft	-0.009sft	-0.55
B24	048	058	Az.	46°42'28.6362"	0°00'00.2477"	0°00'00.0089"	0.05
			ΔHt.	-42.340sft	0.035sft	-0.010sft	-0.39
			Dist.	22752.905sft	0.027sft	-0.011sft	-0.59
B1048	008	009	Az.	359°31'08.6428"	0°00'00.4339"	0°00'00.0443"	0.23
			ΔHt.	-168.327sft	0.037sft	0.003sft	0.18
			Dist.	15184.085sft	0.033sft	0.008sft	0.58

B1045	028	027	Az.	179°48'10.6596"	0°00'00.3558"	0°00'00.0940"	0.42
			ΔHt.	53.613sft	0.032sft	0.010sft	0.57
			Dist.	15505.844sft	0.027sft	-0.003sft	-0.16
B60	086	Blairs	Az.	247°06'56.3240"	0°00'00.8395"	-0°00'00.0115"	-0.03
			ΔHt.	11.368sft	0.031sft	0.009sft	0.55
			Dist.	7142.534sft	0.029sft	0.009sft	0.57
B983	016	025	Az.	94°21'15.6617"	0°00'00.3628"	0°00'00.0703"	0.31
			ΔHt.	21.662sft	0.034sft	-0.011sft	-0.56
			Dist.	15895.749sft	0.027sft	0.004sft	0.21
B974	017	007	Az.	269°59'00.7260"	0°00'00.4114"	-0°00'00.1197"	-0.54
			ΔHt.	-37.913sft	0.035sft	0.010sft	0.55
			Dist.	15297.838sft	0.030sft	0.003sft	0.18
B999	015	005	Az.	269°54'08.4591"	0°00'00.3427"	-0°00'00.1625"	-0.55
			ΔHt.	-68.548sft	0.033sft	0.012sft	0.42
			Dist.	16460.694sft	0.026sft	-0.009sft	-0.42
B950	008	007	Az.	179°02'19.0681"	0°00'00.3451"	-0°00'00.1156"	-0.50
			ΔHt.	-67.364sft	0.035sft	-0.015sft	-0.55
			Dist.	16742.979sft	0.030sft	-0.011sft	-0.51
B933	015	004	Az.	221°54'21.7406"	0°00'00.2657"	0°00'00.0577"	0.30
			ΔHt.	24.535sft	0.033sft	0.014sft	0.54
			Dist.	21359.766sft	0.028sft	-0.003sft	-0.16
B1094	056	046	Az.	269°50'21.2432"	0°00'00.3207"	-0°00'00.0831"	-0.31
			ΔHt.	-24.206sft	0.030sft	0.009sft	0.27
			Dist.	15704.199sft	0.024sft	-0.011sft	-0.54
B964	063	064	Az.	5°37'53.2003"	0°00'00.5152"	-0°00'00.1517"	-0.54
			ΔHt.	-7.739sft	0.032sft	-0.007sft	-0.44
			Dist.	11395.271sft	0.029sft	0.002sft	0.15
B76	030	039	Az.	87°27'45.6532"	0°00'00.3815"	-0°00'00.0533"	-0.25
			ΔHt.	-120.058sft	0.034sft	-0.009sft	-0.54
			Dist.	15869.863sft	0.029sft	-0.005sft	-0.31
B92	052	042	Az.	271°33'20.9795"	0°00'00.3377"	0°00'00.1259"	0.48

			ΔHt.	67.559sft	0.029sft	0.004sft	0.17
			Dist.	15327.142sft	0.025sft	0.001sft	0.06
B131	023	022	Az.	180°04'36.9589"	0°00'00.3680"	-0°00'00.1133"	-0.47
			ΔHt.	-55.966sft	0.032sft	-0.008sft	-0.44
			Dist.	14743.045sft	0.027sft	-0.003sft	-0.16
B94	053	052	Az.	180°56'29.2943"	0°00'00.3752"	0°00'00.0957"	0.45
			ΔHt.	-25.341sft	0.033sft	0.000sft	-0.01
			Dist.	15862.554sft	0.029sft	0.004sft	0.24
B73	069	070	Az.	7°09'32.3070"	0°00'00.5662"	0°00'00.0266"	0.09
			ΔHt.	13.627sft	0.033sft	-0.007sft	-0.45
			Dist.	10685.722sft	0.030sft	0.002sft	0.16
B1005	076	064	Az.	261°44'04.3016"	0°00'00.3902"	-0°00'00.0922"	-0.43
			ΔHt.	-102.583sft	0.033sft	-0.003sft	-0.21
			Dist.	15316.737sft	0.029sft	0.005sft	0.31
B978	034	024	Az.	273°31'41.6818"	0°00'00.3634"	-0°00'00.0008"	0.00
			ΔHt.	89.370sft	0.034sft	0.000sft	0.02
			Dist.	16108.302sft	0.028sft	0.007sft	0.42
B1055	028	94-052	Az.	325°34'00.3021"	0°00'00.2801"	0°00'00.0666"	0.30
			ΔHt.	-53.580sft	0.033sft	-0.012sft	-0.42
			Dist.	18731.382sft	0.027sft	0.001sft	0.03
B59	086	030	Az.	325°28'39.2563"	0°00'00.5293"	0°00'00.0848"	0.30
			ΔHt.	24.925sft	0.034sft	0.006sft	0.34
			Dist.	11803.139sft	0.030sft	0.006sft	0.41
B946	017	016	Az.	180°16'49.1721"	0°00'00.3970"	-0°00'00.0914"	-0.40
			ΔHt.	-29.808sft	0.034sft	0.005sft	0.26
			Dist.	15103.202sft	0.030sft	0.002sft	0.12
B146	071	080	Az.	88°47'10.0900"	0°00'00.3586"	0°00'00.0326"	0.15
			ΔHt.	-58.323sft	0.030sft	0.006sft	0.38
			Dist.	15821.217sft	0.027sft	0.005sft	0.30
B67	TBM-A84	087	Az.	183°15'39.8732"	0°00'00.4497"	0°00'00.0108"	0.04
			ΔHt.	-44.515sft	0.032sft	0.006sft	0.37

			Dist.	13546.947sft	0.029sft	0.005sft	0.34
B1078	94-042	019	Az.	135°22'41.0289"	0°00'00.3117"	0°00'00.0379"	0.20
			ΔHt.	-50.185sft	0.043sft	0.007sft	0.19
			Dist.	22530.617sft	0.034sft	-0.006sft	-0.32
B136	052	042	Az.	271°33'20.9795"	0°00'00.3377"	0°00'00.0011"	0.00
			ΔHt.	67.559sft	0.029sft	-0.005sft	-0.24
			Dist.	15327.142sft	0.025sft	0.001sft	0.08
B926	007	018	Az.	43°34'35.8494"	0°00'00.2571"	-0°00'00.0436"	-0.23
			ΔHt.	5.369sft	0.034sft	0.005sft	0.20
			Dist.	22123.487sft	0.026sft	-0.001sft	-0.06
B932	004	005	Az.	352°05'31.8554"	0°00'00.3493"	-0°00'00.0210"	-0.10
			ΔHt.	-93.082sft	0.032sft	-0.003sft	-0.22
			Dist.	16019.747sft	0.028sft	-0.003sft	-0.17
B78	011	99-202	Az.	139°55'24.8016"	0°00'00.1937"	-0°00'00.0061"	-0.04
			ΔHt.	-19.684sft	0.029sft	0.002sft	0.12
			Dist.	22688.267sft	0.021sft	0.002sft	0.08

Geoid Observations

Number of Observations : 115

Number of Outliers : 0

Observation Adjustment (Critical Tau = 4.00). Any outliers are in red.

Observation ID	Point Name	Separation	A-posteriori Error (1.96σ)	Residual	Standardized Residual
G110	009	-102.372sft	0.322sft	-0.171sft	-2.80
G65	008	-102.484sft	0.313sft	-0.196sft	-2.70
G111	94-042	-102.256sft	0.322sft	-0.162sft	-2.63
G68	y81	-102.668sft	0.293sft	-0.228sft	-2.48

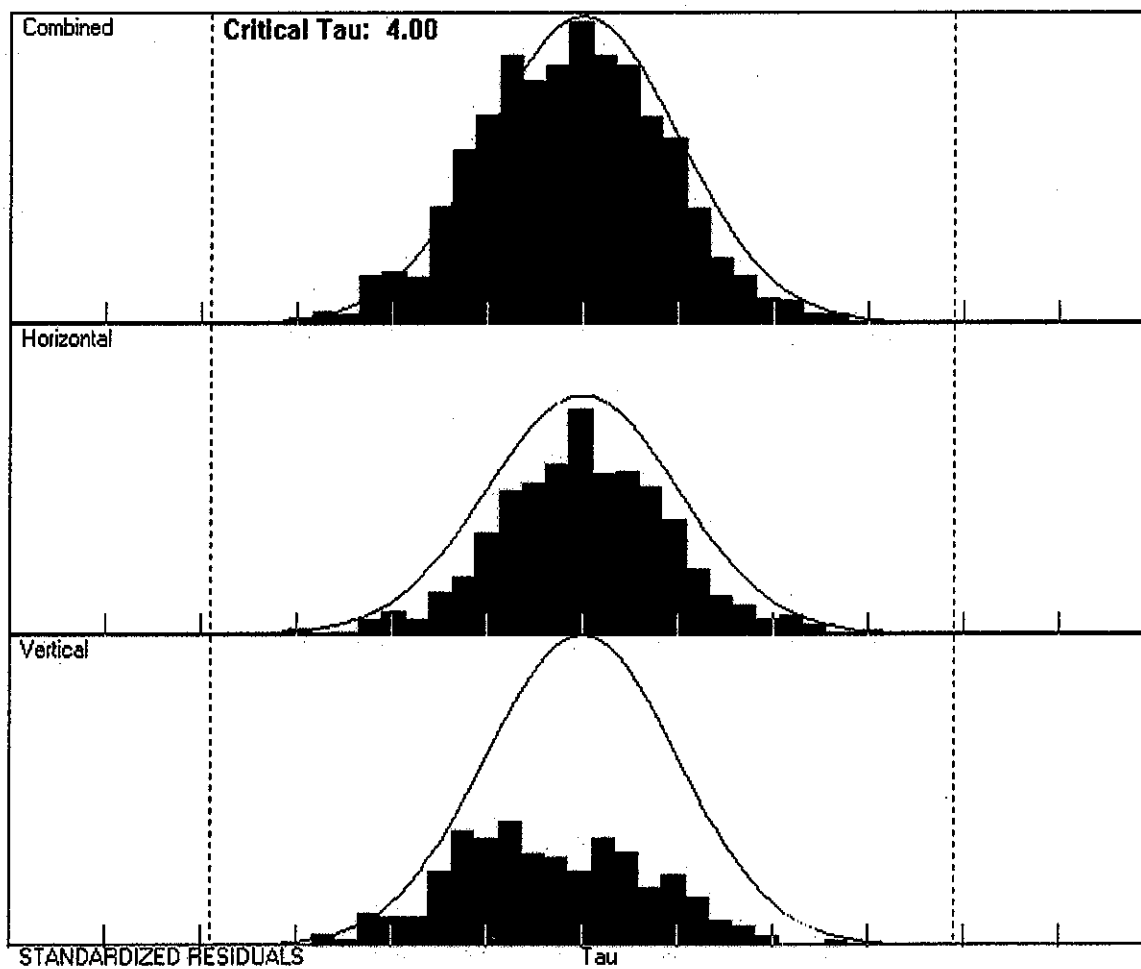
G36	007	-102.646sft	0.295sft	-0.220sft	-2.46
G66	018	-102.245sft	0.311sft	-0.173sft	-2.31
G78	017	-102.433sft	0.303sft	-0.187sft	-2.27
G14	57 27	-105.962sft	0.334sft	-0.092sft	-2.19
G34	006	-102.760sft	0.308sft	-0.168sft	-2.15
G72	016	-102.597sft	0.305sft	-0.169sft	-2.09
G69	pratt	-102.117sft	0.309sft	-0.157sft	-2.05
G109	019	-102.061sft	0.317sft	-0.136sft	-2.01
G70	026	-102.240sft	0.302sft	-0.157sft	-1.87
G50	015	-102.775sft	0.309sft	-0.139sft	-1.81
G73	025	-102.459sft	0.301sft	-0.154sft	-1.81
G67	027	-101.996sft	0.307sft	-0.141sft	-1.78
G37	005	-102.910sft	0.315sft	-0.125sft	-1.76
G71	024	-102.660sft	0.304sft	-0.139sft	-1.69
G113	94-048	-102.017sft	0.316sft	-0.111sft	-1.62
G51	014	-102.979sft	0.313sft	-0.112sft	-1.54
G49	023	-102.916sft	0.307sft	-0.119sft	-1.51
G74	035	-102.342sft	0.292sft	-0.138sft	-1.49
G48	034	-102.613sft	0.296sft	-0.132sft	-1.49
G15	080	-104.595sft	0.310sft	-0.113sft	-1.48
G62	004	-103.064sft	0.318sft	-0.099sft	-1.47
G39	Linn 17	-104.220sft	0.312sft	-0.106sft	-1.44
G77	036	-102.080sft	0.292sft	-0.133sft	-1.44
G108	028	-101.776sft	0.310sft	-0.108sft	-1.42
G16	079	-104.949sft	0.306sft	-0.112sft	-1.41
G63	033	-102.917sft	0.301sft	-0.119sft	-1.41
G54	072	-103.936sft	0.303sft	-0.112sft	-1.35
G53	071	-104.301sft	0.296sft	-0.119sft	-1.33
G41	081	-103.930sft	0.313sft	-0.097sft	-1.33
G45	042	-102.905sft	0.296sft	-0.119sft	-1.33
G46	043	-102.598sft	0.290sft	-0.124sft	-1.31

G59	022	-103.189sft	0.308sft	-0.101sft	-1.30
G33	070	-104.582sft	0.293sft	-0.120sft	-1.30
G57	032	-103.197sft	0.302sft	-0.107sft	-1.29
G102	037	-101.802sft	0.298sft	-0.111sft	-1.28
G55	060	-103.655sft	0.296sft	-0.114sft	-1.28
G44	052	-103.022sft	0.295sft	-0.115sft	-1.27
G43	073	-103.553sft	0.304sft	-0.104sft	-1.26
G60	013	-103.231sft	0.314sft	-0.090sft	-1.26
G58	041	-103.291sft	0.298sft	-0.110sft	-1.26
G56	051	-103.433sft	0.296sft	-0.112sft	-1.25
G64	061	-103.253sft	0.297sft	-0.110sft	-1.25
G52	059	-104.057sft	0.291sft	-0.114sft	-1.22
G75	044	-102.291sft	0.281sft	-0.124sft	-1.22
G47	053	-102.647sft	0.289sft	-0.113sft	-1.19
G20	069	-104.802sft	0.292sft	-0.110sft	-1.18
G13	92-01	-105.266sft	0.298sft	-0.104sft	-1.18
G38	082	-103.614sft	0.312sft	-0.086sft	-1.17
G61	003	-103.302sft	0.319sft	-0.076sft	-1.16
G21	TBM-Q84	-104.603sft	0.276sft	-0.121sft	-1.16
G6	050	-103.870sft	0.294sft	-0.103sft	-1.13
G42	062	-102.844sft	0.294sft	-0.101sft	-1.11
G40	074	-103.177sft	0.303sft	-0.092sft	-1.11
G5	040	-103.721sft	0.297sft	-0.096sft	-1.09
G107	038	-101.585sft	0.302sft	-0.091sft	-1.09
G12	031	-103.619sft	0.302sft	-0.090sft	-1.07
G88	045	-101.984sft	0.275sft	-0.112sft	-1.07
G79	054	-102.321sft	0.280sft	-0.107sft	-1.05
G19	058	-104.464sft	0.284sft	-0.102sft	-1.04
G10	021	-103.531sft	0.307sft	-0.081sft	-1.02
G17	068	-105.007sft	0.297sft	-0.089sft	-1.01
G97	6 157	-101.444sft	0.297sft	-0.088sft	-0.99

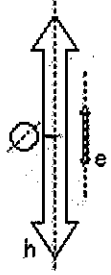
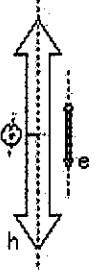
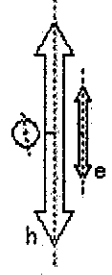
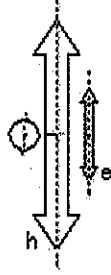
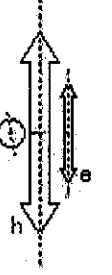
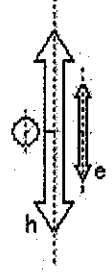
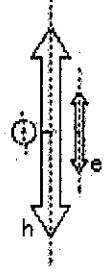
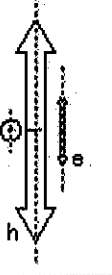
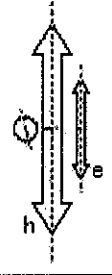
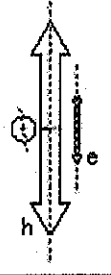
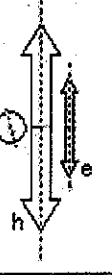
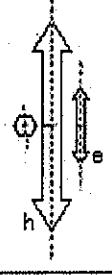
G94	02-257	-101.013sft	0.300sft	0.084sft	0.98
G3	012	-103.538sft	0.311sft	-0.070sft	-0.94
G84	063	-102.440sft	0.289sft	-0.088sft	-0.93
G87	n81	-101.979sft	0.262sft	-0.105sft	-0.93
G7	049	-104.258sft	0.291sft	-0.084sft	-0.90
G80	075	-102.687sft	0.301sft	-0.073sft	-0.86
G112	94-052	-101.776sft	0.310sft	-0.065sft	-0.85
G4	002	-103.580sft	0.317sft	-0.058sft	-0.85
G8	039	-104.122sft	0.293sft	-0.077sft	-0.85
G81	Linn 15	-103.022sft	0.311sft	-0.063sft	-0.85
G11	030	-104.010sft	0.296sft	-0.075sft	-0.84
G101	046	-101.678sft	0.290sft	-0.079sft	-0.84
G76	055	-101.960sft	0.272sft	-0.090sft	-0.84
G26	Blairs	-104.302sft	0.286sft	-0.075sft	-0.78
G35	Q82	-103.086sft	0.313sft	-0.055sft	-0.75
G85	064	-102.152sft	0.289sft	-0.071sft	-0.75
G25	086	-104.283sft	0.291sft	-0.070sft	-0.74
G24	029	-104.349sft	0.290sft	-0.065sft	-0.69
G83	076	-102.267sft	0.301sft	-0.053sft	-0.62
G2	011	-103.845sft	0.308sft	-0.047sft	-0.60
G86	065	-101.975sft	0.290sft	-0.056sft	-0.60
G91	g75 reset	-101.171sft	0.321sft	0.036sft	0.58
G18	99-204	-104.786sft	0.285sft	-0.056sft	-0.58
G9	020	-103.941sft	0.304sft	-0.047sft	-0.57
G82	083	-102.488sft	0.310sft	-0.043sft	-0.56
G22	048	-104.594sft	0.292sft	-0.052sft	-0.56
G1	001	-103.865sft	0.311sft	-0.039sft	-0.53
G90	02-258	-101.058sft	0.304sft	0.043sft	0.52
G32	TBM-A84	-103.939sft	0.303sft	-0.042sft	-0.50
G89	02-259	-101.158sft	0.311sft	0.036sft	0.49
G99	94-067	-101.408sft	0.302sft	-0.040sft	-0.47

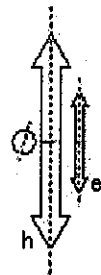
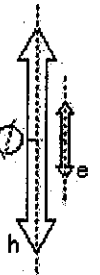
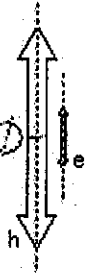
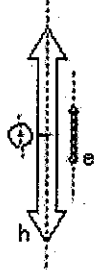
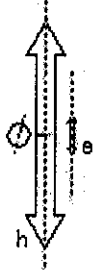
G103	056	-101.589sft	0.287sft	-0.045sft	-0.47
G96	94-073	-101.309sft	0.298sft	-0.038sft	-0.44
G23	99-203	-104.476sft	0.284sft	-0.043sft	-0.44
G98	047	-101.393sft	0.300sft	-0.036sft	-0.43
G95	Linn 13	-101.391sft	0.316sft	0.026sft	0.38
G92	067	-101.199sft	0.299sft	0.032sft	0.37
G31	Hartwick	-104.305sft	0.322sft	0.016sft	0.27
G106	21-DDB	-101.278sft	0.288sft	0.022sft	0.23
G105	066	-101.596sft	0.292sft	-0.021sft	-0.22
G104	077	-101.808sft	0.303sft	-0.018sft	-0.22
G30	99-201	-104.150sft	0.319sft	0.013sft	0.20
G114	078	-101.419sft	0.307sft	0.014sft	0.18
G93	085	-101.614sft	0.314sft	0.012sft	0.17
G115	084	-101.948sft	0.313sft	-0.009sft	-0.12
G100	057	-101.285sft	0.297sft	0.010sft	0.12
G29	010	-104.159sft	0.313sft	-0.007sft	-0.09
G28	087	-104.160sft	0.319sft	0.004sft	0.05
G27	99-202	-104.214sft	0.297sft	-0.003sft	-0.03

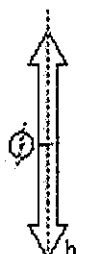
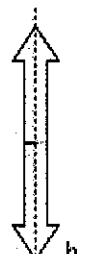
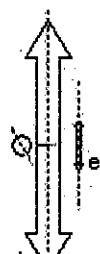
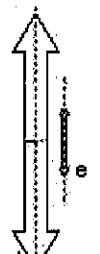
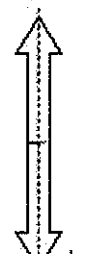
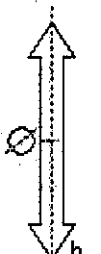
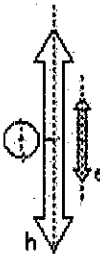
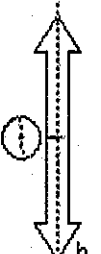
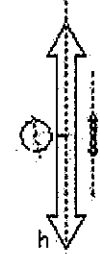
Histograms of Standardized Residuals

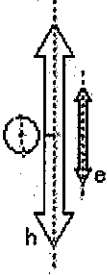
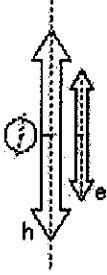
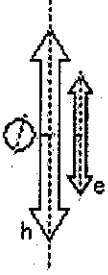
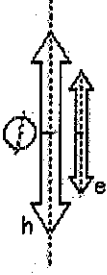
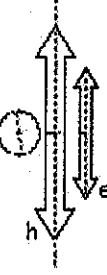
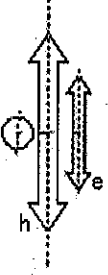
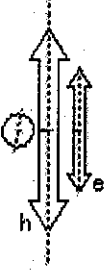
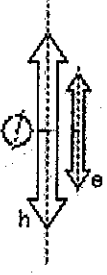
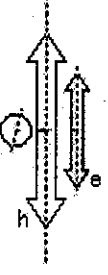
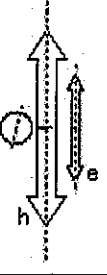
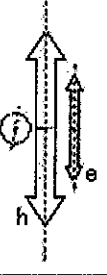
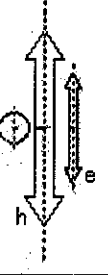


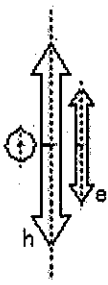
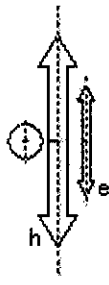
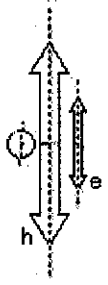
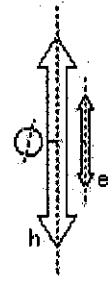
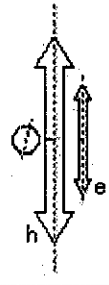
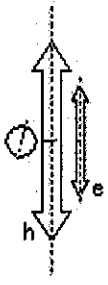
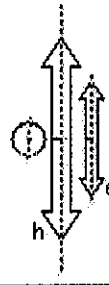
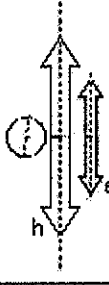
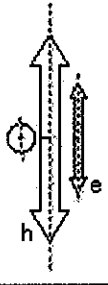
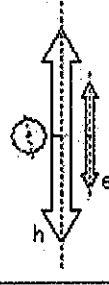
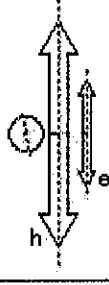
Point Error Ellipses

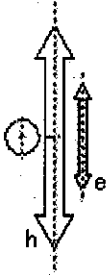
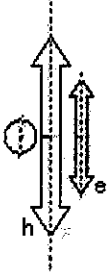
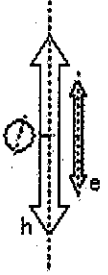
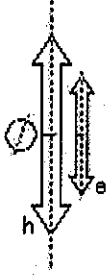
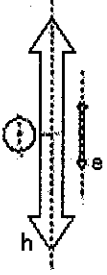
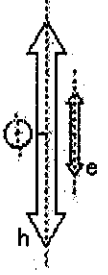
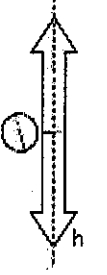
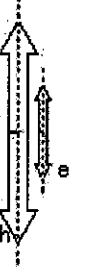
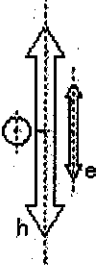
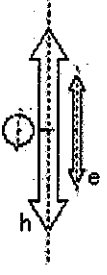
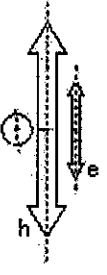
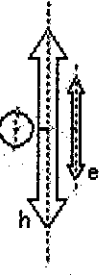
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002	040	050
		
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049	020	021
		
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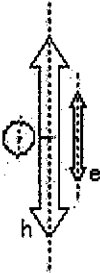
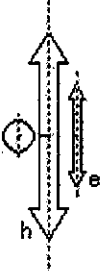
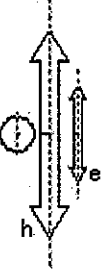
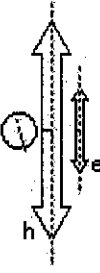
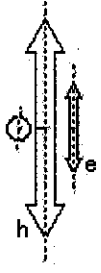
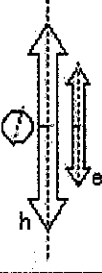
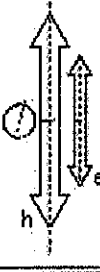
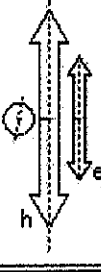
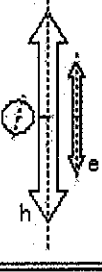
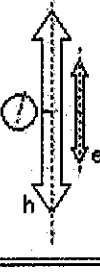
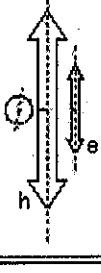
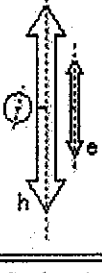
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079	068	99-204
 71°	 77°	 0°
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069	TBM-Q84	048
 74°	 85°	 78°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
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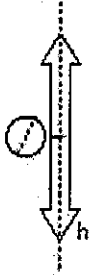
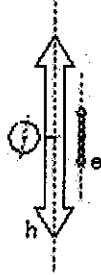
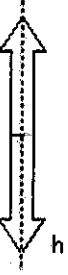
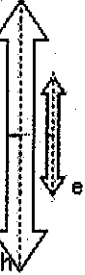
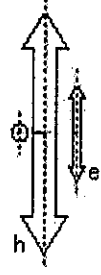
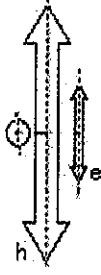
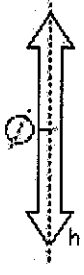
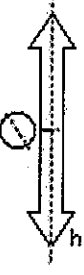
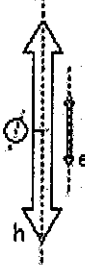
086	Blairs	99-202
 76°	 81°	 0°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
087	010	Hartwick
 -60°	 -59°	 0°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
99-201	TBM-A84	070
 0°	 37°	 75°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
006	Q82	007
 -82°	 -82°	 -79°
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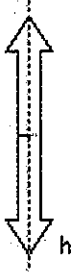
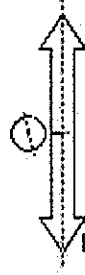
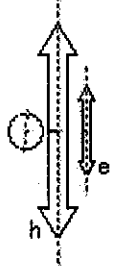
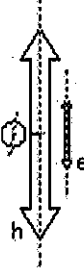
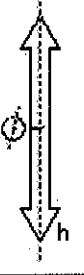
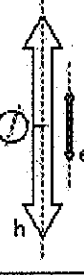
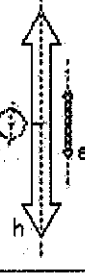
005	082	Linn 17
		
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074	081	062
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
073	052	042
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
043	053	034
		
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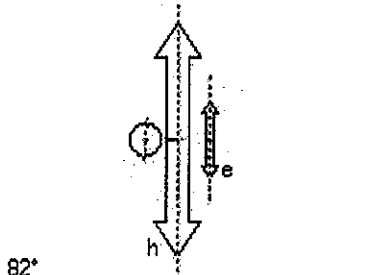
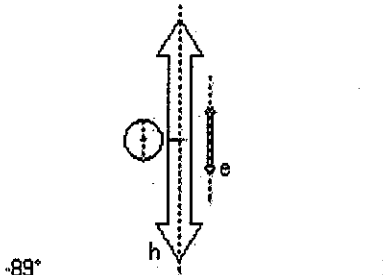
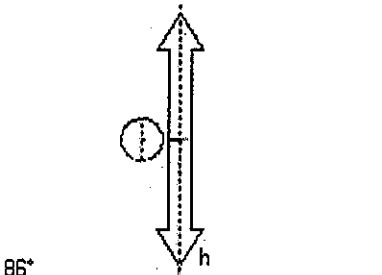
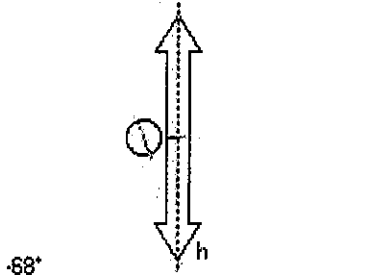
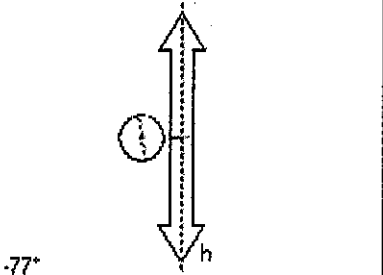
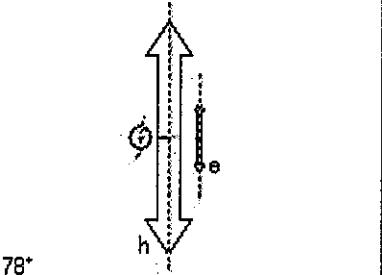
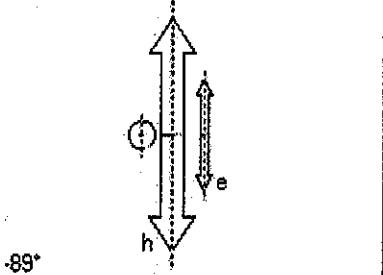
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Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
060	032	041
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
022	013	003
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

004	033	051
		
.86°	.85°	.72°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
061	008	018
		
.70°	.82°	.84°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
y81	pratt	026
		
.73°	0°	.87°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
024	016	035
		
.84°	.85°	.85°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

044	025	036
 82°	 86°	 86°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
017	027	075
 74°	 84°	 74°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
Linn 15	083	076
 73°	 81°	 75°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
063	054	064
 73°	 80°	 76°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

n81	045	055
 63°	 76°	 74°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
02-259	02-258	g75 reset
 0°	 0°	 0°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
067	085	Linn 13
 -76°	 -86°	 -81°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
94-073	6 157	047
 65°	 -54°	 68°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

02-257	94-067	037
 0°	 -75°	 85°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
056	046	065
 79°	 74°	 75°
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077	066	057
 86°	 79°	 77°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
21-DDB	038	028
 76°	 71°	 84°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

019	009	94-042
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
94-052	94-048	078
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
084		
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

Covariant Terms

Adjustment performed in NAD 1983 (Conus)

From Point	To Point		Components	A-posteriori Error (1.96 σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
001	011	Az.	87°27'54.2870"	0°00'00.3916"	1:526143	1:526143
		Δ Ht.	76.343sft	0.044sft		
		Δ Elev.	76.322sft	0.105sft		
		Dist.	14798.692sft	0.028sft		
001	002	Az.	359°04'40.5820"	0°00'00.4182"	1:490502	1:490502
		Δ Ht.	63.665sft	0.053sft		
		Δ Elev.	63.380sft	0.111sft		
		Dist.	15738.326sft	0.032sft		
001	99-201	Az.	183°33'54.6104"	0°00'00.3335"	1:619277	1:619277
		Δ Ht.	-16.515sft	0.054sft		
		Δ Elev.	-16.230sft	0.078sft		
		Dist.	18165.751sft	0.029sft		
001	TBM-A84	Az.	127°39'41.9647"	0°00'01.0285"	1:203544	1:203544
		Δ Ht.	33.426sft	0.039sft		
		Δ Elev.	33.500sft	0.078sft		
		Dist.	6490.811sft	0.032sft		
011	012	Az.	358°51'22.8104"	0°00'00.3688"	1:553092	1:553092
		Δ Ht.	66.836sft	0.044sft		
		Δ Elev.	66.530sft	0.108sft		
		Dist.	15067.227sft	0.027sft		
011	002	Az.	315°07'13.9430"	0°00'00.2891"	1:716431	1:716431
		Δ Ht.	-12.677sft	0.056sft		
		Δ Elev.	-12.942sft	0.125sft		
		Dist.	21297.544sft	0.030sft		
011	020	Az.	102°49'18.0609"	0°00'00.3409"	1:615815	1:615815
		Δ Ht.	75.886sft	0.042sft		
		Δ Elev.	75.982sft	0.097sft		

		Dist.	15422.238sft	0.025sft		
011	99-202	Az.	139°55'24.8192"	0°00'00.1958"	1:1054315	1:1054315
		ΔHt.	-19.662sft	0.051sft		
		ΔElev.	-19.292sft	0.087sft		
		Dist.	22688.278sft	0.022sft		
011	087	Az.	209°53'14.1528"	0°00'00.2482"	1:828821	1:828821
		ΔHt.	-87.419sft	0.053sft		
		ΔElev.	-87.103sft	0.106sft		
		Dist.	20921.363sft	0.025sft		
011	010	Az.	179°18'15.7357"	0°00'00.3313"	1:616635	1:616635
		ΔHt.	-101.429sft	0.045sft		
		ΔElev.	-101.114sft	0.108sft		
		Dist.	16516.912sft	0.027sft		
012	002	Az.	270°06'16.3847"	0°00'00.4282"	1:486066	1:486066
		ΔHt.	-79.514sft	0.047sft		
		ΔElev.	-79.472sft	0.111sft		
		Dist.	14727.213sft	0.030sft		
012	020	Az.	140°19'00.2274"	0°00'00.2424"	1:831238	1:831238
		ΔHt.	9.050sft	0.057sft		
		ΔElev.	9.452sft	0.123sft		
		Dist.	24021.343sft	0.029sft		
012	021	Az.	87°49'45.6494"	0°00'00.3748"	1:560847	1:560847
		ΔHt.	-12.494sft	0.046sft		
		ΔElev.	-12.500sft	0.111sft		
		Dist.	16063.160sft	0.029sft		
002	003	Az.	359°03'26.1410"	0°00'00.4497"	1:450391	1:450391
		ΔHt.	79.903sft	0.052sft		
		ΔElev.	79.625sft	0.112sft		
		Dist.	15723.030sft	0.035sft		
040	050	Az.	90°12'02.8949"	0°00'00.3996"	1:530222	1:530222
		ΔHt.	49.389sft	0.044sft		

		ΔElev.	49.538sft	0.109sft		
		Dist.	15407.340sft	0.029sft		
040	049	Az.	133°19'43.6761"	0°00'00.2618"	1:779646	1:779646
		ΔHt.	16.183sft	0.051sft		
		ΔElev.	16.720sft	0.123sft		
		Dist.	21839.979sft	0.028sft		
040	031	Az.	269°54'00.0073"	0°00'00.4100"	1:516845	1:516845
		ΔHt.	12.758sft	0.046sft		
		ΔElev.	12.656sft	0.111sft		
		Dist.	15714.797sft	0.030sft		
040	039	Az.	179°05'10.9830"	0°00'00.3461"	1:583159	1:583159
		ΔHt.	-23.060sft	0.043sft		
		ΔElev.	-22.659sft	0.109sft		
		Dist.	15768.049sft	0.027sft		
050	049	Az.	178°11'51.3511"	0°00'00.3835"	1:525529	1:525529
		ΔHt.	-33.206sft	0.043sft		
		ΔElev.	-32.818sft	0.108sft		
		Dist.	14939.952sft	0.028sft		
050	059	Az.	87°44'28.7809"	0°00'00.3915"	1:534316	1:534316
		ΔHt.	-3.560sft	0.046sft		
		ΔElev.	-3.373sft	0.111sft		
		Dist.	16202.683sft	0.030sft		
050	060	Az.	44°23'59.2991"	0°00'00.2779"	1:726960	1:726960
		ΔHt.	1.207sft	0.063sft		
		ΔElev.	0.992sft	0.131sft		
		Dist.	22204.702sft	0.031sft		
050	051	Az.	0°14'25.3256"	0°00'00.3744"	1:534603	1:534603
		ΔHt.	33.874sft	0.054sft		
		ΔElev.	33.437sft	0.116sft		
		Dist.	16314.036sft	0.031sft		
049	039	Az.	267°11'01.7779"	0°00'00.3394"	1:620179	1:620179

		ΔHt.	-39.243sft	0.042sft		
		ΔElev.	-39.379sft	0.103sft		
		Dist.	15655.023sft	0.025sft		
049	048	Az.	184°52'22.7548"	0°00'00.3278"	1:623539	1:623539
		ΔHt.	17.678sft	0.046sft		
		ΔElev.	18.014sft	0.112sft		
		Dist.	16675.990sft	0.027sft		
049	058	Az.	93°49'57.7589"	0°00'00.3828"	1:542580	1:542580
		ΔHt.	-24.673sft	0.045sft		
		ΔElev.	-24.467sft	0.100sft		
		Dist.	15179.435sft	0.028sft		
020	021	Az.	2°10'33.5303"	0°00'00.2957"	1:673248	1:673248
		ΔHt.	-21.543sft	0.052sft		
		ΔElev.	-21.953sft	0.118sft		
		Dist.	19108.202sft	0.028sft		
020	030	Az.	83°34'16.0023"	0°00'00.3704"	1:584809	1:584809
		ΔHt.	7.849sft	0.051sft		
		ΔElev.	7.919sft	0.104sft		
		Dist.	16755.692sft	0.029sft		
020	029	Az.	128°14'59.5243"	0°00'00.2768"	1:769151	1:769151
		ΔHt.	-8.633sft	0.054sft		
		ΔElev.	-8.225sft	0.107sft		
		Dist.	21250.329sft	0.028sft		
020	99-202	Az.	181°48'25.4990"	0°00'00.3399"	1:591918	1:591918
		ΔHt.	-95.548sft	0.041sft		
		ΔElev.	-95.275sft	0.093sft		
		Dist.	13944.947sft	0.024sft		
021	030	Az.	137°14'12.2288"	0°00'00.2569"	1:770886	1:770886
		ΔHt.	29.392sft	0.057sft		
		ΔElev.	29.871sft	0.123sft		
		Dist.	23453.548sft	0.030sft		

021	031	Az.	92°51'29.4392"	0°00'00.4220"	1:502070	1:502070
		ΔHt.	-54.843sft	0.048sft		
		ΔElev.	-54.756sft	0.111sft		
		Dist.	15810.333sft	0.031sft		
021	022	Az.	359°14'53.0070"	0°00'00.3642"	1:559051	1:559051
		ΔHt.	-19.864sft	0.051sft		
		ΔElev.	-20.206sft	0.114sft		
		Dist.	16294.806sft	0.029sft		
021	013	Az.	313°21'43.6163"	0°00'00.2885"	1:710732	1:710732
		ΔHt.	1.129sft	0.057sft		
		ΔElev.	0.829sft	0.128sft		
		Dist.	22194.389sft	0.031sft		
030	039	Az.	87°27'45.6707"	0°00'00.3792"	1:557445	1:557445
		ΔHt.	-120.054sft	0.045sft		
		ΔElev.	-119.942sft	0.103sft		
		Dist.	15869.871sft	0.028sft		
030	086	Az.	145°27'40.2086"	0°00'00.5307"	1:390903	1:390903
		ΔHt.	-24.913sft	0.040sft		
		ΔElev.	-24.641sft	0.098sft		
		Dist.	11803.145sft	0.030sft		
030	Blairs	Az.	179°29'05.6231"	0°00'00.4546"	1:445300	1:445300
		ΔHt.	-13.545sft	0.039sft		
		ΔElev.	-13.253sft	0.095sft		
		Dist.	12502.672sft	0.028sft		
031	039	Az.	134°33'00.4764"	0°00'00.2720"	1:736513	1:736513
		ΔHt.	-35.818sft	0.054sft		
		ΔElev.	-35.315sft	0.124sft		
		Dist.	22419.264sft	0.030sft		
039	048	Az.	138°03'32.9990"	0°00'00.2524"	1:811671	1:811671
		ΔHt.	56.921sft	0.050sft		
		ΔElev.	57.393sft	0.119sft		

		Dist.	21291.044sft	0.026sft		
039	99-203	Az.	169°50'28.7491"	0°00'00.3016"	1:669526	1:669526
		ΔHt.	83.995sft	0.045sft		
		ΔElev.	84.349sft	0.100sft		
		Dist.	16051.734sft	0.024sft		
92-01	57 27	Az.	81°02'30.3340"	0°00'00.1091"	1:1925807	1:1925807
		ΔHt.	29.194sft	0.105sft		
		ΔElev.	29.890sft	0.000sft		
		Dist.	50953.352sft	0.026sft		
92-01	079	Az.	359°38'23.7440"	0°00'00.3921"	1:515562	1:515562
		ΔHt.	41.890sft	0.046sft		
		ΔElev.	41.572sft	0.101sft		
		Dist.	15957.528sft	0.031sft		
92-01	068	Az.	270°02'52.5001"	0°00'00.3739"	1:560977	1:560977
		ΔHt.	64.671sft	0.056sft		
		ΔElev.	64.412sft	0.087sft		
		Dist.	16281.925sft	0.029sft		
92-01	069	Az.	303°41'53.1725"	0°00'00.3149"	1:660224	1:660224
		ΔHt.	52.437sft	0.050sft		
		ΔElev.	51.972sft	0.081sft		
		Dist.	19195.521sft	0.029sft		
92-01	070	Az.	325°27'12.2990"	0°00'00.2139"	1:967691	1:967691
		ΔHt.	66.053sft	0.057sft		
		ΔElev.	65.368sft	0.092sft		
		Dist.	25801.145sft	0.027sft		
57 27	080	Az.	295°40'53.9261"	0°00'00.0956"	1:2251053	1:2251053
		ΔHt.	-0.283sft	0.110sft		
		ΔElev.	-1.650sft	0.128sft		
		Dist.	56280.071sft	0.025sft		
57 27	079	Az.	279°09'45.3122"	0°00'00.1245"	1:1724707	1:1724707
		ΔHt.	12.695sft	0.103sft		

		ΔElev.	11.682sft	0.101sft		
		Dist.	51066.294sft	0.030sft		
080	079	Az.	178°47'52.7289"	0°00'00.3817"	1:529763	1:529763
		ΔHt.	12.979sft	0.046sft		
		ΔElev.	13.332sft	0.112sft		
		Dist.	16261.356sft	0.031sft		
080	070	Az.	232°18'31.4236"	0°00'00.3027"	1:675075	1:675075
		ΔHt.	37.142sft	0.047sft		
		ΔElev.	37.128sft	0.114sft		
		Dist.	17932.014sft	0.027sft		
080	Linn 17	Az.	359°01'35.5042"	0°00'00.3758"	1:532461	1:532461
		ΔHt.	46.208sft	0.050sft		
		ΔElev.	45.832sft	0.117sft		
		Dist.	16559.177sft	0.031sft		
080	071	Az.	268°49'30.0378"	0°00'00.3573"	1:587687	1:587687
		ΔHt.	58.319sft	0.043sft		
		ΔElev.	58.024sft	0.109sft		
		Dist.	15821.225sft	0.027sft		
080	072	Az.	315°25'38.3479"	0°00'00.2673"	1:793533	1:793533
		ΔHt.	23.859sft	0.054sft		
		ΔElev.	23.200sft	0.127sft		
		Dist.	21712.434sft	0.027sft		
068	99-204	Az.	270°00'52.8847"	0°00'00.3769"	1:553922	1:553922
		ΔHt.	26.179sft	0.051sft		
		ΔElev.	25.958sft	0.087sft		
		Dist.	15333.022sft	0.028sft		
068	069	Az.	1°38'20.6759"	0°00'00.5902"	1:346784	1:346784
		ΔHt.	-12.235sft	0.048sft		
		ΔElev.	-12.440sft	0.095sft		
		Dist.	10640.950sft	0.031sft		
068	TBM-Q84	Az.	331°33'00.1154"	0°00'00.3647"	1:562666	1:562666

		ΔHt.	-34.738sft	0.056sft		
		ΔElev.	-35.142sft	0.087sft		
		Dist.	17070.499sft	0.030sft		
99-204	TBM-Q84	Az.	25°35'54.2168"	0°00'00.3117"	1:652962	1:652962
		ΔHt.	-60.917sft	0.051sft		
		ΔElev.	-61.100sft	0.000sft		
		Dist.	16643.376sft	0.025sft		
99-204	048	Az.	270°56'53.2535"	0°00'00.2633"	1:789496	1:789496
		ΔHt.	13.196sft	0.050sft		
		ΔElev.	13.004sft	0.081sft		
		Dist.	17740.053sft	0.022sft		
99-204	058	Az.	355°48'22.0264"	0°00'00.3241"	1:632472	1:632472
		ΔHt.	-29.154sft	0.045sft		
		ΔElev.	-29.477sft	0.079sft		
		Dist.	15925.693sft	0.025sft		
069	070	Az.	7°09'32.3246"	0°00'00.5664"	1:361880	1:361880
		ΔHt.	13.616sft	0.039sft		
		ΔElev.	13.396sft	0.096sft		
		Dist.	10685.727sft	0.030sft		
TBM-Q84	058	Az.	275°59'03.7974"	0°00'00.7154"	1:290819	1:290819
		ΔHt.	31.762sft	0.041sft		
		ΔElev.	31.623sft	0.079sft		
		Dist.	8401.131sft	0.029sft		
TBM-Q84	070	Az.	57°27'01.7975"	0°00'00.4821"	1:429373	1:429373
		ΔHt.	36.119sft	0.042sft		
		ΔElev.	36.098sft	0.092sft		
		Dist.	11585.796sft	0.027sft		
TBM-Q84	059	Az.	336°01'42.5100"	0°00'00.3279"	1:618291	1:618291
		ΔHt.	86.082sft	0.054sft		
		ΔElev.	85.535sft	0.117sft		
		Dist.	19108.939sft	0.031sft		

048	99-203	Az.	270°13'13.9695"	0°00'00.4098"	1:507323	1:507323
		ΔHt.	27.074sft	0.040sft		
		ΔElev.	26.956sft	0.081sft		
		Dist.	11399.078sft	0.022sft		
048	058	Az.	46°42'28.6537"	0°00'00.2487"	1:833121	1:833121
		ΔHt.	-42.351sft	0.058sft		
		ΔElev.	-42.481sft	0.104sft		
		Dist.	22752.916sft	0.027sft		
99-203	029	Az.	270°14'26.9772"	0°00'00.2758"	1:784399	1:784399
		ΔHt.	19.576sft	0.052sft		
		ΔElev.	19.449sft	0.052sft		
		Dist.	18669.032sft	0.024sft		
99-203	Blairs	Az.	277°59'25.3614"	0°00'00.3080"	1:692746	1:692746
		ΔHt.	22.514sft	0.050sft		
		ΔElev.	22.340sft	0.000sft		
		Dist.	18763.847sft	0.027sft		
029	086	Az.	51°27'29.5850"	0°00'00.7144"	1:286503	1:286503
		ΔHt.	-8.431sft	0.037sft		
		ΔElev.	-8.497sft	0.083sft		
		Dist.	8521.005sft	0.030sft		
029	Blairs	Az.	1°55'41.3611"	0°00'02.1841"	1:92464	1:92464
		ΔHt.	2.938sft	0.030sft		
		ΔElev.	2.891sft	0.052sft		
		Dist.	2531.334sft	0.027sft		
029	99-202	Az.	267°25'35.2841"	0°00'00.2998"	1:719072	1:719072
		ΔHt.	-86.915sft	0.049sft		
		ΔElev.	-87.049sft	0.052sft		
		Dist.	17145.863sft	0.024sft		
086	Blairs	Az.	247°06'56.3416"	0°00'00.8410"	1:245411	1:245411
		ΔHt.	11.368sft	0.034sft		
		ΔElev.	11.387sft	0.071sft		

		Dist.	7142.537sft	0.029sft		
99-202	010	Az.	273°23'34.2685"	0°00'00.3387"	1:612738	1:612738
		ΔHt.	-81.767sft	0.043sft		
		ΔElev.	-81.822sft	0.081sft		
		Dist.	14431.154sft	0.024sft		
087	010	Az.	81°17'18.3392"	0°00'00.5088"	1:408253	1:408253
		ΔHt.	-14.010sft	0.037sft		
		ΔElev.	-14.011sft	0.082sft		
		Dist.	10748.818sft	0.026sft		
087	Hartwick	Az.	195°54'54.2250"	0°00'00.4234"	1:487437	1:487437
		ΔHt.	159.695sft	0.038sft		
		ΔElev.	159.840sft	0.097sft		
		Dist.	10551.239sft	0.022sft		
087	99-201	Az.	263°22'42.5819"	0°00'00.8077"	1:256222	1:256222
		ΔHt.	-5.439sft	0.031sft		
		ΔElev.	-5.449sft	0.064sft		
		Dist.	5537.353sft	0.022sft		
087	TBM-A84	Az.	3°15'33.0928"	0°00'00.4508"	1:458011	1:458011
		ΔHt.	44.501sft	0.042sft		
		ΔElev.	44.281sft	0.064sft		
		Dist.	13546.953sft	0.030sft		
010	Hartwick	Az.	228°58'07.6575"	0°00'00.2741"	1:764725	1:764725
		ΔHt.	173.705sft	0.051sft		
		ΔElev.	173.851sft	0.110sft		
		Dist.	17927.219sft	0.023sft		
Hartwick	99-201	Az.	344°39'34.1097"	0°00'00.0000"	1:0	1:0
		ΔHt.	-165.134sft	0.039sft		
		ΔElev.	-165.289sft	0.093sft		
		Dist.	9859.247sft	0.000sft		
99-201	TBM-A84	Az.	23°52'00.6027"	0°00'00.3799"	1:540255	1:540255
		ΔHt.	49.941sft	0.044sft		

		ΔElev.	49.730sft	0.000sft		
		Dist.	15489.567sft	0.029sft		
070	059	Az.	302°39'44.9711"	0°00'00.2750"	1:760291	1:760291
		ΔHt.	49.962sft	0.049sft		
		ΔElev.	49.437sft	0.122sft		
		Dist.	20816.785sft	0.027sft		
070	071	Az.	351°15'55.4751"	0°00'00.5177"	1:393138	1:393138
		ΔHt.	21.177sft	0.036sft		
		ΔElev.	20.896sft	0.095sft		
		Dist.	10763.154sft	0.027sft		
006	Q82	Az.	250°43'17.7352"	0°00'00.2208"	1:1052762	1:1052762
		ΔHt.	-67.158sft	0.076sft		
		ΔElev.	-66.832sft	0.108sft		
		Dist.	32316.491sft	0.031sft		
006	007	Az.	359°59'15.4022"	0°00'00.3689"	1:524507	1:524507
		ΔHt.	13.963sft	0.048sft		
		ΔElev.	13.849sft	0.105sft		
		Dist.	15864.108sft	0.030sft		
006	005	Az.	181°21'14.1478"	0°00'00.3761"	1:514378	1:514378
		ΔHt.	-73.164sft	0.048sft		
		ΔElev.	-73.014sft	0.110sft		
		Dist.	15902.542sft	0.031sft		
006	016	Az.	87°05'06.0697"	0°00'00.4103"	1:521895	1:521895
		ΔHt.	22.088sft	0.046sft		
		ΔElev.	21.925sft	0.110sft		
		Dist.	15250.224sft	0.029sft		
Q82	007	Az.	48°54'13.0847"	0°00'00.1836"	1:1194844	1:1194844
		ΔHt.	81.121sft	0.093sft		
		ΔElev.	80.681sft	0.056sft		
		Dist.	40427.002sft	0.034sft		
Q82	005	Az.	99°46'11.0449"	0°00'00.2054"	1:1125857	1:1125857

		ΔHt.	-6.006sft	0.069sft		
		ΔElev.	-6.182sft	0.125sft		
		Dist.	30578.920sft	0.027sft		
Q82	004	Az.	123°02'47.6130"	0°00'00.1826"	1:1190277	1:1190277
		ΔHt.	87.094sft	0.082sft		
		ΔElev.	87.072sft	0.136sft		
		Dist.	38607.109sft	0.032sft		
007	008	Az.	359°02'21.5909"	0°00'00.3441"	1:566948	1:566948
		ΔHt.	67.347sft	0.047sft		
		ΔElev.	67.185sft	0.106sft		
		Dist.	16742.987sft	0.030sft		
007	018	Az.	43°34'35.8669"	0°00'00.2598"	1:826665	1:826665
		ΔHt.	5.357sft	0.056sft		
		ΔElev.	4.956sft	0.112sft		
		Dist.	22123.498sft	0.027sft		
007	y81	Az.	302°46'40.7127"	0°00'02.4565"	1:82320	1:82320
		ΔHt.	25.587sft	0.035sft		
		ΔElev.	25.609sft	0.056sft		
		Dist.	2545.744sft	0.031sft		
007	016	Az.	134°43'31.2200"	0°00'00.2512"	1:803645	1:803645
		ΔHt.	8.125sft	0.051sft		
		ΔElev.	8.076sft	0.119sft		
		Dist.	21441.486sft	0.027sft		
007	017	Az.	89°56'44.3790"	0°00'00.4130"	1:512673	1:512673
		ΔHt.	37.918sft	0.045sft		
		ΔElev.	37.706sft	0.105sft		
		Dist.	15297.845sft	0.030sft		
005	015	Az.	89°51'42.1938"	0°00'00.3445"	1:639870	1:639870
		ΔHt.	68.554sft	0.045sft		
		ΔElev.	68.419sft	0.113sft		
		Dist.	16460.702sft	0.026sft		

005	004	Az.	172°05'12.2948"	0°00'00.3489"	1:566655	1:566655
		ΔHt.	93.100sft	0.044sft		
		ΔElev.	93.254sft	0.111sft		
		Dist.	16019.755sft	0.028sft		
082	Linn 17	Az.	179°33'08.7714"	0°00'00.1788"	1:1118452	1:1118452
		ΔHt.	2.882sft	0.061sft		
		ΔElev.	3.488sft	0.138sft		
		Dist.	26816.809sft	0.024sft		
082	074	Az.	280°02'50.3898"	0°00'00.3054"	1:684549	1:684549
		ΔHt.	1.327sft	0.041sft		
		ΔElev.	0.891sft	0.114sft		
		Dist.	16086.804sft	0.023sft		
082	081	Az.	180°05'54.2604"	0°00'00.5170"	1:387751	1:387751
		ΔHt.	-10.243sft	0.051sft		
		ΔElev.	-9.927sft	0.110sft		
		Dist.	13518.956sft	0.035sft		
082	Linn 15	Az.	1°46'56.3944"	0°00'00.3446"	1:571188	1:571188
		ΔHt.	29.997sft	0.060sft		
		ΔElev.	29.405sft	0.129sft		
		Dist.	20254.952sft	0.035sft		
Linn 17	074	Az.	331°33'05.5230"	0°00'00.1444"	1:1381232	1:1381232
		ΔHt.	-1.555sft	0.070sft		
		ΔElev.	-2.597sft	0.148sft		
		Dist.	33690.984sft	0.024sft		
Linn 17	081	Az.	358°59'52.6448"	0°00'00.5380"	1:369119	1:369119
		ΔHt.	-13.125sft	0.053sft		
		ΔElev.	-13.415sft	0.111sft		
		Dist.	13299.091sft	0.036sft		
Linn 17	072	Az.	265°49'56.2519"	0°00'00.4032"	1:523249	1:523249
		ΔHt.	-22.348sft	0.046sft		
		ΔElev.	-22.632sft	0.112sft		

		Dist.	14996.389sft	0.029sft		
074	062	Az.	276°24'07.8608"	0°00'00.3964"	1:525252	1:525252
		ΔHt.	35.482sft	0.045sft		
		ΔElev.	35.149sft	0.115sft		
		Dist.	15763.617sft	0.030sft		
074	073	Az.	180°13'47.0410"	0°00'00.4089"	1:496601	1:496601
		ΔHt.	-19.003sft	0.046sft		
		ΔElev.	-18.628sft	0.111sft		
		Dist.	15068.501sft	0.030sft		
062	073	Az.	137°07'04.3531"	0°00'00.2862"	1:713392	1:713392
		ΔHt.	-54.486sft	0.057sft		
		ΔElev.	-53.777sft	0.131sft		
		Dist.	22948.447sft	0.032sft		
062	053	Az.	267°36'37.9791"	0°00'00.4115"	1:505750	1:505750
		ΔHt.	31.001sft	0.046sft		
		ΔElev.	30.804sft	0.116sft		
		Dist.	15891.431sft	0.031sft		
062	075	Az.	46°02'53.1868"	0°00'00.2994"	1:675598	1:675598
		ΔHt.	15.178sft	0.059sft		
		ΔElev.	15.021sft	0.133sft		
		Dist.	22258.927sft	0.033sft		
073	072	Az.	175°42'26.0046"	0°00'00.3900"	1:513714	1:513714
		ΔHt.	-1.790sft	0.051sft		
		ΔElev.	-1.406sft	0.114sft		
		Dist.	15687.402sft	0.031sft		
073	061	Az.	270°48'52.2945"	0°00'00.4252"	1:508505	1:508505
		ΔHt.	54.239sft	0.054sft		
		ΔElev.	53.939sft	0.119sft		
		Dist.	16068.684sft	0.032sft		
052	042	Az.	271°33'20.9972"	0°00'00.3385"	1:615690	1:615690
		ΔHt.	67.554sft	0.041sft		

		ΔElev.	67.436sft	0.112sft		
		Dist.	15327.149sft	0.025sft		
052	043	Az.	315°18'13.0644"	0°00'00.2705"	1:776845	1:776845
		ΔHt.	15.930sft	0.052sft		
		ΔElev.	15.506sft	0.127sft		
		Dist.	21679.582sft	0.028sft		
052	053	Az.	0°56'26.9982"	0°00'00.3728"	1:550316	1:550316
		ΔHt.	25.326sft	0.045sft		
		ΔElev.	24.951sft	0.111sft		
		Dist.	15862.562sft	0.029sft		
052	051	Az.	178°30'52.2882"	0°00'00.3794"	1:529283	1:529283
		ΔHt.	38.728sft	0.047sft		
		ΔElev.	39.138sft	0.111sft		
		Dist.	15462.270sft	0.029sft		
052	061	Az.	90°14'04.5279"	0°00'00.4015"	1:533727	1:533727
		ΔHt.	-5.922sft	0.049sft		
		ΔElev.	-5.692sft	0.116sft		
		Dist.	15698.308sft	0.029sft		
042	043	Az.	0°14'30.5464"	0°00'00.4001"	1:513585	1:513585
		ΔHt.	-51.623sft	0.045sft		
		ΔElev.	-51.930sft	0.109sft		
		Dist.	14994.830sft	0.029sft		
042	032	Az.	225°57'35.0817"	0°00'00.2853"	1:706979	1:706979
		ΔHt.	-34.702sft	0.056sft		
		ΔElev.	-34.411sft	0.127sft		
		Dist.	21584.571sft	0.031sft		
042	033	Az.	263°33'38.6264"	0°00'00.3884"	1:541182	1:541182
		ΔHt.	-12.101sft	0.045sft		
		ΔElev.	-12.090sft	0.114sft		
		Dist.	15837.701sft	0.029sft		
043	053	Az.	88°18'06.2897"	0°00'00.4031"	1:511665	1:511665

		ΔHt.	9.395sft	0.046sft		
		ΔElev.	9.444sft	0.114sft		
		Dist.	15515.303sft	0.030sft		
043	034	Az.	271°23'26.7858"	0°00'00.4231"	1:492666	1:492666
		ΔHt.	-18.909sft	0.048sft		
		ΔElev.	-18.895sft	0.114sft		
		Dist.	15525.616sft	0.032sft		
053	054	Az.	0°18'23.5068"	0°00'00.4104"	1:496673	1:496673
		ΔHt.	-44.887sft	0.045sft		
		ΔElev.	-45.213sft	0.109sft		
		Dist.	15259.320sft	0.031sft		
034	023	Az.	225°25'26.9060"	0°00'00.2274"	1:908006	1:908006
		ΔHt.	62.133sft	0.054sft		
		ΔElev.	62.436sft	0.127sft		
		Dist.	22350.018sft	0.025sft		
034	024	Az.	273°31'41.6995"	0°00'00.3643"	1:578253	1:578253
		ΔHt.	89.364sft	0.046sft		
		ΔElev.	89.411sft	0.113sft		
		Dist.	16108.309sft	0.028sft		
034	035	Az.	359°40'24.0307"	0°00'00.4119"	1:495935	1:495935
		ΔHt.	0.666sft	0.052sft		
		ΔElev.	0.395sft	0.116sft		
		Dist.	15912.965sft	0.032sft		
023	015	Az.	316°08'32.4780"	0°00'00.2770"	1:745243	1:745243
		ΔHt.	-24.697sft	0.054sft		
		ΔElev.	-24.838sft	0.127sft		
		Dist.	21905.337sft	0.029sft		
023	014	Az.	270°06'40.8814"	0°00'00.3765"	1:569683	1:569683
		ΔHt.	-20.721sft	0.045sft		
		ΔElev.	-20.658sft	0.113sft		
		Dist.	15906.109sft	0.028sft		

023	022	Az.	180°04'36.9765"	0°00'00.3651"	1:544890	1:544890
		ΔHt.	-55.952sft	0.043sft		
		ΔElev.	-55.679sft	0.108sft		
		Dist.	14743.052sft	0.027sft		
023	033	Az.	95°17'42.2431"	0°00'00.3963"	1:539286	1:539286
		ΔHt.	-3.702sft	0.045sft		
		ΔElev.	-3.701sft	0.113sft		
		Dist.	15719.871sft	0.029sft		
023	024	Az.	359°25'12.3872"	0°00'00.3318"	1:603987	1:603987
		ΔHt.	27.231sft	0.047sft		
		ΔElev.	26.975sft	0.115sft		
		Dist.	16678.484sft	0.028sft		
015	014	Az.	182°36'31.0269"	0°00'00.3637"	1:548988	1:548988
		ΔHt.	3.976sft	0.045sft		
		ΔElev.	4.180sft	0.111sft		
		Dist.	15781.050sft	0.029sft		
015	004	Az.	221°54'21.7583"	0°00'00.2672"	1:757912	1:757912
		ΔHt.	24.546sft	0.054sft		
		ΔElev.	24.836sft	0.126sft		
		Dist.	21359.776sft	0.028sft		
015	024	Az.	86°35'51.0430"	0°00'00.4166"	1:513148	1:513148
		ΔHt.	51.927sft	0.046sft		
		ΔElev.	51.813sft	0.111sft		
		Dist.	15034.649sft	0.029sft		
014	022	Az.	132°52'59.0478"	0°00'00.2956"	1:703605	1:703605
		ΔHt.	-35.231sft	0.055sft		
		ΔElev.	-35.021sft	0.127sft		
		Dist.	21694.321sft	0.031sft		
014	004	Az.	269°26'22.0851"	0°00'00.4563"	1:465458	1:465458
		ΔHt.	20.571sft	0.042sft		
		ΔElev.	20.655sft	0.106sft		

		Dist.	13548.827sft	0.029sft		
059	071	Az.	92°06'21.2060"	0°00'00.3844"	1:547401	1:547401
		ΔHt.	-28.785sft	0.044sft		
		ΔElev.	-28.541sft	0.112sft		
		Dist.	15901.624sft	0.029sft		
071	072	Az.	2°03'50.0878"	0°00'00.3859"	1:520203	1:520203
		ΔHt.	-34.459sft	0.048sft		
		ΔElev.	-34.824sft	0.113sft		
		Dist.	15802.155sft	0.030sft		
072	060	Az.	270°06'10.4963"	0°00'00.3613"	1:587203	1:587203
		ΔHt.	68.012sft	0.053sft		
		ΔElev.	67.730sft	0.120sft		
		Dist.	17092.987sft	0.029sft		
072	061	Az.	312°38'04.5548"	0°00'00.2696"	1:801673	1:801673
		ΔHt.	56.028sft	0.061sft		
		ΔElev.	55.345sft	0.133sft		
		Dist.	23434.534sft	0.029sft		
060	051	Az.	271°42'06.0574"	0°00'00.3304"	1:640642	1:640642
		ΔHt.	32.666sft	0.043sft		
		ΔElev.	32.445sft	0.112sft		
		Dist.	15473.841sft	0.024sft		
060	061	Az.	359°25'27.4487"	0°00'00.3606"	1:550121	1:550121
		ΔHt.	-11.983sft	0.049sft		
		ΔElev.	-12.385sft	0.113sft		
		Dist.	15842.669sft	0.029sft		
032	041	Az.	93°48'59.0845"	0°00'00.4622"	1:450484	1:450484
		ΔHt.	-19.700sft	0.056sft		
		ΔElev.	-19.606sft	0.118sft		
		Dist.	15751.608sft	0.035sft		
032	022	Az.	269°48'30.7968"	0°00'00.3865"	1:544227	1:544227
		ΔHt.	-29.649sft	0.048sft		

		ΔElev.	-29.657sft	0.114sft		
		Dist.	15912.254sft	0.029sft		
032	033	Az.	359°00'06.2229"	0°00'00.4473"	1:450326	1:450326
		ΔHt.	22.601sft	0.042sft		
		ΔElev.	22.321sft	0.104sft		
		Dist.	13230.466sft	0.029sft		
041	051	Az.	89°15'34.8010"	0°00'00.4648"	1:447169	1:447169
		ΔHt.	25.576sft	0.053sft		
		ΔElev.	25.718sft	0.116sft		
		Dist.	15534.215sft	0.035sft		
022	013	Az.	266°12'36.3887"	0°00'00.4056"	1:512213	1:512213
		ΔHt.	20.993sft	0.052sft		
		ΔElev.	21.036sft	0.116sft		
		Dist.	15957.000sft	0.031sft		
022	033	Az.	49°41'52.0961"	0°00'00.2914"	1:706783	1:706783
		ΔHt.	52.250sft	0.054sft		
		ΔElev.	51.978sft	0.125sft		
		Dist.	20550.329sft	0.029sft		
013	003	Az.	269°39'36.9812"	0°00'00.4660"	1:446729	1:446729
		ΔHt.	11.754sft	0.050sft		
		ΔElev.	11.824sft	0.114sft		
		Dist.	14881.391sft	0.033sft		
003	004	Az.	4°52'49.5354"	0°00'00.4443"	1:453089	1:453089
		ΔHt.	23.054sft	0.052sft		
		ΔElev.	22.817sft	0.113sft		
		Dist.	15842.654sft	0.035sft		
051	061	Az.	44°49'22.0144"	0°00'00.2658"	1:727078	1:727078
		ΔHt.	-44.650sft	0.059sft		
		ΔElev.	-44.830sft	0.131sft		
		Dist.	21701.309sft	0.030sft		
008	018	Az.	92°37'42.6843"	0°00'00.3854"	1:559366	1:559366

		ΔHt.	-61.990sft	0.045sft		
		ΔElev.	-62.230sft	0.110sft		
		Dist.	15547.339sft	0.028sft		
008	y81	Az.	186°54'05.8120"	0°00'00.4072"	1:486661	1:486661
		ΔHt.	-41.760sft	0.047sft		
		ΔElev.	-41.576sft	0.097sft		
		Dist.	15474.558sft	0.032sft		
008	019	Az.	46°55'52.9245"	0°00'00.2903"	1:708186	1:708186
		ΔHt.	-80.362sft	0.058sft		
		ΔElev.	-80.785sft	0.112sft		
		Dist.	21673.907sft	0.031sft		
008	009	Az.	359°31'08.6604"	0°00'00.4343"	1:466406	1:466406
		ΔHt.	-168.343sft	0.047sft		
		ΔElev.	-168.456sft	0.098sft		
		Dist.	15184.092sft	0.033sft		
018	y81	Az.	229°55'41.9948"	0°00'00.3036"	1:733844	1:733844
		ΔHt.	20.230sft	0.060sft		
		ΔElev.	20.654sft	0.108sft		
		Dist.	22738.388sft	0.031sft		
018	pratt	Az.	90°27'47.9422"	0°00'00.7801"	1:272834	1:272834
		ΔHt.	27.599sft	0.040sft		
		ΔElev.	27.471sft	0.086sft		
		Dist.	7988.132sft	0.029sft		
018	026	Az.	135°01'39.2993"	0°00'00.2545"	1:798784	1:798784
		ΔHt.	15.205sft	0.054sft		
		ΔElev.	15.201sft	0.126sft		
		Dist.	22821.020sft	0.029sft		
pratt	027	Az.	89°53'25.2601"	0°00'00.6518"	1:322633	1:322633
		ΔHt.	-29.089sft	0.040sft		
		ΔElev.	-29.210sft	0.087sft		
		Dist.	8370.743sft	0.026sft		

026	016	Az.	227°14'13.7792"	0°00'00.2481"	1:847227	1:847227
		ΔHt.	-12.437sft	0.054sft		
		ΔElev.	-12.080sft	0.124sft		
		Dist.	22033.593sft	0.026sft		
026	025	Az.	181°09'33.4573"	0°00'00.3423"	1:593776	1:593776
		ΔHt.	9.231sft	0.046sft		
		ΔElev.	9.450sft	0.114sft		
		Dist.	16181.304sft	0.027sft		
026	036	Az.	90°21'03.2423"	0°00'00.4101"	1:507512	1:507512
		ΔHt.	5.463sft	0.049sft		
		ΔElev.	5.302sft	0.109sft		
		Dist.	15781.837sft	0.031sft		
026	017	Az.	270°30'32.0049"	0°00'00.3917"	1:538427	1:538427
		ΔHt.	17.356sft	0.046sft		
		ΔElev.	17.549sft	0.108sft		
		Dist.	16092.651sft	0.030sft		
026	027	Az.	0°51'23.6335"	0°00'00.3674"	1:549791	1:549791
		ΔHt.	-16.695sft	0.045sft		
		ΔElev.	-16.939sft	0.111sft		
		Dist.	16100.617sft	0.029sft		
024	016	Az.	314°50'24.6171"	0°00'00.2819"	1:749132	1:749132
		ΔHt.	-25.230sft	0.057sft		
		ΔElev.	-25.293sft	0.127sft		
		Dist.	22340.098sft	0.030sft		
024	025	Az.	0°01'56.4734"	0°00'00.4152"	1:482849	1:482849
		ΔHt.	-3.562sft	0.048sft		
		ΔElev.	-3.763sft	0.111sft		
		Dist.	14534.998sft	0.030sft		
016	025	Az.	94°21'15.6792"	0°00'00.3639"	1:579766	1:579766
		ΔHt.	21.668sft	0.046sft		
		ΔElev.	21.530sft	0.110sft		

		Dist.	15895.756sft	0.027sft		
016	017	Az.	0°16'48.5317"	0°00'00.3976"	1:507299	1:507299
		ΔHt.	29.793sft	0.045sft		
		ΔElev.	29.630sft	0.110sft		
		Dist.	15103.209sft	0.030sft		
035	044	Az.	90°08'13.8612"	0°00'00.4488"	1:465307	1:465307
		ΔHt.	-53.650sft	0.055sft		
		ΔElev.	-53.701sft	0.114sft		
		Dist.	15661.186sft	0.034sft		
035	025	Az.	268°36'49.1454"	0°00'00.4190"	1:498345	1:498345
		ΔHt.	85.136sft	0.054sft		
		ΔElev.	85.253sft	0.114sft		
		Dist.	15973.447sft	0.032sft		
044	054	Az.	91°55'43.2692"	0°00'00.3547"	1:600083	1:600083
		ΔHt.	36.401sft	0.043sft		
		ΔElev.	36.432sft	0.113sft		
		Dist.	15528.729sft	0.026sft		
044	045	Az.	0°38'27.5200"	0°00'00.4062"	1:482020	1:482020
		ΔHt.	-28.661sft	0.051sft		
		ΔElev.	-28.968sft	0.115sft		
		Dist.	15848.294sft	0.033sft		
025	036	Az.	45°02'53.8648"	0°00'00.2966"	1:695346	1:695346
		ΔHt.	-3.768sft	0.064sft		
		ΔElev.	-4.148sft	0.129sft		
		Dist.	22761.959sft	0.033sft		
036	045	Az.	89°32'24.4861"	0°00'00.4803"	1:436352	1:436352
		ΔHt.	-163.678sft	0.059sft		
		ΔElev.	-163.775sft	0.111sft		
		Dist.	15677.221sft	0.036sft		
027	037	Az.	89°59'45.9171"	0°00'00.4326"	1:482013	1:482013
		ΔHt.	-15.454sft	0.050sft		

		ΔElev.	-15.648sft	0.111sft		
		Dist.	16335.315sft	0.034sft		
027	038	Az.	46°45'39.2599"	0°00'00.2926"	1:682327	1:682327
		ΔHt.	-90.324sft	0.058sft		
		ΔElev.	-90.735sft	0.118sft		
		Dist.	21485.349sft	0.031sft		
027	028	Az.	359°48'11.1535"	0°00'00.3565"	1:566918	1:566918
		ΔHt.	-53.628sft	0.044sft		
		ΔElev.	-53.848sft	0.105sft		
		Dist.	15505.851sft	0.027sft		
027	019	Az.	314°09'30.9375"	0°00'00.2767"	1:759075	1:759075
		ΔHt.	-16.882sft	0.054sft		
		ΔElev.	-16.817sft	0.120sft		
		Dist.	22350.469sft	0.029sft		
075	Linn 15	Az.	89°05'46.6778"	0°00'00.3772"	1:560324	1:560324
		ΔHt.	-21.991sft	0.046sft		
		ΔElev.	-21.656sft	0.116sft		
		Dist.	16090.346sft	0.029sft		
075	076	Az.	357°30'43.5673"	0°00'00.4326"	1:466577	1:466577
		ΔHt.	53.752sft	0.042sft		
		ΔElev.	53.333sft	0.105sft		
		Dist.	13212.782sft	0.028sft		
075	063	Az.	268°50'31.9500"	0°00'00.3952"	1:542171	1:542171
		ΔHt.	-41.082sft	0.051sft		
		ΔElev.	-41.329sft	0.118sft		
		Dist.	16861.145sft	0.031sft		
075	064	Az.	304°57'35.9344"	0°00'00.2948"	1:721681	1:721681
		ΔHt.	-48.833sft	0.048sft		
		ΔElev.	-49.368sft	0.122sft		
		Dist.	19194.920sft	0.027sft		
Linn 15	083	Az.	349°02'58.3748"	0°00'00.4037"	1:504939	1:504939

		ΔHt.	-53.971sft	0.046sft		
		ΔElev.	-54.504sft	0.113sft		
		Dist.	15367.307sft	0.030sft		
Linn 15	076	Az.	307°53'15.1987"	0°00'00.2849"	1:745566	1:745566
		ΔHt.	75.744sft	0.051sft		
		ΔElev.	74.989sft	0.128sft		
		Dist.	21100.516sft	0.028sft		
083	076	Az.	261°10'45.8321"	0°00'00.4471"	1:466767	1:466767
		ΔHt.	129.714sft	0.044sft		
		ΔElev.	129.493sft	0.109sft		
		Dist.	13897.818sft	0.030sft		
083	077	Az.	320°45'08.5598"	0°00'00.3061"	1:673454	1:673454
		ΔHt.	46.566sft	0.057sft		
		ΔElev.	45.886sft	0.129sft		
		Dist.	20456.814sft	0.030sft		
083	084	Az.	8°11'11.7623"	0°00'00.3037"	1:659354	1:659354
		ΔHt.	5.161sft	0.059sft		
		ΔElev.	4.621sft	0.129sft		
		Dist.	21214.998sft	0.032sft		
076	064	Az.	261°44'04.3192"	0°00'00.3913"	1:534846	1:534846
		ΔHt.	-102.586sft	0.045sft		
		ΔElev.	-102.701sft	0.111sft		
		Dist.	15316.744sft	0.029sft		
063	054	Az.	268°04'57.3113"	0°00'00.4261"	1:498647	1:498647
		ΔHt.	12.018sft	0.044sft		
		ΔElev.	11.899sft	0.111sft		
		Dist.	14961.138sft	0.030sft		
063	064	Az.	5°37'53.2179"	0°00'00.5155"	1:388926	1:388926
		ΔHt.	-7.751sft	0.039sft		
		ΔElev.	-8.039sft	0.099sft		
		Dist.	11395.276sft	0.029sft		

054	064	Az.	53°34'50.7637"	0°00'00.2760"	1:747700	1:747700
		ΔHt.	-19.769sft	0.050sft		
		ΔElev.	-19.938sft	0.122sft		
		Dist.	19962.016sft	0.027sft		
054	045	Az.	316°53'37.5352"	0°00'00.2828"	1:745034	1:745034
		ΔHt.	-65.063sft	0.057sft		
		ΔElev.	-65.400sft	0.132sft		
		Dist.	22435.934sft	0.030sft		
054	055	Az.	359°29'03.0944"	0°00'00.3676"	1:535451	1:535451
		ΔHt.	-67.044sft	0.050sft		
		ΔElev.	-67.404sft	0.114sft		
		Dist.	16016.534sft	0.030sft		
064	055	Az.	284°27'02.1858"	0°00'00.3886"	1:566807	1:566807
		ΔHt.	-47.274sft	0.052sft		
		ΔElev.	-47.466sft	0.114sft		
		Dist.	16734.031sft	0.030sft		
064	065	Az.	9°38'40.9272"	0°00'00.8829"	1:223231	1:223231
		ΔHt.	7.359sft	0.045sft		
		ΔElev.	7.182sft	0.086sft		
		Dist.	7209.169sft	0.032sft		
n81	045	Az.	275°42'16.8259"	0°00'00.8584"	1:242483	1:242483
		ΔHt.	10.160sft	0.043sft		
		ΔElev.	10.165sft	0.086sft		
		Dist.	8517.301sft	0.035sft		
n81	055	Az.	85°51'07.2297"	0°00'01.0936"	1:189148	1:189148
		ΔHt.	8.179sft	0.043sft		
		ΔElev.	8.160sft	0.079sft		
		Dist.	6730.098sft	0.036sft		
045	046	Az.	0°18'13.1496"	0°00'00.3892"	1:512629	1:512629
		ΔHt.	41.613sft	0.048sft		
		ΔElev.	41.307sft	0.106sft		

		Dist.	15935.038sft	0.031sft		
055	056	Az.	2°08'34.8646"	0°00'00.3565"	1:546556	1:546556
		ΔHt.	67.805sft	0.049sft		
		ΔElev.	67.433sft	0.103sft		
		Dist.	16354.902sft	0.030sft		
055	046	Az.	317°12'03.0847"	0°00'00.2782"	1:765527	1:765527
		ΔHt.	43.594sft	0.055sft		
		ΔElev.	43.312sft	0.121sft		
		Dist.	22213.565sft	0.029sft		
055	065	Az.	80°24'13.5737"	0°00'00.3937"	1:543735	1:543735
		ΔHt.	54.633sft	0.058sft		
		ΔElev.	54.648sft	0.115sft		
		Dist.	17657.451sft	0.032sft		
02-259	02-258	Az.	268°59'08.1354"	0°00'00.0000"	1:0	1:0
		ΔHt.	-105.820sft	0.044sft		
		ΔElev.	-105.920sft	0.000sft		
		Dist.	15963.243sft	0.000sft		
02-259	g75 reset	Az.	48°52'56.3525"	0°00'00.0000"	1:0	1:0
		ΔHt.	-31.109sft	0.058sft		
		ΔElev.	-31.095sft	0.151sft		
		Dist.	24501.083sft	0.000sft		
02-259	067	Az.	237°10'07.1982"	0°00'00.2181"	1:961557	1:961557
		ΔHt.	-60.452sft	0.051sft		
		ΔElev.	-60.410sft	0.060sft		
		Dist.	20263.340sft	0.021sft		
02-259	085	Az.	129°04'39.4946"	0°00'00.2004"	1:1033012	1:1033012
		ΔHt.	-118.175sft	0.046sft		
		ΔElev.	-117.719sft	0.124sft		
		Dist.	20021.641sft	0.019sft		
02-259	Linn 13	Az.	89°17'19.1365"	0°00'00.3513"	1:632583	1:632583
		ΔHt.	-50.846sft	0.049sft		

		ΔElev.	-50.612sft	0.123sft		
		Dist.	16571.564sft	0.026sft		
02-259	078	Az.	183°25'20.3962"	0°00'00.3017"	1:654002	1:654002
		ΔHt.	-46.937sft	0.046sft		
		ΔElev.	-46.675sft	0.096sft		
		Dist.	16018.029sft	0.024sft		
02-258	067	Az.	185°38'51.0559"	0°00'00.4042"	1:502140	1:502140
		ΔHt.	45.369sft	0.037sft		
		ΔElev.	45.510sft	0.060sft		
		Dist.	10756.466sft	0.021sft		
02-258	02-257	Az.	270°13'47.6333"	0°00'00.0000"	1:0	1:0
		ΔHt.	-24.876sft	0.044sft		
		ΔElev.	-24.920sft	0.000sft		
		Dist.	15845.406sft	0.000sft		
g75 reset	085	Az.	185°50'23.3070"	0°00'00.1346"	1:1445966	1:1445966
		ΔHt.	-87.067sft	0.064sft		
		ΔElev.	-86.624sft	0.153sft		
		Dist.	28880.734sft	0.020sft		
g75 reset	Linn 13	Az.	186°48'52.2021"	0°00'00.3388"	1:569723	1:569723
		ΔHt.	-19.737sft	0.047sft		
		ΔElev.	-19.517sft	0.120sft		
		Dist.	16018.002sft	0.028sft		
067	02-257	Az.	306°03'35.1878"	0°00'00.2391"	1:859111	1:859111
		ΔHt.	-70.244sft	0.046sft		
		ΔElev.	-70.430sft	0.060sft		
		Dist.	18291.920sft	0.021sft		
067	057	Az.	250°17'30.5218"	0°00'00.3349"	1:623804	1:623804
		ΔHt.	-69.198sft	0.043sft		
		ΔElev.	-69.112sft	0.100sft		
		Dist.	15806.842sft	0.025sft		
067	21-DDB	Az.	198°06'56.3510"	0°00'00.9773"	1:204989	1:204989

		ΔHt.	-10.469sft	0.033sft		
		ΔElev.	-10.390sft	0.060sft		
		Dist.	5533.021sft	0.027sft		
085	Linn 13	Az.	4°37'09.0165"	0°00'00.4491"	1:433466	1:433466
		ΔHt.	67.330sft	0.042sft		
		ΔElev.	67.107sft	0.106sft		
		Dist.	12867.935sft	0.030sft		
085	078	Az.	258°29'59.3892"	0°00'00.3224"	1:663770	1:663770
		ΔHt.	71.238sft	0.047sft		
		ΔElev.	71.043sft	0.117sft		
		Dist.	16839.180sft	0.025sft		
085	084	Az.	180°30'30.3118"	0°00'00.4182"	1:478566	1:478566
		ΔHt.	-23.761sft	0.048sft		
		ΔElev.	-23.427sft	0.110sft		
		Dist.	14592.050sft	0.030sft		
94-073	6 157	Az.	239°44'02.5568"	0°00'01.0791"	1:190657	1:190657
		ΔHt.	-35.444sft	0.036sft		
		ΔElev.	-35.310sft	0.000sft		
		Dist.	6225.069sft	0.033sft		
94-073	047	Az.	143°45'47.4198"	0°00'00.3564"	1:584854	1:584854
		ΔHt.	-25.088sft	0.050sft		
		ΔElev.	-25.004sft	0.094sft		
		Dist.	17858.146sft	0.031sft		
94-073	02-257	Az.	86°32'42.3483"	0°00'00.2346"	1:882864	1:882864
		ΔHt.	-11.054sft	0.062sft		
		ΔElev.	-11.350sft	0.000sft		
		Dist.	26290.259sft	0.030sft		
94-073	94-067	Az.	277°44'30.9262"	0°00'00.6159"	1:336555	1:336555
		ΔHt.	-28.379sft	0.039sft		
		ΔElev.	-28.280sft	0.000sft		
		Dist.	10543.417sft	0.031sft		

6 157	94-067	Az.	311°56'14.6509"	0°00'00.8980"	1:224258	1:224258
		ΔHt.	7.066sft	0.033sft		
		ΔElev.	7.030sft	0.000sft		
		Dist.	6818.096sft	0.030sft		
6 157	028	Az.	233°31'53.1999"	0°00'00.3506"	1:619377	1:619377
		ΔHt.	77.717sft	0.055sft		
		ΔElev.	78.050sft	0.097sft		
		Dist.	19348.091sft	0.031sft		
6 157	94-052	Az.	278°36'23.0735"	0°00'00.2591"	1:784779	1:784779
		ΔHt.	24.118sft	0.064sft		
		ΔElev.	24.450sft	0.000sft		
		Dist.	26438.269sft	0.034sft		
047	02-257	Az.	44°28'46.1758"	0°00'00.2248"	1:903767	1:903767
		ΔHt.	14.034sft	0.057sft		
		ΔElev.	13.654sft	0.094sft		
		Dist.	22398.239sft	0.025sft		
047	056	Az.	135°34'16.1503"	0°00'00.2578"	1:804833	1:804833
		ΔHt.	45.292sft	0.053sft		
		ΔElev.	45.488sft	0.113sft		
		Dist.	22172.405sft	0.028sft		
047	046	Az.	180°39'34.5891"	0°00'00.3553"	1:566588	1:566588
		ΔHt.	21.081sft	0.046sft		
		ΔElev.	21.366sft	0.102sft		
		Dist.	15889.434sft	0.028sft		
047	057	Az.	90°25'39.9910"	0°00'00.3546"	1:588447	1:588447
		ΔHt.	15.080sft	0.043sft		
		ΔElev.	14.972sft	0.099sft		
		Dist.	15621.476sft	0.027sft		
047	038	Az.	266°17'18.4005"	0°00'00.4181"	1:504593	1:504593
		ΔHt.	30.664sft	0.049sft		
		ΔElev.	30.857sft	0.105sft		

		Dist.	15824.022sft	0.031sft		
02-257	057	Az.	180°17'47.7910"	0°00'00.2941"	1:689588	1:689588
		ΔHt.	1.046sft	0.045sft		
		ΔElev.	1.318sft	0.083sft		
		Dist.	16097.963sft	0.023sft		
94-067	028	Az.	213°08'17.4573"	0°00'00.3250"	1:659144	1:659144
		ΔHt.	70.652sft	0.053sft		
		ΔElev.	71.020sft	0.097sft		
		Dist.	19178.391sft	0.029sft		
94-067	94-052	Az.	268°21'19.4175"	0°00'00.3091"	1:679305	1:679305
		ΔHt.	17.052sft	0.055sft		
		ΔElev.	17.420sft	0.000sft		
		Dist.	21077.300sft	0.031sft		
037	046	Az.	90°31'17.3800"	0°00'00.4817"	1:435039	1:435039
		ΔHt.	-84.454sft	0.050sft		
		ΔElev.	-84.578sft	0.108sft		
		Dist.	14945.464sft	0.034sft		
056	046	Az.	269°50'21.2608"	0°00'00.3217"	1:659775	1:659775
		ΔHt.	-24.211sft	0.042sft		
		ΔElev.	-24.122sft	0.107sft		
		Dist.	15704.207sft	0.024sft		
056	066	Az.	85°20'24.7259"	0°00'00.3716"	1:563737	1:563737
		ΔHt.	15.182sft	0.049sft		
		ΔElev.	15.190sft	0.110sft		
		Dist.	15949.103sft	0.028sft		
056	057	Az.	0°24'08.9825"	0°00'00.3520"	1:577809	1:577809
		ΔHt.	-30.212sft	0.044sft		
		ΔElev.	-30.515sft	0.100sft		
		Dist.	15717.450sft	0.027sft		
065	077	Az.	48°22'32.6990"	0°00'00.3176"	1:644391	1:644391
		ΔHt.	12.079sft	0.060sft		

		ΔElev.	11.912sft	0.122sft		
		Dist.	19688.652sft	0.031sft		
065	066	Az.	356°31'44.9763"	0°00'00.4123"	1:491580	1:491580
		ΔHt.	28.354sft	0.052sft		
		ΔElev.	27.975sft	0.108sft		
		Dist.	14723.688sft	0.030sft		
077	066	Az.	275°57'24.6756"	0°00'00.3640"	1:572408	1:572408
		ΔHt.	16.275sft	0.047sft		
		ΔElev.	16.063sft	0.113sft		
		Dist.	15692.683sft	0.027sft		
077	078	Az.	358°32'08.6801"	0°00'00.3512"	1:575718	1:575718
		ΔHt.	53.593sft	0.053sft		
		ΔElev.	53.205sft	0.114sft		
		Dist.	16393.779sft	0.028sft		
077	084	Az.	72°03'57.2932"	0°00'00.3588"	1:584880	1:584880
		ΔHt.	-41.406sft	0.051sft		
		ΔElev.	-41.265sft	0.118sft		
		Dist.	16775.652sft	0.029sft		
066	21-DDB	Az.	349°46'38.0673"	0°00'00.3835"	1:531081	1:531081
		ΔHt.	13.335sft	0.050sft		
		ΔElev.	13.017sft	0.101sft		
		Dist.	14737.462sft	0.028sft		
066	078	Az.	45°46'56.3163"	0°00'00.2600"	1:789253	1:789253
		ΔHt.	37.318sft	0.060sft		
		ΔElev.	37.141sft	0.117sft		
		Dist.	21179.228sft	0.027sft		
057	21-DDB	Az.	89°39'01.8651"	0°00'00.3764"	1:564098	1:564098
		ΔHt.	58.729sft	0.038sft		
		ΔElev.	58.722sft	0.083sft		
		Dist.	13160.694sft	0.023sft		
21-DDB	078	Az.	89°08'06.5635"	0°00'00.2882"	1:738095	1:738095

		ΔHt.	23.983sft	0.050sft		
		ΔElev.	24.125sft	0.096sft		
		Dist.	17796.591sft	0.024sft		
038	028	Az.	272°54'31.7209"	0°00'00.4110"	1:515712	1:515712
		ΔHt.	36.696sft	0.047sft		
		ΔElev.	36.887sft	0.104sft		
		Dist.	15725.115sft	0.030sft		
028	019	Az.	270°13'53.6271"	0°00'00.3835"	1:549077	1:549077
		ΔHt.	36.746sft	0.046sft		
		ΔElev.	37.031sft	0.104sft		
		Dist.	15981.387sft	0.029sft		
028	94-052	Az.	325°34'00.3197"	0°00'00.2832"	1:687747	1:687747
		ΔHt.	-53.600sft	0.048sft		
		ΔElev.	-53.600sft	0.097sft		
		Dist.	18731.391sft	0.027sft		
019	009	Az.	271°24'50.2467"	0°00'00.3936"	1:535054	1:535054
		ΔHt.	-87.981sft	0.047sft		
		ΔElev.	-87.671sft	0.107sft		
		Dist.	15965.619sft	0.030sft		
019	94-042	Az.	315°25'02.6077"	0°00'00.3145"	1:663599	1:663599
		ΔHt.	50.164sft	0.058sft		
		ΔElev.	50.359sft	0.097sft		
		Dist.	22530.628sft	0.034sft		
009	94-042	Az.	0°29'36.8179"	0°00'00.4359"	1:463978	1:463978
		ΔHt.	138.146sft	0.049sft		
		ΔElev.	138.030sft	0.097sft		
		Dist.	15653.908sft	0.034sft		
94-042	94-048	Az.	89°44'37.4289"	0°00'00.7267"	1:289595	1:289595
		ΔHt.	-100.442sft	0.044sft		
		ΔElev.	-100.680sft	0.000sft		
		Dist.	10614.140sft	0.037sft		

94-052	94-048	Az.	273°47'33.2217"	0°00'00.7318"	1:287202	1:287202
		ΔHt.	40.069sft	0.045sft		
		ΔElev.	40.310sft	0.000sft		
		Dist.	10603.080sft	0.037sft		
078	084	Az.	124°25'01.1129"	0°00'00.2987"	1:692582	1:692582
		ΔHt.	-94.999sft	0.054sft		
		ΔElev.	-94.470sft	0.129sft		
		Dist.	19855.439sft	0.029sft		