SALT - GILA RIVERS

GPS PROJECT PROCESSING

GPS CONTROL SURVEY

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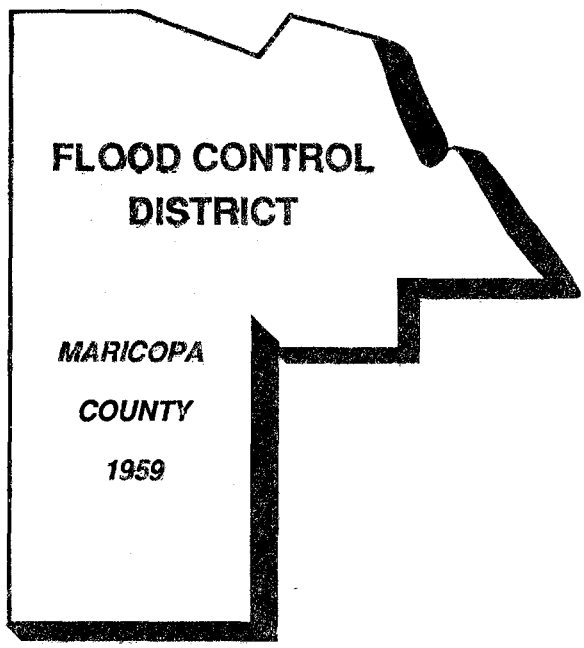


Baker
Michael Baker Jr., Inc

Greiner

MARICOPA COUNTY SALT-GILA WATERCOURSE MASTER PLAN PHASE 1 AERIAL MAPPING GPS CONTROL SURVEY NETWORK PHOENIX, ARIZONA GREINER, INC. 1991

SUMMARY

The intent of this GPS Control Survey was to provide a photogrammetric horizontal control network for a 400 scale 4-foot contour aerial topographic map of the Salt-Gila Rivers in the general vicinity of Phoenix Arizona. Approximately 150 record monuments were targeted and occupied using Trimble 4000 ST single frequency receivers in accordance with the FGCC "Geometric Accuracy Standards and Specifications for using GPS Relative Positioning Techniques" in order to develop the photogrammetric horizontal control for this aerial mapping project. The photogrammetric vertical control for this aerial mapping project was developed by a Least Squares Adjustment of conventional leveling and is not a part of this report.

In accordance with the contract specifications, this GPS horizontal control network was tied into the Arizona State Plane Coordinate System by direct measurements to 3 NGS first order triangulation stations within the immediate vicinity of this mapping project. These first order NGS triangulation stations are: Broadway, Etta and Val Vista. Additionally, in consideration of the fact that the East-West scope of this aerial mapping project extended approximately 80 miles, several other NGS first order triangulation stations were occupied around the project perimeter. These additional first order triangulation stations were occupied in order to verify the existence of a uniform State Plane Coordinate Network and to identify any "Local Control" coordinate discrepancies which may exist and thereby have an impact on this project or future projects within the same general area. Although verification of the existing NGS triangulation network is beyond the scope of this 400 scale 4-foot contour aerial topographic mapping project, all baselines between the NGS triangulation stations listed below were measured at least twice in order to provide redundant measurements as defined in the FGCC specifications. Due to its historical significance, as the initial point of the Arizona public lands survey system, one NGS second order triangulation station "Initial Point" was occupied instead of the NGS first order triangulation station "Initial Monument" only a few feet away. The published NAD83 record coordinates of triangulation stations Etta, Broadway, Squaw Peak, Litchfield, and Initial Point (not Initial Monument) appear to be in general agreement due to the lack of significant differences between the record coordinate values and the (measured) coordinate values generated by the unconstrained GPS project adjustment. However, triangulation stations Val Vista, Powers Butte, and Wintersburg exhibit larger positional differences between the published record coordinate values and the (measured) coordinate values generated by the unconstrained GPS project adjustment. This positional discrepancy would appear to cast some doubt on the accuracy of the published record coordinates of these three triangulation stations in relation to the overall area network. Please see the attached table entitled "NAD83 Grid Coordinate Value Comparisons (International Foot)".

Once again, it should be emphasized that the intent of this particular GPS control survey was to provide photogrammetric horizontal control for a 4-foot contour 400 scale aerial topographic map of the Salt-Gila Rivers, and an examination of the precision of the unconstrained adjustment proved to be well within the PPM requirements specified in the contract for this GPS control network. Under no circumstances should the resultant coordinate values of this GPS control survey be used for boundary analysis or land net control of a GIS digital mapping database.

THE FOLLOWING APPENDICES ARE INCLUDED AS PART OF THIS PROJECT REPORT:

An Appendix entitled GPS PROJECT COORDINATES which contains the following sections: NAD83 Arizona State Plane Ground Coordinates in International Feet, NAD83 Arizona State Plane Grid Coordinates in International Feet, NAD83 State Plane Grid Coordinates in Meters, and NAD27 Arizona State Plane Grid Coordinates in U.S. Survey Feet. Once again, it should be noted that the intent of this GPS control survey was to develop horizontal photogrammetric control for a 400 scale, 4-foot contour aerial topographic map of the Salt-Gila Rivers and under no circumstances should the resultant coordinate values be used for boundary analysis or land net control of a GIS digital mapping database.

An Appendix entitled GPS PROJECT ADJUSTMENTS which contains a GEOLAB least squares statistical adjustment with the title "Unscaled, #8 Constrained NAD83 Adjustment - Salt River GPS - 1991". This project adjustment was developed by the constrained NAD83 values of the following 8 NGS triangulation stations: Initial Point (not Initial Monument), Powers Butte, Wintersburg, Litchfield, Etta, Squaw Peak, Val Vista, and Broadway. It should be noted that due to the relatively large distance away from the immediate project, the record coordinate values of these 8 NGS control points were held "fixed" in the Geolab least squares adjustment but were not heavily weighted. Therefore, minor differences in the final coordinates of these points will be evident in the least squares adjustment report and the resultant coordinate listings due to a lack of agreement between the record coordinate values and the redundant GPS baseline vector measurements. The average ppm of the constrained project adjustment was 6 ppm, with a low value of 1 ppm and a high value of 35 ppm in a vector distance of 685 meters. This constrained adjustment was used to develop the NAD83 Coordinate values for this 400 scale 4-foot contour aerial topographic mapping project.

An Appendix entitled GPS PROJECT ADJUSTMENTS which contains a GEOLAB least squares statistical adjustment with the title: "Unscaled, #8 Constrained NAD27 Adjustment - Salt River GPS - 1991". This project adjustment was developed from the constrained NAD27 values of the following 8 NGS triangulation stations: Initial Point (not Initial Monument), Powers Butte, Wintersburg, Litchfield, Etta, Squaw Peak, Val Vista, and Broadway. It should be noted that due to the relatively large distance away from the immediate project, the record coordinate values of these 8 NGS control points were held "fixed" in the Geolab least squares adjustment but were not heavily weighted. Therefore, minor differences in the final coordinates of these points will be evident in the least squares adjustment report and the resultant coordinate listings due to a lack of agreement between the record coordinate values and the redundant GPS baseline vector measurements. The average ppm of this constrained project adjustment was 6 ppm with a low value of 1 ppm and a high value of 31 ppm in a vector distance of 685 meters. This constrained adjustment was used to develop the NAD27 coordinate values for this 400 scale 4-foot contour aerial topographic mapping project.

An Appendix entitled GPS PROJECT ADJUSTMENTS which contains a GEOLAB least squares statistical adjustment with the title: "Scaled Unconstrained Project Adjustment - Salt River GPS - 1991". This project adjustment was developed by constraining the NAD83 value of a single NGS triangulation station (Etta), in order to provide a quality check of the internal consistency of the GPS measurements. This adjustment was scaled to better fit a bell curve graph and to pass the Chi-squared test. The average ppm of this scaled unconstrained project network was 3 ppm with a low value of 1 ppm, and a high value of 13 ppm, in a vector distance of 685 meters. This scaled unconstrained adjustment is well within contract specifications and was produced in order to examine the actual precision of the GPS measurements used for this 400 scale 4-foot contour aerial topographic mapping project.

An Appendix entitled GPS PROJECT PROCESSING which contains the Trimble (Rev E) automatic baseline processing software parameters for the GPS observations of the NGS triangulation station network verification along with the resulting baseline summary reports and a Trimble "TMAP" plot of the baselines observed. In consideration of the relatively long baselines measured in the NGS triangulation station verification, the GPS observation data was first processed using the Trimble preset "automatic" processing parameters and then reprocessed using "manually" modified processing parameters in order to provide a comparison of the resultant vector differences. For all intents and purposes, the resultant raw GPS baseline vectors developed from the program preset "automatic" processing parameters were nearly identical to the resultant raw GPS baseline vectors developed from the "manually" modified processing. Therefore, the "automatic" GPS vectors were considered to be adequate for the NGS triangulation station verification of this 400 scale, 4 foot contour aerial mapping project. Please see the attached comparison tables entitled "Trimble 4000 ST Single Frequency Field Calibration and Comparisons".

An Appendix entitled GPS PROJECT PROCESSING which contains the Trimble (Rev E) manually modified baseline processing software parameters for the GPS observations of the NGS triangulation station verification along with the resulting baseline summary reports and a Trimble "TMAP" plot of the baselines observed. In consideration of the relatively long baseline measurements included in the NGS triangulation station verification, the Trimble processing parameters were manually modified in order to provide a comparison to the preset automatic processing sequence. Although the positional dilution of precision (PDOP) improved noticeably, the resultant raw GPS "Manual" baseline vectors were only slightly different than the processed preset "Automatic" baselines. Therefore, the program processed and adjusted "Automatic" baselines were considered to be adequate for the NGS triangulation station verification of this 400 scale, 4 foot contour aerial mapping project. Please see the attached comparison tables entitled "Trimble 4000 ST Single Frequency Field Calibration and Comparisons".

An Appendix entitled GPS PROJECT CLOSURES which contains the Trimble (Rev E) "Tclose" traverse closure reports for the NGS triangulation station verification and the 20 project loops. In accordance with the FGCC standards and specifications, all 20 project network loops were 10 sides or less. The average ppm closure for the loops in the project network was 2 ppm with a low value of 1 ppm and a high value of 5 ppm. The average value of 2 ppm for all the loops in this project network was considerably less than the specified allowable average of 16 ppm, and the maximum project loop closure of 4.53 ppm for Loop #8 was also considerably less than the allowable maximum of 25 ppm as specified in the FGCC standards.

An Appendix entitled GPS OBSERVATION REPORTS which contains the daily work reports recorded by the GPS field crew for each GPS observation day. These daily work reports are a general summary of the hours worked and points observed by each member of the GPS field crew. In order to satisfy contract requirements, daily work reports were recorded in addition to the GPS observation sheets which provide a detailed summary of each observation session.

An Appendix entitled GPS OBSERVATION SHEETS which contains the GPS observation sheets for all the points of this project as recorded by each member of the GPS field crew. These observation sheets show relevant information concerning each GPS occupation including: the name of the field operator, the model and serial number of the GPS receiver, the location and description of the point occupied, information regarding the satellite constellation for each individual observation session, and the antenna height entered into the receiver along with the three independent measurement checks required by the FGCC specifications.

An Appendix entitled GPS OBSERVATION WINDOWS which contains the satellite windows available for this project as well as the Trimble satellite "SKYPLOT" configurations for the individual observation sessions. All observations sessions were designed according to the "FGCC Geometric Accuracy Standards and Specifications for using GPS Relative Positioning Techniques".

An Appendix entitled GPS OBSERVATION POINTS which contains the recon sheet "Visibility", "To Reach", and "Point Identification" descriptions for all the GPS observation points of this project. This binder also includes the published record coordinates and "To Reach" descriptions for the occupied NGS triangulation stations surrounding the general vicinity of this 400 scale 4-foot contour aerial topographic mapping project.

David Paul Johnson
Project Surveyor, G.P.S.

Robert J. Pecha, P.L.S.
Project Manager

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
21080
ROBERT J.
PECHA
Date Signed 7-17-92
ARIZONA, U.S.A.

R00704

MARICOPA COUNTY SALT-GILA WATERCOURSE AERIAL MAPPING

NAD 83 GRID COORDINATE VALUE COMPARISONS (INTERNATIONAL FOOT)

NAME	NUMBER		RECORD	CONSTRAINED	± DIF	UNCONSTRAINED	± DIF
		N	864,981.997	864,981.987	-0.010	864,981.913	-0.084
INITIAL POINT	0001	E	581,116.248	581,116.362	+0.114	581,116.537	+0.289
		N	840,141.032	840,141.074	+0.042	840,141.285	+0.253
POWERS BUTTE	0005	E	450,010.732	450,011.135	+0.403	450,011.819	+1.087
		N	880,381.043	880,381.056	+0.013	880,381.027	-0.016
WINTERSBURG	0007	E	407,444.792	407,444.862	+0.070	407,446.665	+1.873
		N	917,126.638	917,126.633	-0.005	917,126.404	-0.234
LITCHFIELD	0009	E	564,283.971	564,283.975	+0.004	564,284.542	+0.571
		N	896,344.272	896,344.272	HELD	896,344.272	HELD
ETTA	0013	E	647,409.040	647,409.040	HELD	647.409.040	HELD
		N	926,687.833	926,687.747	-0.086	926,687.466	-0.367
SQUAW PEAK	0015	E	668,215.780	668,215.769	-0.011	668,215.654	-0.126
		N	900,292.414	900,292.274	-0.140	900,292.259	-0.155
VAL VISTA	0019	E	750,259.803	750,259.198	-0.605	750,258.834	-0.969
		N	875,535.738	875,535.795	+0.057	875,535.783	+0.045
BROADWAY	0021	E	684,546.463	684,546.424	-0.039	684,546.338	-0.125

* NOTE: Although verification of the local existing NGS triangulation network is beyond the scope of this 400 scale, 4-foot contour aerial mapping project, the published NAD83 Record Coordinates of Triangulation Stations Etta, Broadway, Squaw Peak, Litchfield, and Initial Point (not Initial Monument) appear to be in general agreement according the lack of major differences between the record coordinate values and the (measured) coordinate values generated by the unconstrained adjustment. Triangulation stations Val Vista, Powers Butte and Wintersburg exhibit larger positional differences between the (measured) unconstrained coordinates and the published record values. This discrepancy would appear to cast some doubt on the accuracy of the published record coordinates of these three triangulation stations relative to the overall area network.

MARICOPA COUNTY SALT-GILA WATERCOURSE AERIAL MAPPING

RAW GPS "AUTOMATIC" BASELINE MEASUREMENT COMPARISONS (DIRECTORY VCTR1)

TRIMBLE 4000 ST SINGLE FREQUENCY RECEIVER FIELD CALIBRATION AND COMPARISONS

STATION FROM	RECEIVER FROM	STATION TO	RECEIVER TO	GPS DAY	VECTOR DISTANCE (m)
0001	WHITE	0013	BLUE	330-1	22,356.121 *
0001	WHITE	0013	BLUE	330-2	22,356.297
0001	RED	0013	WHITE	337-1	22,356.248
0001	RED	0013	WHITE	337-2	22,356.214
0001	GREEN	0013	RED	339-1	22,356.396
0001	GREEN	0013	RED	339-4	22,356.352

#2934A00381 = RED #2934A00379 = WHITE #2934A00382 = BLUE #2934A00373 = GREEN

* NOTE: As noted per the attached letter, Trimble GPS receivers are calibrated before they leave the factory, and also undergo a self calibration routine each time they are turned on. However, in an effort to provide an actual project field comparison, a common network baseline was measured repeatedly using three different receiver combinations with the resultant raw GPS vector distances shown above. Except for the first raw GPS vector distance which would appear to contain operator error, the maximum difference between any pair of measured "automatic" vectors is 182mm in 22,356m, or 8ppm. Of further note is the fact that the maximum difference realized between any raw GPS vector developed from preset "Automatic" processing and the corresponding raw GPS vector developed from "Manual" processing (set to process each measurement observation) was only 91mm in 22,356 meters, or 4ppm (please refer to the following page).

MARICOPA COUNTY SALT-GILA WATERCOURSE AERIAL MAPPING

RAW GPS "MANUAL" BASELINE MEASUREMENT COMPARISONS (DIRECTORY VCTR1M)

TRIMBLE 4000 ST SINGLE FREQUENCY RECEIVER FIELD CALIBRATION AND COMPARISONS

STATION FROM	RECEIVER FROM	STATION TO	RECEIVER TO	GPS DAY	VECTOR DISTANCE (m)
0001	WHITE	0013	BLUE	330-1	22,356.139 *
0001	WHITE	0013	BLUE	330-2	22,356.273
0001	RED	0013	WHITE	337-1	22,356.291
0001	RED	0013	WHITE	337-2	22,356.281
0001	GREEN	0013	RED	339-1	22,356.305
0001	GREEN	0013	RED	339-4	22,356.288

#2934A00381 = RED #2934A00379 = WHITE #2934A00382 = BLUE #2934A00373 = GREEN

* NOTE: As noted per the attached letter, Trimble GPS receivers are calibrated before they leave the factory, and also undergo a self calibration routine each time they are turned on. However, in an effort to provide an actual project field comparison, a common network baseline was measured repeatedly using three different receiver combinations with the resultant raw GPS vector distances shown above. Except for the first raw GPS vector distance which would appear to contain operator error, the maximum difference between any pair of measured "manual" vectors is 32mm in 22,356m, or 1ppm. Of further note is the fact that the maximum difference realized between any raw GPS vector developed from preset "Automatic" processing and the corresponding raw GPS vector developed from "Manual" processing (set to process each measurement observation) was only 91mm in 22,356 meters, or 4ppm (please refer to the previous page).

RECEIVED
DEC 1991
GREINER ENG.

TrimbleNavigation

1 November 1991

Dave Johnson
GREINER, INC.
1261 East Dyer Road
Santa Ana, CA 92705-5605

Dear Mr. Johnson:

As per your request for information regarding the calibration of GPS Carrier Phase Tracking receivers. All receivers are calibrated before leaving Trimble Navigation Ltd by our Q.A. group. This calibration includes measuring a baseline of known coordinates to determine any abnormalities in the antenna phase center or the receivers tracking loop. The receivers also do a self calibration between all the channels every time a survey is started. The results of this calibration are available for the user to analyze, and are located in the double difference output file.

Should you have any further questions or if I can be of service to you, please call me at 1-800-874-6253 extension 2019.

Regards,

TRIMBLE NAVIGATION LTD.

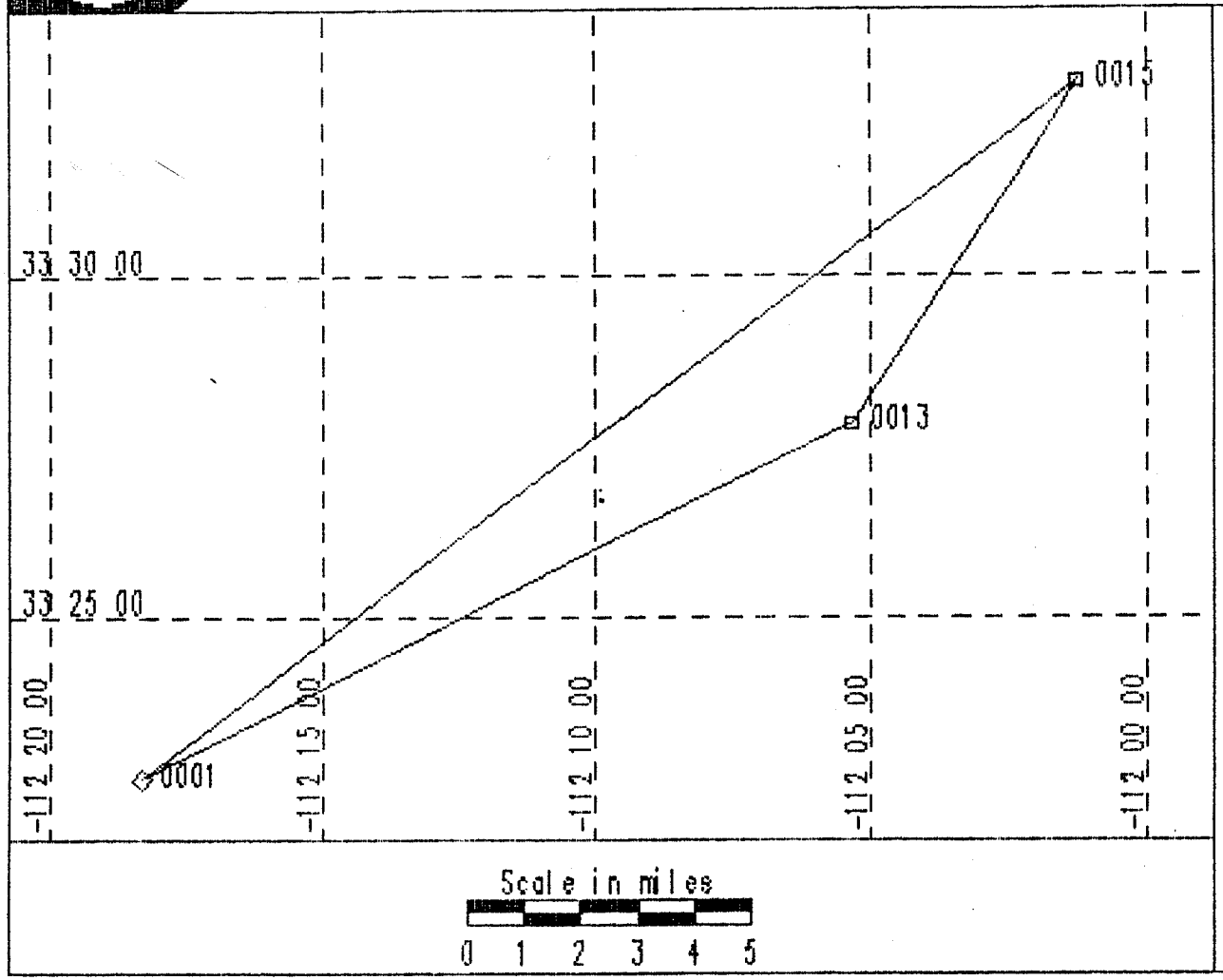
Ken Mooyman

Ken Mooyman
Survey Sales
Western Region

645 North Mary Avenue
Post Office Box 3642
Sunnyvale, CA 94088-3642

(408) 730-2900
FAX (408) 730-2997
Telex 6713973

GILA SALT RIVER BASIN MAIN CONTROL NETWORK - DAY 330



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\330\vctrl

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
330-1	0001	0013	0.063	0.708	n/a	22356.121	1.689	1.598
330-1	0001	0015	0.100	0.109	n/a	32543.814	1.689	1.435
-2	0001	0013	0.071	0.114	n/a	22356.297	1.575	1.535
330-2	0001	0015	0.082	0.111	n/a	32543.828	1.575	1.301
330-2	0013	0015	0.033	0.119	n/a	11225.825	1.535	1.301
330-1	0013	0015	0.063	0.048	4.430	11225.816	1.598	1.435

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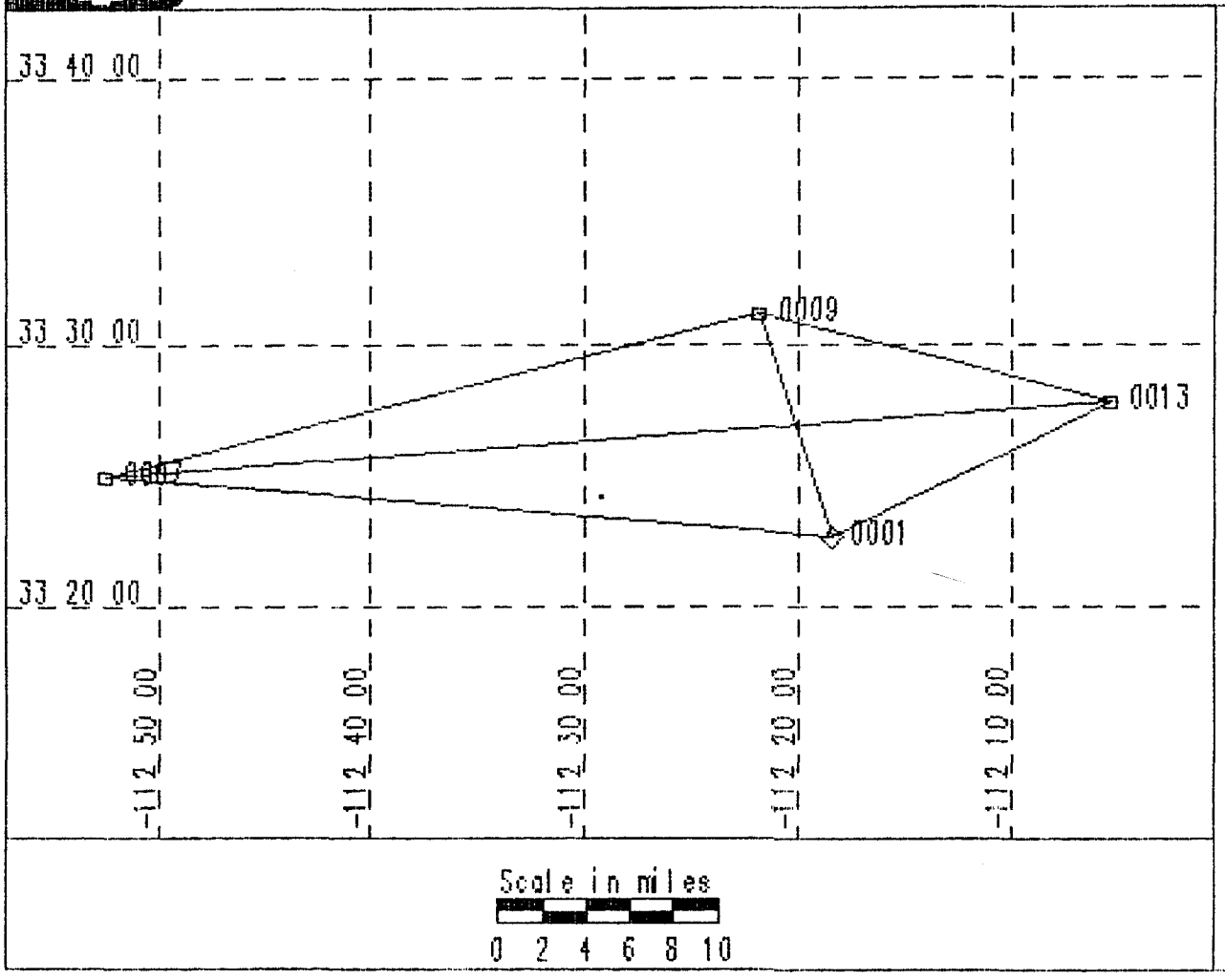
GILA SALT RIVER BASIN MAIN CONTROL NETWORK - DAY 337



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

ummary of directory: c:\gps\gila\337\VCTR1

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337-1	0001	0007	0.191	0.106	n/a	53147.579	1.577	1.460
337-1	0001	0009	0.108	0.106	n/a	16703.449	1.577	1.595
1	0001	0013	0.086	0.115	n/a	22356.248	1.577	1.654
1	0007	0009	0.210	0.105	n/a	49103.407	1.460	1.595
337-1	0007	0013	0.264	0.114	n/a	73310.062	1.460	1.654
337-1	0009	0013	0.119	0.113	n/a	26119.843	1.595	1.654
337-2	0001	0007	0.207	0.107	n/a	53147.548	1.640	1.350
337-2	0001	0009	0.088	0.114	n/a	16703.452	1.640	1.514
337-2	0001	0013	0.097	0.103	n/a	22356.214	1.640	1.621
337-2	0007	0009	0.178	0.107	n/a	49103.313	1.350	1.514
337-2	0007	0013	0.263	0.106	n/a	73309.971	1.350	1.621
337-2	0009	0013	0.094	0.110	n/a	26119.821	1.514	1.621

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                    Batch Processing Utility   Version 91.081
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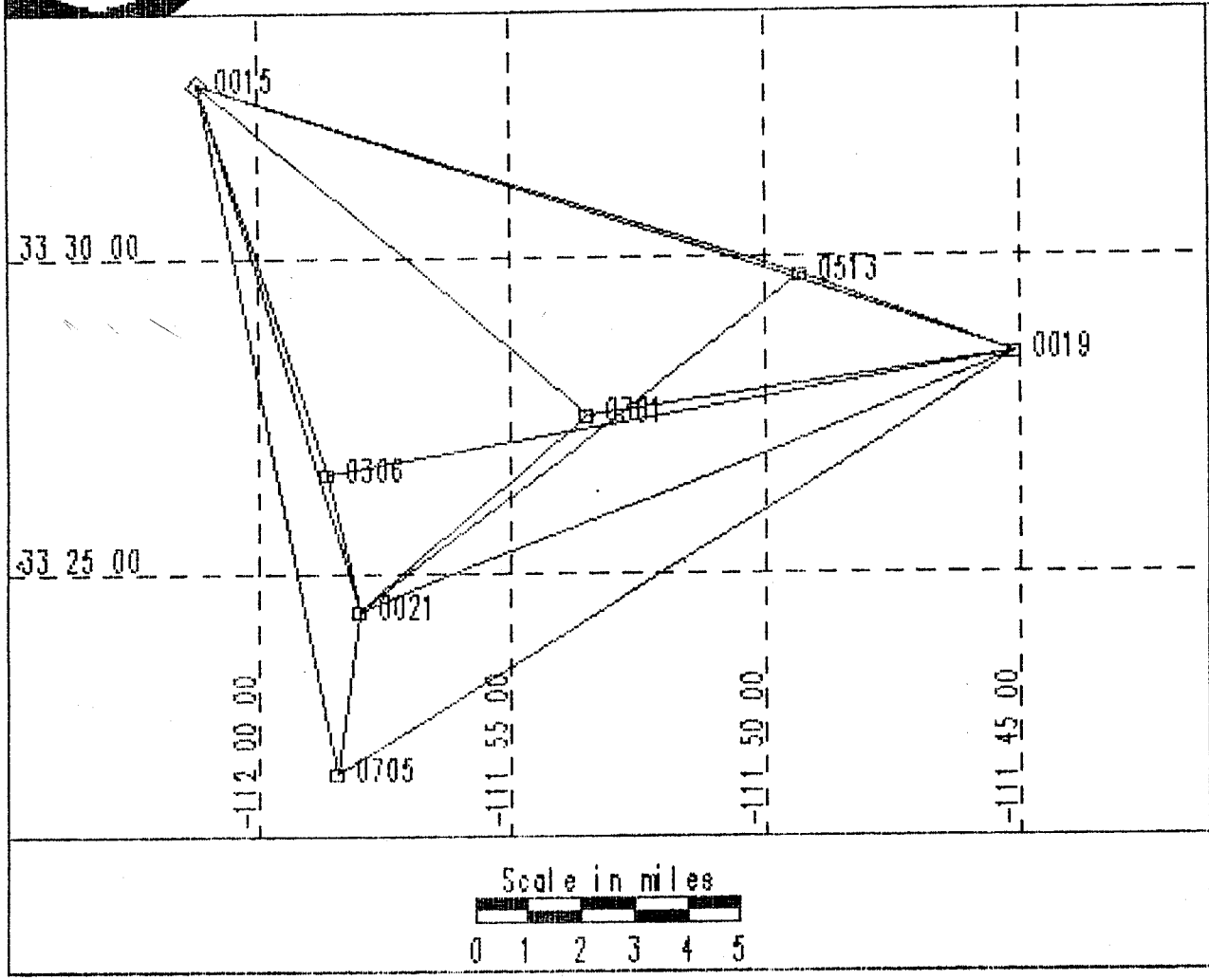
GILA SALT RIVER BASIN MAIN CONTROL NETWORK - DAY 338



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\338\vctr1

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338-1	0015	0021	0.097	0.098	n/a	16373.951	1.459	1.559
-1	0015	0513	0.070	0.432	n/a	19367.254	1.459	2.192
338-1	0019	0021	0.096	0.094	n/a	21406.895	1.637	1.559
338-1	0021	0513	0.046	0.478	n/a	16690.232	1.559	2.192
338-2	0015	0019	0.100	0.104	n/a	26276.951	1.459	1.637
338-2	0015	0021	0.097	0.098	n/a	16373.951	1.459	1.559
338-2	0015	0301	0.047	0.390	n/a	15522.682	1.459	1.727
338-2	0019	0021	0.096	0.094	n/a	21406.895	1.637	1.559
338-2	0019	0301	0.060	0.328	n/a	13144.808	1.637	1.727
338-3	0015	0019	0.109	0.083	n/a	26276.862	1.406	1.552
338-3	0015	0021	0.092	0.084	n/a	16373.915	1.406	1.513
338-3	0015	0705	0.114	0.271	n/a	20831.507	1.406	1.732
338-3	0019	0021	0.053	0.086	n/a	21406.973	1.552	1.513
338-3	0019	0705	0.071	0.276	n/a	24096.880	1.552	1.732
338-4	0015	0019	0.109	0.083	n/a	26276.862	1.406	1.552
338-4	0015	0021	0.092	0.084	n/a	16373.915	1.406	1.513
338-4	0015	0306	0.047	2.216	n/a	12148.997	1.406	1.869
338-4	0019	0021	0.053	0.086	n/a	21406.973	1.552	1.513
338-4	0019	0306	0.031	2.414	n/a	21342.980	1.552	1.869
338-2	0021	0301	0.070	0.047	3.120	9064.604	1.559	1.727
338-4	0021	0306	0.018	0.099	3.160	4239.597	1.513	1.869
338-3	0021	0705	0.033	0.050	4.890	4830.053	1.513	1.732
338-1	0019	0513	0.025	0.087	14.850	6913.483	1.637	2.192

Batch Processing Utility Version 91.081

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Output Directory: c:\gps\gila\338\vctr1

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Antenna Correction .....: MicroST     [Use spacebar to toggle antenna types
                                       or press F9 to select from a list]
Name Generation ........: Last        [First, Full, Last, NoNames]

Baseline Processor .....: MBP-Single  [MBP-Single, MBP-Multi, 640-Single]
Coordinate Seeding .....: Yes         [No, Yes]
Display Computations ...: No          [No, Yes]
Quality Summary ........: Yes         [No, Yes]
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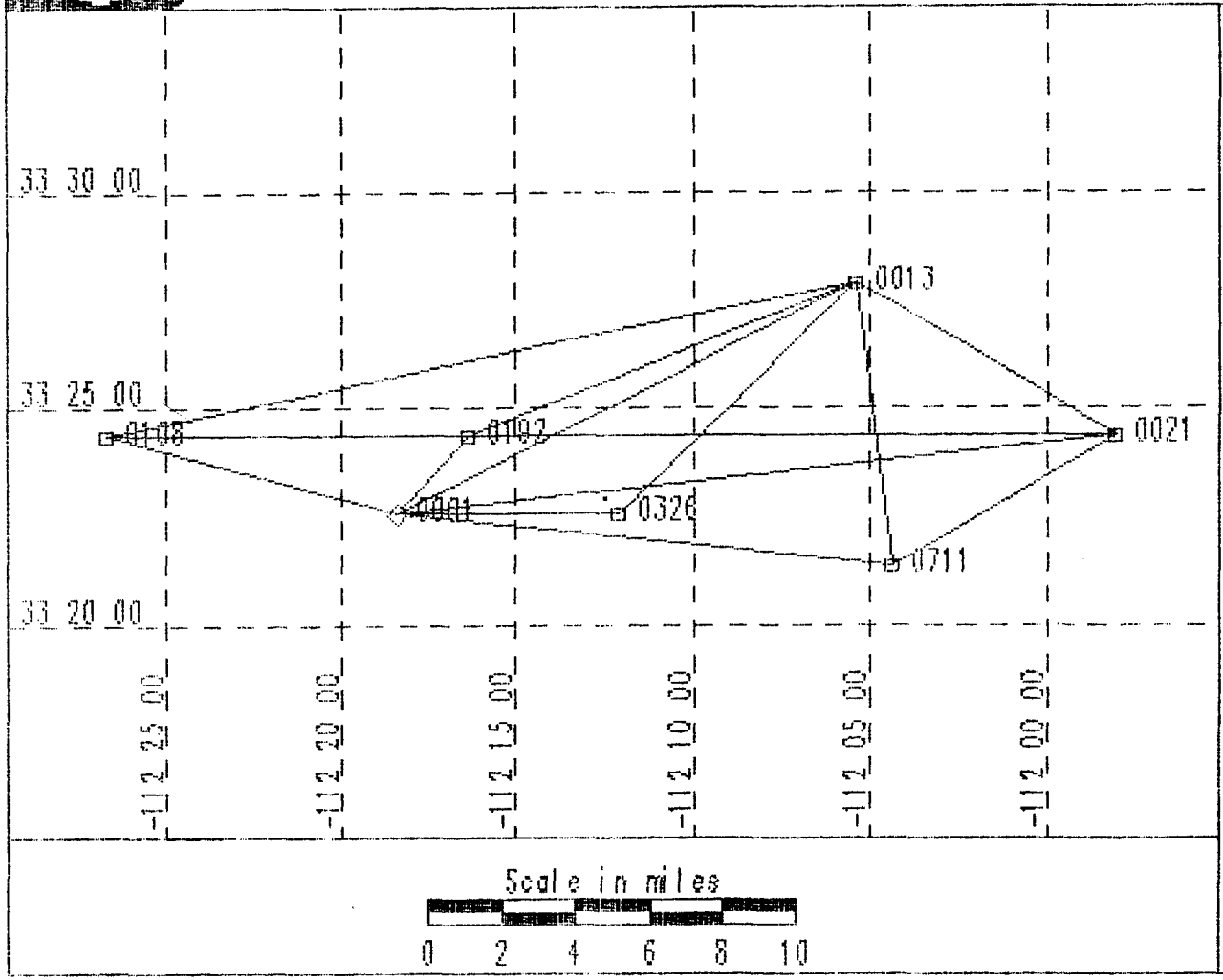
GILA SALT RIVER BASIN MAIN CONTROL NETWORK - DAY 339



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Toggle on/off:
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Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\339\VCTR1

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339-1	0001	0013	0.119	0.091	n/a	22356.396	1.830	1.572
339-1	0001	0021	0.131	0.090	n/a	31694.035	1.830	1.494
[illegible]-1	0013	0108	0.147	0.327	n/a	33620.529	1.572	1.870
[illegible]-1	0021	0108	0.149	0.345	n/a	44358.023	1.494	1.870
339-2	0001	0013	0.119	0.091	n/a	22356.396	1.830	1.572
339-2	0001	0021	0.131	0.090	n/a	31694.035	1.830	1.494
339-2	0001	0192	0.038	0.674	n/a	4525.043	1.830	1.848
339-2	0013	0192	0.079	0.675	n/a	18183.179	1.572	1.848
339-2	0021	0192	0.066	0.642	n/a	28370.182	1.494	1.848
339-3	0001	0013	0.089	0.090	n/a	22356.352	1.758	1.627
339-4	0001	0013	0.089	0.090	n/a	22356.352	1.758	1.627
339-4	0001	0021	0.105	0.092	n/a	31694.060	1.758	1.539
339-4	0001	0711	0.032	1.265	n/a	21838.201	1.758	1.723
339-4	0013	0711	0.053	2.139	n/a	11921.151	1.627	1.723
339-4	0021	0711	0.046	1.520	n/a	11236.742	1.539	1.723
339-3	0013	0326	0.069	0.046	3.460	14254.473	1.627	1.901
339-4	0013	0021	0.067	0.034	3.530	12977.501	1.627	1.539
339-1	0013	0021	0.066	0.042	4.160	12977.505	1.572	1.494
339-2	0013	0021	0.066	0.042	4.160	12977.505	1.572	1.494
339-3	0001	0326	0.030	0.050	5.040	9646.035	1.758	1.901
339-1	0001	0108	0.038	0.082	9.630	13250.958	1.830	1.870

```
                    Batch Processing Utility   Version 91.081
##################################################################

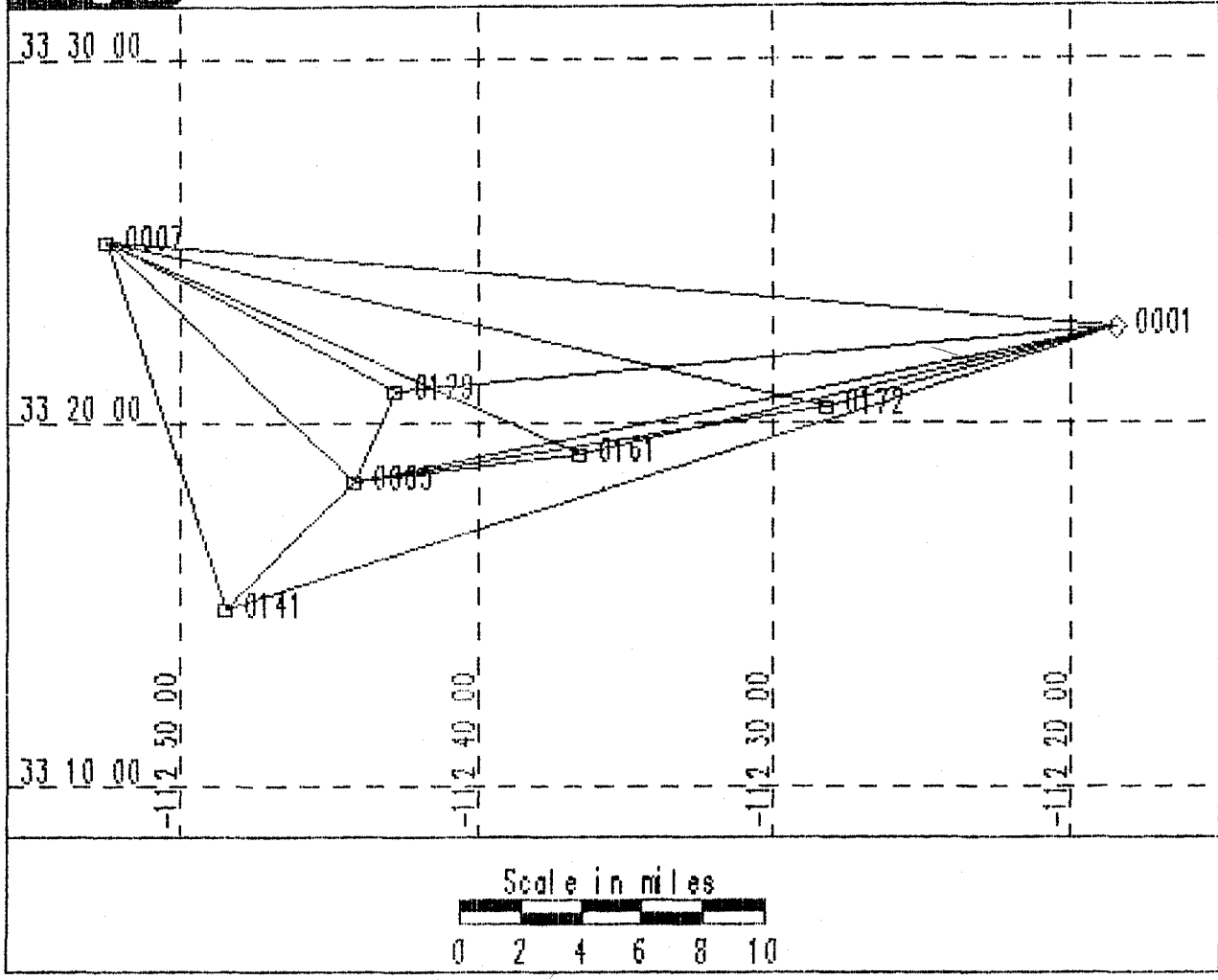
   Data Directory  : c:\gps\gila\339
   Output Directory: c:\gps\gila\339\VCTR1

   Pseudo Range Processing: Yes          [No, Yes]
   Antenna Correction .....: MicroST     [Use spacebar to toggle antenna types
                                          or press F9 to select from a list]
   Name Generation ........: Last        [First, Full, Last, NoNames]

   Baseline Processor .....: MBP-Single  [MBP-Single, MBP-Multi, 640-Single]
   Coordinate Seeding .....: Yes         [No, Yes]
   Display Computations ...: Yes         [No, Yes]
   Quality Summary ........: Yes         [No, Yes]


ZDDD
```

GILA SALT RIVER BASIN MAIN CONTROL NETWORK - DAY 340



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\340\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
340-1	0001	0005	0.121	0.099	n/a	40676.466	1.722	1.631
340-1	0001	0007	0.153	0.096	n/a	53147.777	1.722	1.489
340-1	0001	0141	0.110	0.713	n/a	48762.023	1.722	1.482
340-1	0005	0007	0.083	0.092	n/a	17855.075	1.631	1.489
340-1	0007	0141	0.031	0.664	n/a	19708.942	1.489	1.482
340-2	0001	0005	0.121	0.099	n/a	40676.466	1.722	1.631
340-2	0001	0007	0.153	0.096	n/a	53147.777	1.722	1.489
340-2	0001	0129	0.090	0.348	n/a	37893.234	1.722	2.018
340-2	0005	0007	0.083	0.092	n/a	17855.075	1.631	1.489
340-2	0007	0129	0.056	0.356	n/a	16987.033	1.489	2.018
340-3	0001	0005	0.151	0.075	n/a	40676.399	1.771	1.535
340-3	0001	0007	0.193	0.075	n/a	53147.600	1.771	1.540
340-3	0001	0161	0.091	0.225	n/a	28835.968	1.771	1.511
340-3	0005	0007	0.108	0.070	n/a	17855.066	1.535	1.540
340-3	0007	0161	0.116	0.217	n/a	27093.524	1.540	1.511
340-4	0001	0005	0.151	0.075	n/a	40676.399	1.771	1.535
340-4	0001	0007	0.193	0.075	n/a	53147.600	1.771	1.540
340-4	0001	0172	0.028	1.687	n/a	15751.528	1.771	1.915
340-4	0005	0007	0.108	0.070	n/a	17855.066	1.535	1.540
340-4	0005	0172	0.032	1.518	n/a	24978.029	1.535	1.915
340-4	0007	0172	0.049	1.534	n/a	38655.462	1.540	1.915
340-3	0005	0161	0.073	0.054	3.630	11888.312	1.535	1.511
340-1	0005	0141	0.042	0.096	5.210	9319.505	1.631	1.482
340-2	0005	0129	0.027	0.058	10.070	5102.978	1.631	2.018

```
                    Batch Processing Utility   Version 91.081
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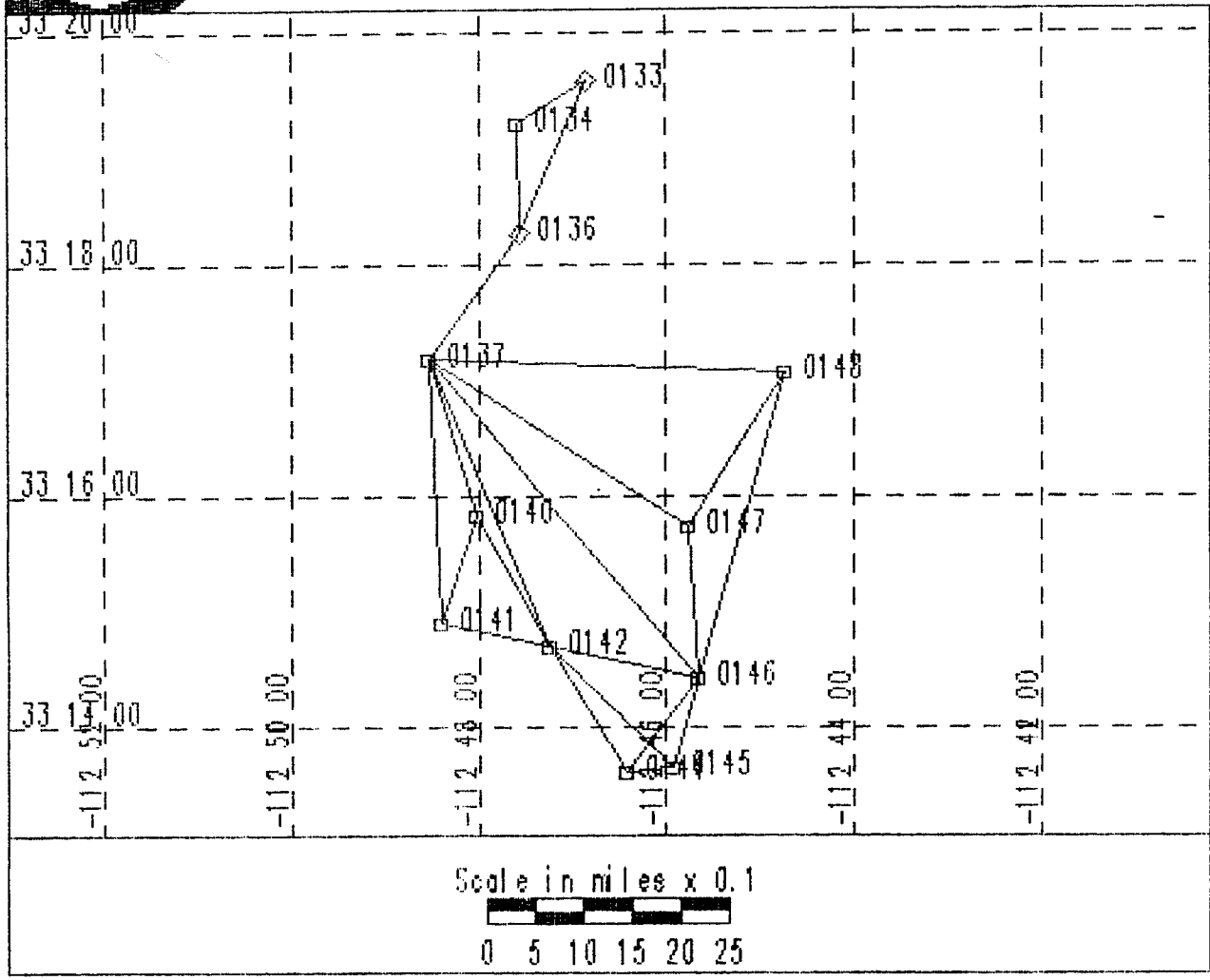
```

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 343



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\343\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
343-4	0137	0146	0.041	0.065	4.680	6787.929	1.646	1.553
343-4	0137	0148	0.027	0.080	12.180	5935.385	1.646	1.691
[illegible]-4	0137	0147	0.028	0.080	12.340	5066.239	1.646	1.717
[illegible]-5	0142	0145	0.029	0.085	12.580	2835.044	1.794	1.685
343-4	0146	0148	0.029	0.081	14.490	5090.704	1.553	1.691
343-3	0145	0146	0.025	0.086	15.010	1506.374	1.685	1.697
343-3	0142	0144	0.022	0.084	20.620	2396.212	1.794	1.572
343-3	0144	0146	0.021	0.084	22.800	1926.627	1.572	1.697
343-3	0142	0146	0.020	0.085	23.020	2512.000	1.794	1.697
343-2	0137	0142	0.022	0.053	26.260	4989.235	1.661	1.666
343-4	0147	0148	0.019	0.081	28.660	2915.789	1.717	1.691
343-2	0141	0142	0.021	0.053	29.990	1836.266	1.489	1.666
343-1	0136	0137	0.018	0.048	31.440	2539.377	1.673	1.587
343-3	0144	0145	0.017	0.084	36.040	777.577	1.572	1.685
343-5	0136	0133	0.019	0.050	39.440	2675.319	1.705	1.626
343-4	0146	0147	0.016	0.081	41.680	2455.709	1.553	1.717
343-2	0140	0142	0.017	0.053	42.430	2435.332	1.522	1.666
343-2	0137	0141	0.018	0.050	46.290	4208.590	1.661	1.489
343-5	0133	0134	0.017	0.051	53.030	1330.822	1.626	1.487
343-2	0140	0141	0.017	0.049	68.340	1830.453	1.522	1.489
343-5	0136	0134	0.016	0.051	73.720	1746.249	1.705	1.487
343-2	0137	0140	0.014	0.048	82.030	2584.855	1.661	1.522

```
                    Batch Processing Utility   Version 91.081
/////////////////////////////////////////////////////////////////////////////////////////////////////////////

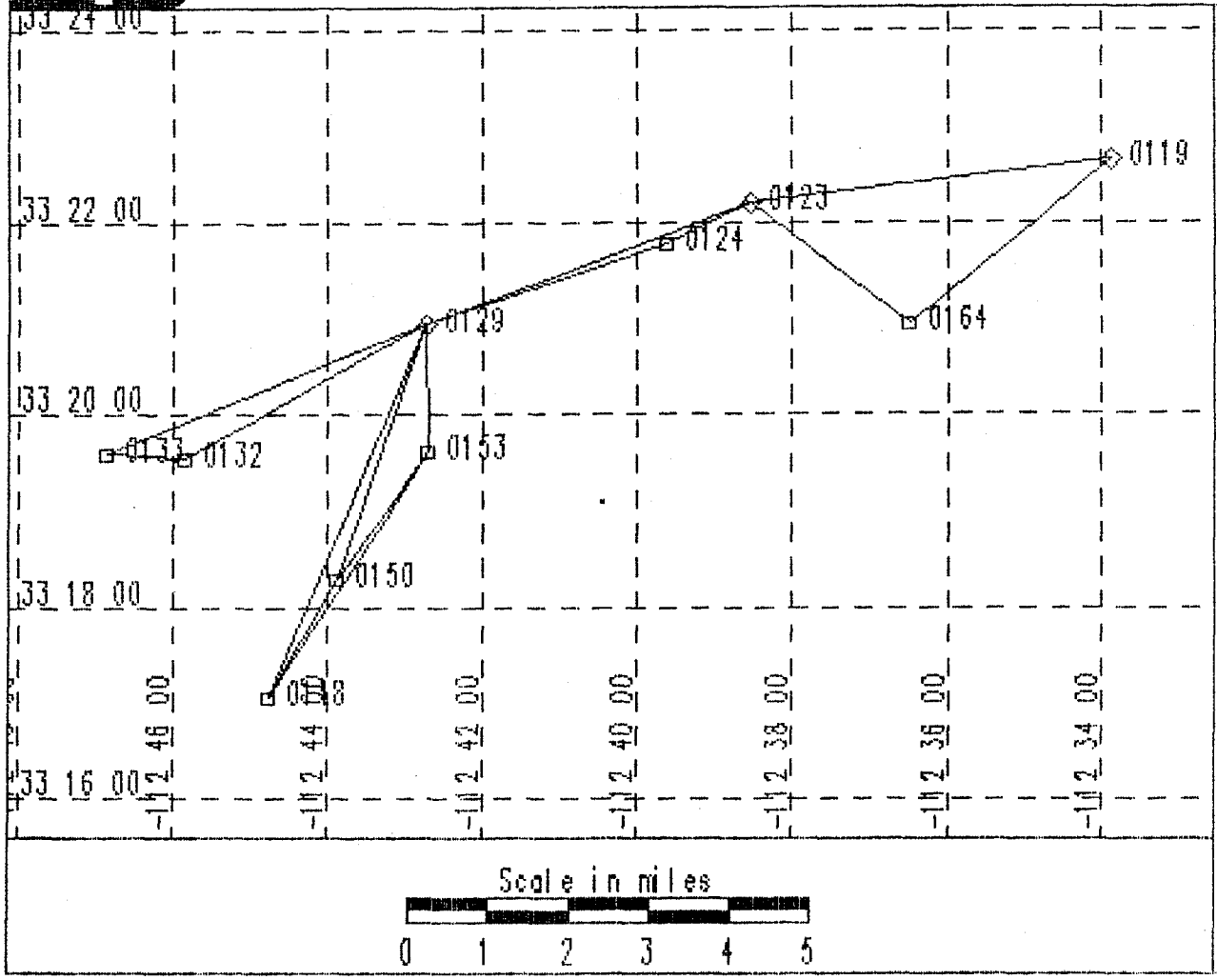
  Data Directory   : c:\gps\gila\343
  Output Directory: c:\gps\gila\343\VCTR1

  Pseudo Range Processing: Yes          [No, Yes]
  Antenna Correction .....: MicroST     [Use spacebar to toggle antenna types
                                         or press F9 to select from a list]
  Name Generation ........: Last        [First, Full, Last, NoNames]

  Baseline Processor .....: MBP-Single  [MBP-Single, MBP-Multi, 640-Single]
  Coordinate Seeding .....: Yes         [No, Yes]
  Display Computations ...: No          [No, Yes]
  Quality Summary ........: Yes         [No, Yes]


ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD?
3 Esc   - Quit              F1 - Help                 F10 - Begin Processing 3
3 Space - Toggle Options    F2 - Directory Info                              3
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDY
```

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 344



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\344\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
344-2	0129	0132	0.027	0.094	3.010	5453.814	1.948	1.725
344-3	0129	0123	0.031	0.084	4.700	6903.874	1.939	1.807
[illegible]-4	0123	0119	0.041	0.084	5.120	7279.410	1.635	1.705
[illegible]-4	0123	0164	0.035	0.088	6.490	3980.738	1.635	1.481
344-4	0119	0164	0.034	0.086	6.740	5167.023	1.705	1.481
344-3	0129	0124	0.031	0.081	7.670	5083.101	1.939	1.861
344-3	0123	0124	0.024	0.083	9.030	1833.937	1.807	1.861
344-2	0129	0133	0.027	0.057	9.580	6891.492	1.948	1.705
344-2	0132	0133	0.018	0.101	11.290	1613.893	1.725	1.705
344-1	0129	0148	0.022	0.053	11.900	7773.877	1.895	1.707
344-1	0129	0150	0.019	0.059	21.320	5136.671	1.895	1.700
344-1	0148	0150	0.017	0.052	28.190	2666.497	1.707	1.700
344-1	0148	0153	0.019	0.047	29.440	5673.786	1.707	1.525
344-1	0129	0153	0.016	0.051	31.290	2431.882	1.895	1.525
344-1	0150	0153	0.016	0.052	38.430	3017.740	1.700	1.525

```
                    Batch Processing Utility   Version 91.081
/////////////////////////////////////////////////////////////////////////////////////////////////////////////

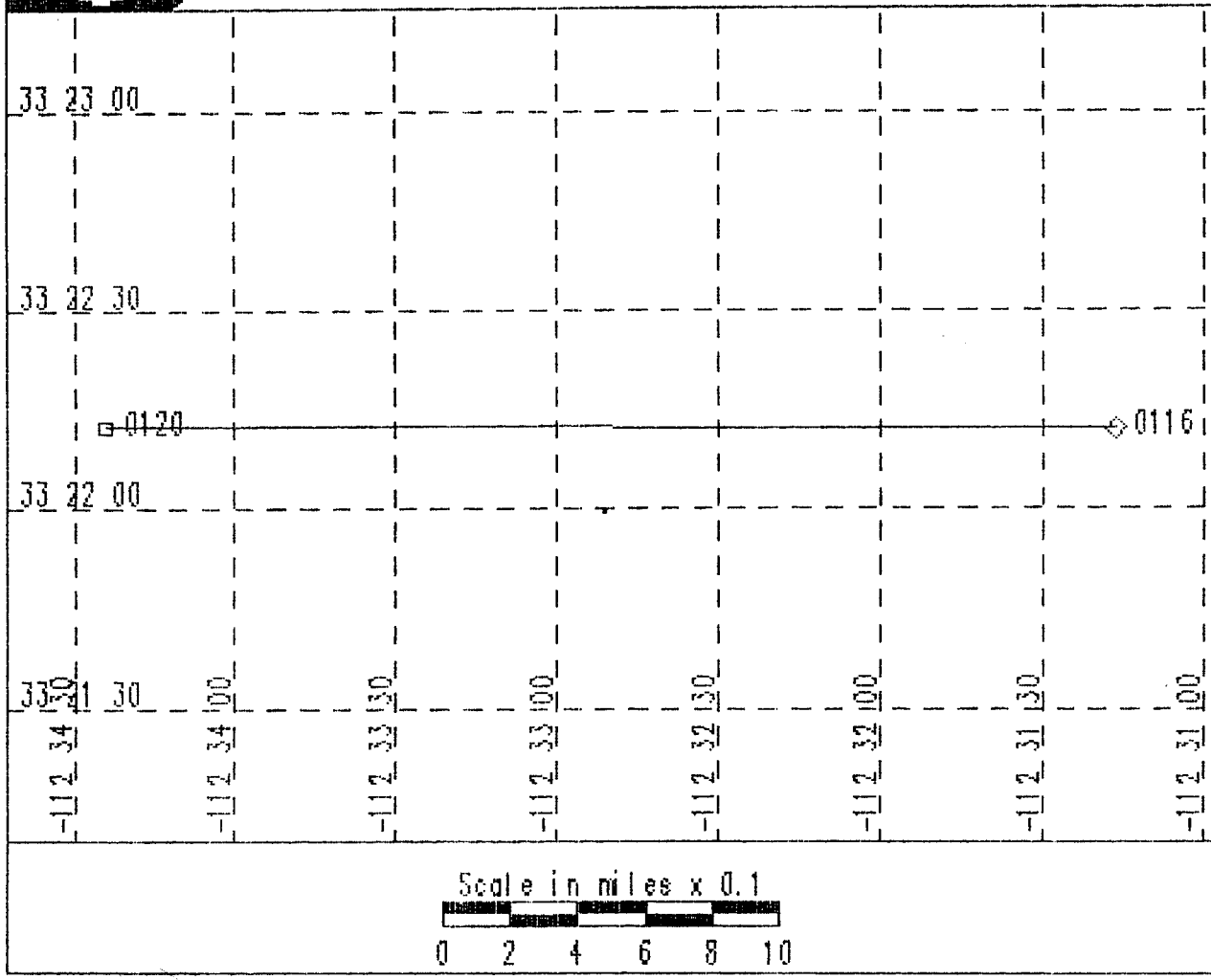
  Data Directory  : c:\gps\gila\344
  Output Directory: c:\gps\gila\344\VCTR1

  Pseudo Range Processing: Yes          [No, Yes]
  Antenna Correction .....: MicroST     [Use spacebar to toggle antenna types
                                         or press F9 to select from a list]
  Name Generation ........: Last        [First, Full, Last, NoNames]

  Baseline Processor .....: MBP-Single  [MBP-Single, MBP-Multi, 640-Single]
  Coordinate Seeding .....: Yes         [No, Yes]
  Display Computations ...: No          [No, Yes]
  Quality Summary ........: Yes         [No, Yes]


Z DDDD
```

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 345



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow Keys - Rect.

Esc to exit

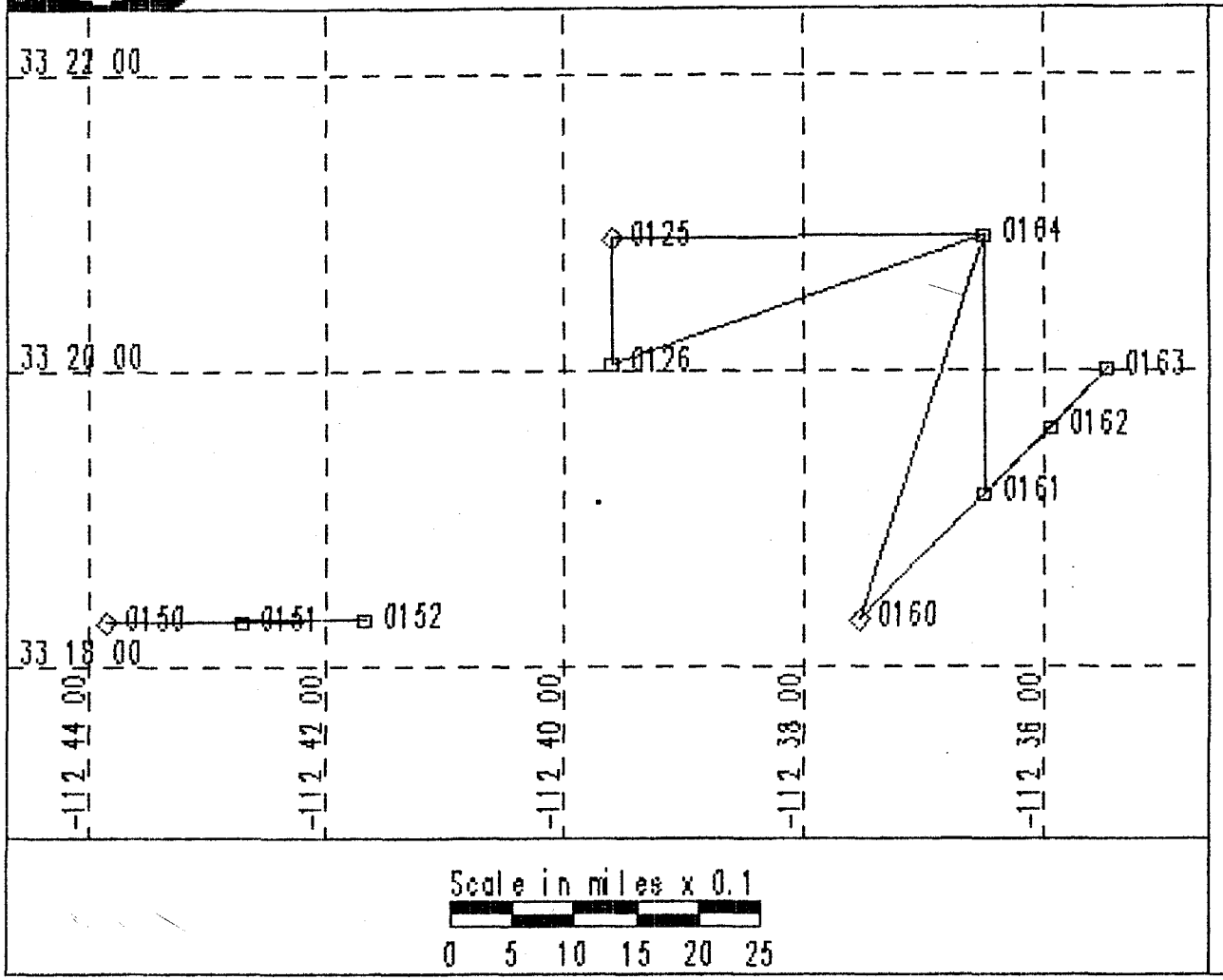
p - Print graph

Summary of directory: c:\gps\gila\345/VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
345-1	0116	0120	0.021	0.056	21.020	4858.568	1.751	1.675

```
                    Batch Processing Utility   Version 91.081
MMMM
```

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 350



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\350\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
350-1	0156	0160	0.129	0.455	n/a	3310.845	1.401	1.420
350-1	0156	0161	0.100	0.425	n/a	4881.479	1.401	1.483
350-1	0156	0164	0.102	0.425	n/a	6270.760	1.401	1.432
350-2	0164	0153	0.094	0.316	n/a	9901.580	1.378	1.592
350-2	0125	0153	0.067	0.405	n/a	5347.714	1.686	1.592
350-2	0126	0153	0.074	0.334	n/a	4853.943	1.803	1.592
350-3	0156	0150	0.072	0.307	n/a	6670.950	1.356	1.560
350-3	0156	0151	0.071	0.300	n/a	4892.922	1.356	1.524
350-3	0156	0152	0.085	0.368	n/a	3317.209	1.356	1.508
350-4	0161	0168	0.120	0.455	n/a	8209.839	1.363	2.305
350-4	0162	0168	0.117	0.431	n/a	7209.447	1.735	2.305
350-4	0163	0168	0.123	0.436	n/a	6451.710	1.640	2.305
350-1	0160	0164	0.022	0.054	16.170	5054.816	1.420	1.432
350-1	0161	0164	0.023	0.054	17.720	3213.392	1.483	1.432
350-1	0160	0161	0.021	0.060	21.090	2248.462	1.420	1.483
350-2	0164	0126	0.024	0.056	21.570	5076.069	1.378	1.803
350-2	0164	0125	0.021	0.058	24.680	4821.369	1.378	1.686
350-3	0150	0152	0.019	0.076	24.680	3399.426	1.560	1.508
350-3	0151	0152	0.019	0.079	24.750	1605.110	1.524	1.508
350-3	0150	0151	0.016	0.075	41.700	1794.324	1.560	1.524
350-4	0161	0163	0.014	0.087	49.810	2225.290	1.363	1.640
350-2	0125	0126	0.016	0.060	53.040	1578.739	1.686	1.803
350-4	0161	0162	0.013	0.083	61.970	1213.343	1.363	1.735
350-4	0162	0163	0.010	0.088	89.310	1012.214	1.735	1.640

DELETE

```
C:\GPS\GILA\350\VCTR1>dir *.opt

 Volume in drive C is GREINER
 Volume Serial Number is 0E0E-7284
 Directory of  C:\GPS\GILA\350\VCTR1

60613501 OPT      15135 12-16-91   3:18p
60643501 OPT      15135 12-16-91   3:24p
61643501 OPT      15135 12-16-91   3:31p
64253502 OPT      14474 12-16-91   3:36p
64263502 OPT      14638 12-16-91   3:41p
65263502 OPT      14474 12-16-91   3:53p
60513503 OPT      14310 12-16-91   4:33p
60523503 OPT      14310 12-16-91   4:39p
51523503 OPT      14310 12-16-91   4:45p
61623504 OPT      14152 12-16-91   4:51p
61633504 OPT      14152 12-16-91   4:57p
62633504 OPT      14152 12-16-91   5:09p
       12 File(s)   14964736 bytes free

C:\GPS\GILA\350\VCTR1>
```

```
                    Batch Processing Utility   Version 91.081
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```

TRIMBLE NAVIGATION MODEL 4000S SURVEY SUPPORT

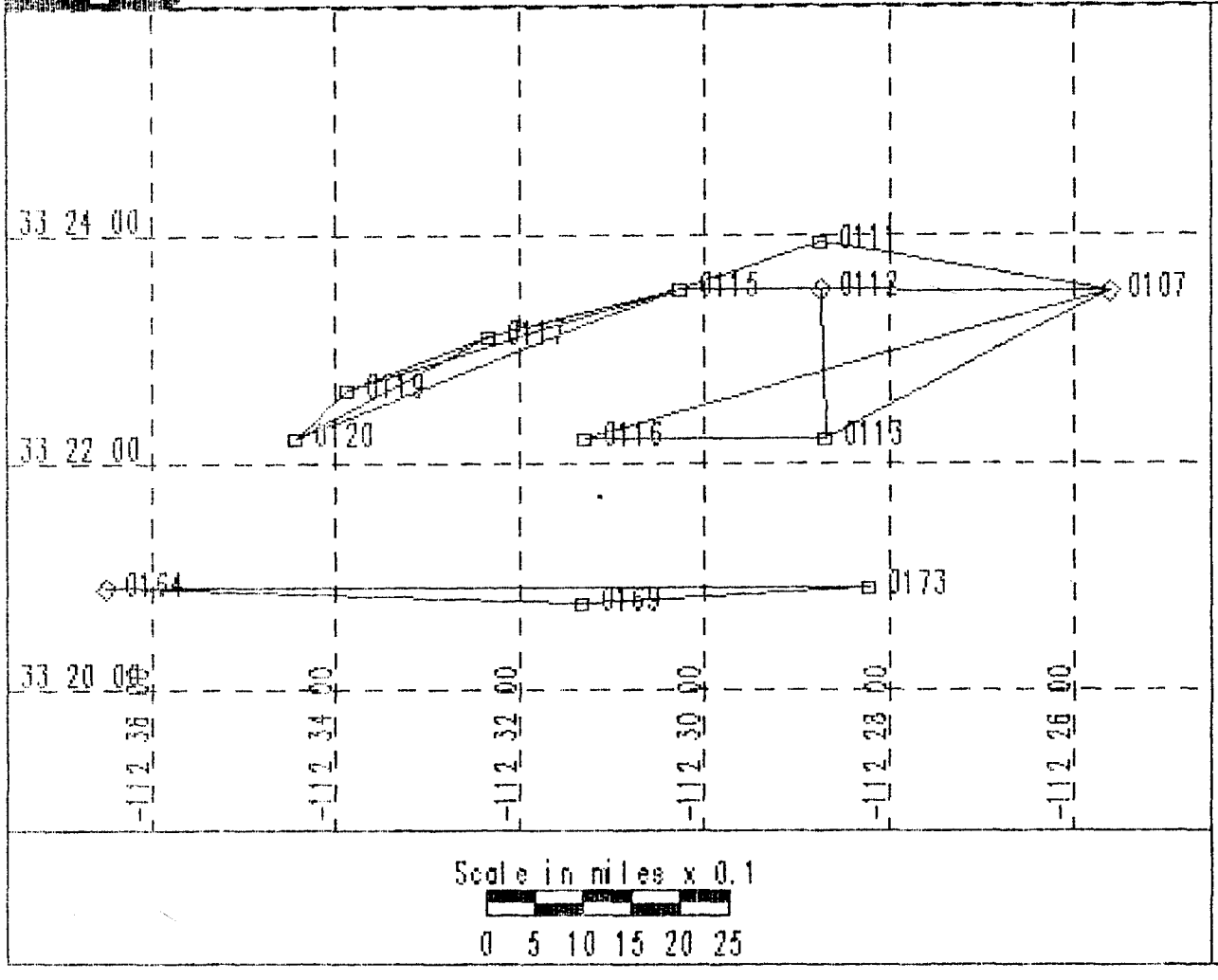
SURVEY DATA DIRECTORY - PAGE 1 of 1

Session	Size	Date	Time	Session	Size	Date	Time
>0156-350-1	284	Dec 16 91	11:56				
0153-350-2	275	Dec 16 91	13:18				
0156-350-3	277	Dec 16 91	14:45				
0168-350-4	292	Dec 16 91	16:12				

COMPACTED DATA

```
ZDDD
```

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 351



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\351\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
351-1	0107	0112	0.072	0.409	n/a	4838.387	1.582	1.810
351-1	0112	0116	0.189	0.306	n/a	4628.467	1.810	1.777
[illegible]-2	0107	0108	0.040	0.418	n/a	2300.947	1.536	1.809
[illegible]-2	0108	0111	0.101	0.306	n/a	3332.340	1.809	1.689
351-2	0108	0115	0.103	0.361	n/a	5815.556	1.809	1.999
351-4	0120	0164	0.068	0.651	n/a	4038.863	1.701	1.432
351-4	0120	0169	0.224	0.431	n/a	5535.539	1.701	1.742
351-4	0120	0173	0.122	0.488	n/a	9941.727	1.701	1.748
351-1	0112	0113	0.050	0.057	3.590	2414.892	1.810	1.829
351-4	0164	0173	0.031	0.087	5.930	12863.006	1.432	1.748
351-3	0115	0120	0.040	0.081	6.040	6871.713	1.839	1.672
351-3	0117	0120	0.038	0.081	8.150	3605.575	1.693	1.672
351-3	0119	0120	0.030	0.082	10.960	1132.946	1.731	1.672
351-4	0164	0169	0.022	0.088	11.470	8066.769	1.432	1.742
351-2	0107	0115	0.024	0.063	12.770	7204.150	1.536	1.999
351-1	0107	0116	0.026	0.049	13.160	9105.244	1.582	1.777
351-1	0107	0113	0.020	0.053	15.930	5326.999	1.582	1.829
351-2	0107	0111	0.023	0.057	20.490	4903.390	1.536	1.689
351-3	0115	0119	0.021	0.080	24.220	5841.426	1.839	1.731
351-1	0113	0116	0.018	0.052	24.820	4024.339	1.829	1.777
351-4	0169	0173	0.017	0.086	26.640	4806.895	1.742	1.748
351-2	0111	0115	0.018	0.059	37.330	2485.479	1.689	1.999
351-3	0117	0119	0.016	0.079	45.180	2540.763	1.693	1.731
351-3	0115	0117	0.014	0.073	54.830	3306.181	1.839	1.693

DELETE

```
C:\GPS\GILA\351\VCTR1>dir *.opt

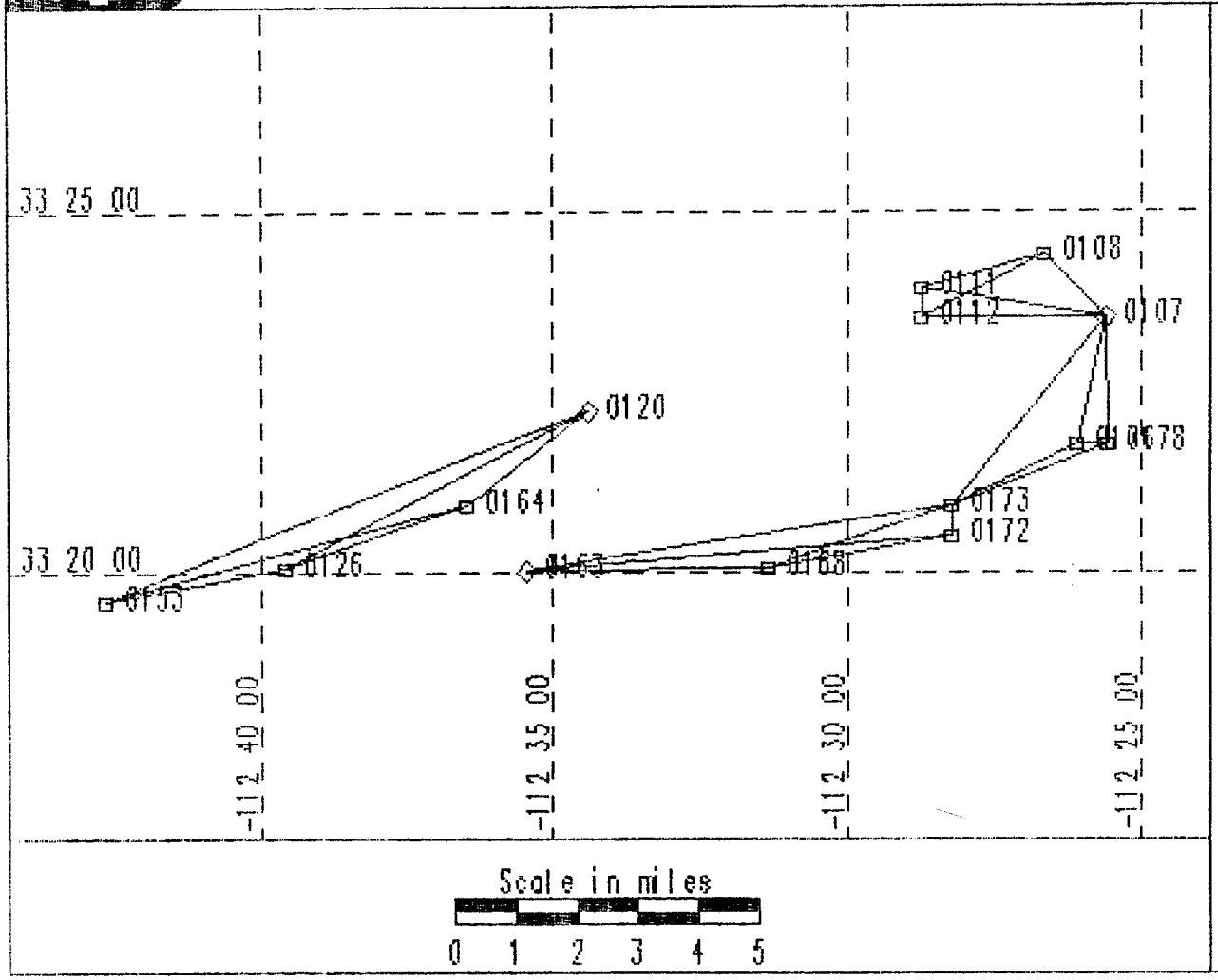
 Volume in drive C is GREINER
 Volume Serial Number is 0E0E-7284
 D  ectory of  C:\GPS\GILA\351\VCTR1

07133511 OPT      15135 12-17-91  12:18p
07163511 OPT      15135 12-17-91  12:24p
12133511 OPT      15135 12-17-91  12:34p
13163511 OPT      15135 12-17-91  12:46p
07113512 OPT      14638 12-17-91   1:02p
07153512 OPT      14638 12-17-91   1:07p
11153512 OPT      14638 12-17-91   1:27p
15173513 OPT      14310 12-17-91   1:33p
15193513 OPT      14474 12-17-91   1:38p
15203513 OPT      14310 12-17-91   1:46p
17193513 OPT      14474 12-17-91   1:51p
17203513 OPT      14310 12-17-91   1:58p
19203513 OPT      14474 12-17-91   2:06p
64693514 OPT      14152 12-17-91   2:37p
64733514 OPT      14152 12-17-91   2:44p
69733514 OPT      14152 12-17-91   2:50p
       16 File(s)   14964736 bytes free

C:\GPS\GILA\351\VCTR1>
```

```
                    Batch Processing Utility   Version 91.081
MMMM
```

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 352



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

ummary of directory: c:\gps\gila\352\vctr1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
352-3	0173	0163	0.044	0.354	n/a *	11398.149	1.667	1.659
352-4	0120	0153	0.047	0.098	3.710 *	13713.576	1.724	1.559
[illegible]-3	0163	0172	0.052	0.073	3.990	11313.528	1.659	1.835
[illegible]-4	0153	0164	0.041	0.100	5.230	9901.608	1.559	1.443
352-4	0120	0126	0.036	0.105	5.340	8996.584	1.724	1.810
352-3	0173	0168	0.035	0.068	8.820	5084.363	1.667	2.297
352-2	0107	0173	0.045	0.049	9.420	6260.349	1.530	1.821
352-2	0173	0178	0.038	0.062	9.670	4401.486	1.821	1.148
352-1	0108	0111	0.026	0.051	9.920	3332.299	1.908	1.693
352-1	0107	0111	0.031	0.053	10.280	4903.389	1.606	1.693
352-4	0126	0153	0.021	0.105	11.770	4853.916	1.810	1.559
352-4	0126	0164	0.024	0.104	12.010	5076.079	1.810	1.443
352-3	0168	0172	0.031	0.069	12.190	4895.324	2.297	1.835
352-1	0107	0112	0.024	0.052	12.330	4838.395	1.606	1.852
352-3	0163	0168	0.029	0.073	13.420	6451.651	1.659	2.297
352-2	0173	0176	0.030	0.061	16.670	3660.787	1.821	0.895
352-4	0120	0164	0.020	0.103	17.310	4038.869	1.724	1.443
352-1	0108	0112	0.023	0.048	18.070	3603.887	1.908	1.852
352-2	0107	0176	0.025	0.061	21.440	3297.513	1.530	0.895
352-1	0107	0108	0.019	0.052	22.820	2300.982	1.606	1.908
352-2	0107	0178	0.025	0.062	22.990	3224.014	1.530	1.148
352-2	0176	0178	0.018	0.064	32.200	807.630	0.895	1.148
352-1	0111	0112	0.015	0.050	39.470	767.601	1.693	1.852
352-3	0173	0172	0.016	0.068	45.140	803.380	1.667	1.835

* DELETED DEPENDENT VECTOR

Johnson
12-19-97

```
07083521 OPT      15135 12-19-91    1:34p
07113521 OPT      15135 12-19-91    1:40p
07123521 OPT      15135 12-19-91    1:46p
08113521 OPT      15135 12-19-91    1:53p
0[illegible]23521 OPT      15135 12-19-91    1:59p
1[illegible]23521 OPT      15135 12-19-91    2:05p
07733522 OPT      14638 12-19-91    2:12p
07763522 OPT      14638 12-19-91    2:18p
07783522 OPT      14638 12-19-91    2:24p
73763522 OPT      14638 12-19-91    2:30p
73783522 OPT      14638 12-19-91    2:36p
76783522 OPT      14638 12-19-91    2:42p
73683523 OPT      14638 12-19-91    2:54p
73723523 OPT      14638 12-19-91    3:00p
63683523 OPT      14638 12-19-91    3:06p
63723523 OPT      14638 12-19-91    3:12p
68723523 OPT      14638 12-19-91    3:17p
20263524 OPT      14152 12-19-91    3:24p
20643524 OPT      14152 12-19-91    3:36p
26533524 OPT      13988 12-19-91    3:41p
26643524 OPT      14152 12-19-91    3:48p
53643524 OPT      13988 12-19-91    3:53p
        22 File(s)    15560704 bytes free

C:\GPS\GILA\352\VCTR1>
```

```
                    Batch Processing Utility   Version 91.081
/////////////////////////////////////////////////////////////////////////////////////////////////////////

  Data Directory  : c:\gps\gila\352
  Output Directory: c:\gps\gila\352\vctr1

  Pseudo Range Processing: Yes          [No, Yes]
  Antenna Correction .....: MicroST     [Use spacebar to toggle antenna types
                                         or press F9 to select from a list]
  Name Generation ........: Last        [First, Full, Last, NoNames]

  Baseline Processor .....: MBP-Single  [MBP-Single, MBP-Multi, 640-Single]
  Coordinate Seeding .....: Yes         [No, Yes]
  Display Computations ...: No          [No, Yes]
  Quality Summary ........: Yes         [No, Yes]

ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD?
3 Esc   - Quit              F1 - Help                 F10 - Begin Processing 3
3 Space - Toggle Options    F2 - Directory Info                              3
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDY
```

Johnson
12-19-91

Batch Processing Utility Version 91.081

```
Data Directory   : c:\gps\gila\352
Output Directory: c:\gps\gila\352\VCTR1

Pseudo Range Processing: Yes          [No, Yes]
Antenna Correction .....: MicroST     [Use spacebar to toggle antenna types
                                       or press F9 to select from a list]
Name Generation ........: Last        [First, Full, Last, NoNames]

Baseline Processor .....: MBP-Single  [MBP-Single, MBP-Multi, 640-Single]
Coordinate Seeding .....: Yes         [No, Yes]
Display Computations ...: No          [No, Yes]
Quality Summary ........: Yes         [No, Yes]
```

Jamison
12-18-91

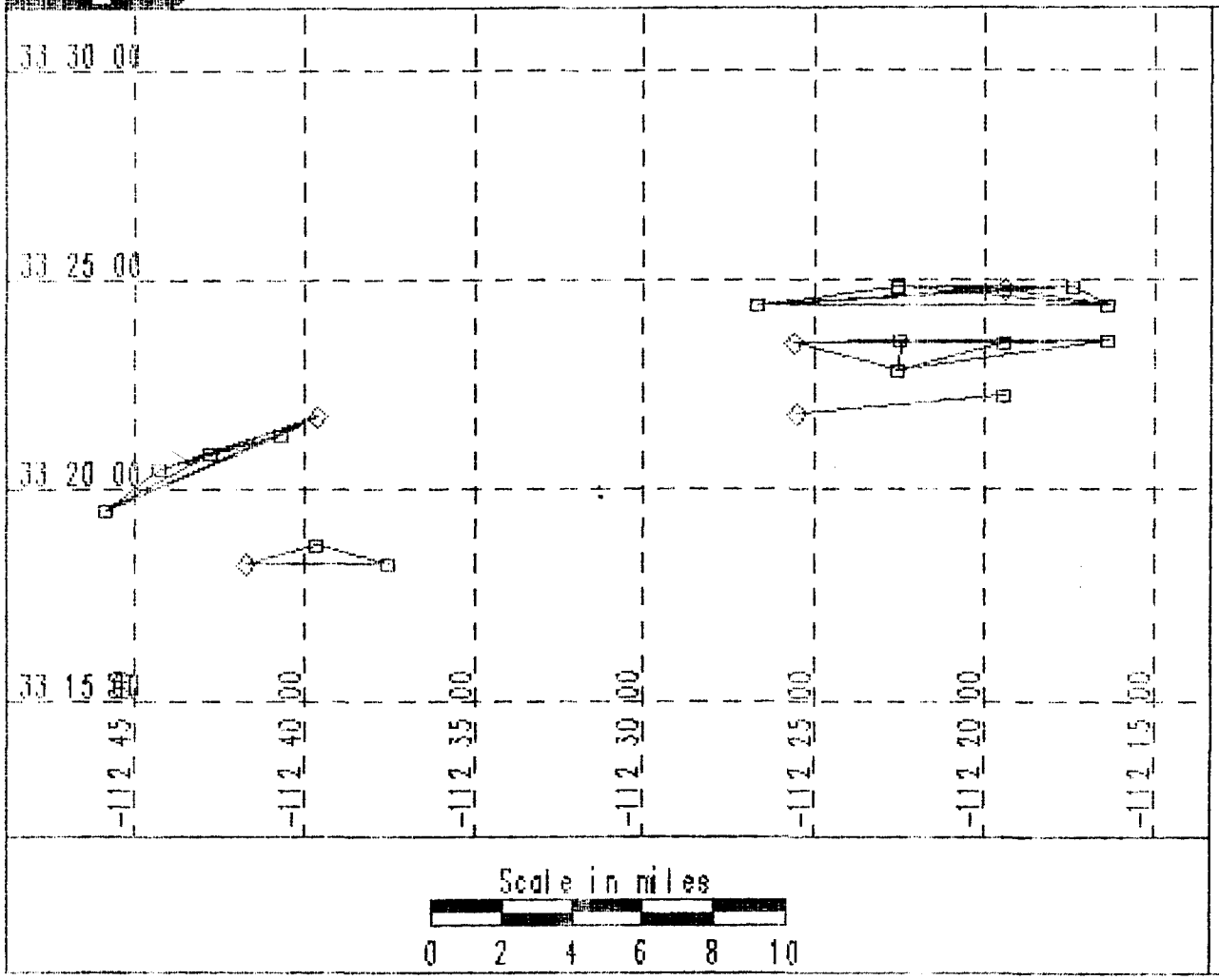
```
ZDDD
```

Summary of directory: c:\gps\gila\352\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
352-3	0173	0163	0.044	0.354	n/a	11398.149	1.667	1.659
352-4	0120	152	0.047	0.098	3.710	13713.576	1.724	1.559
[illegible]-3	0163	352	0.052	0.073	3.990	11313.528	1.659	1.835
[illegible]-4	152	0164	0.041	0.100	5.230	9901.608	1.559	1.443
352-4	0120	0126	0.036	0.105	5.340	8996.584	1.724	1.810
352-3	0173	0168	0.035	0.068	8.820	5084.363	1.667	2.297
352-2	0107	0173	0.045	0.049	9.420	6260.349	1.530	1.821
352-2	0173	352	0.038	0.062	9.670	4401.486	1.821	1.148
352-1	0108	0111	0.026	0.051	9.920	3332.299	1.908	1.693
352-1	0107	0111	0.031	0.053	10.280	4903.389	1.606	1.693
352-4	0126	152	0.021	0.105	11.770	4853.916	1.810	1.559
352-4	0126	0164	0.024	0.104	12.010	5076.079	1.810	1.443
352-3	0168	352	0.031	0.069	12.190	4895.324	2.297	1.835
352-1	0107	352	0.024	0.052	12.330	4838.395	1.606	1.852
352-3	0163	0168	0.029	0.073	13.420	6451.651	1.659	2.297
352-2	0173	0176	0.030	0.061	16.670	3660.787	1.821	0.895
352-4	0120	0164	0.020	0.103	17.310	4038.869	1.724	1.443
352-1	0108	352	0.023	0.048	18.070	3603.887	1.908	1.852
352-2	0107	0176	0.025	0.061	21.440	3297.513	1.530	0.895
352-1	0107	0108	0.019	0.052	22.820	2300.982	1.606	1.908
352-2	0107	352	0.025	0.062	22.990	3224.014	1.530	1.148
352-2	0176	352	0.018	0.064	32.200	807.630	0.895	1.148
352-1	0111	352	0.015	0.050	39.470	767.601	1.693	1.852
352-3	0173	352	0.016	0.068	45.140	803.380	1.667	1.835

VOID
POINT NUMBERS
ENTERED WRONG
EDITED AND REPROCESSED
Johnson
12-19-91

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 357



F1 - Help

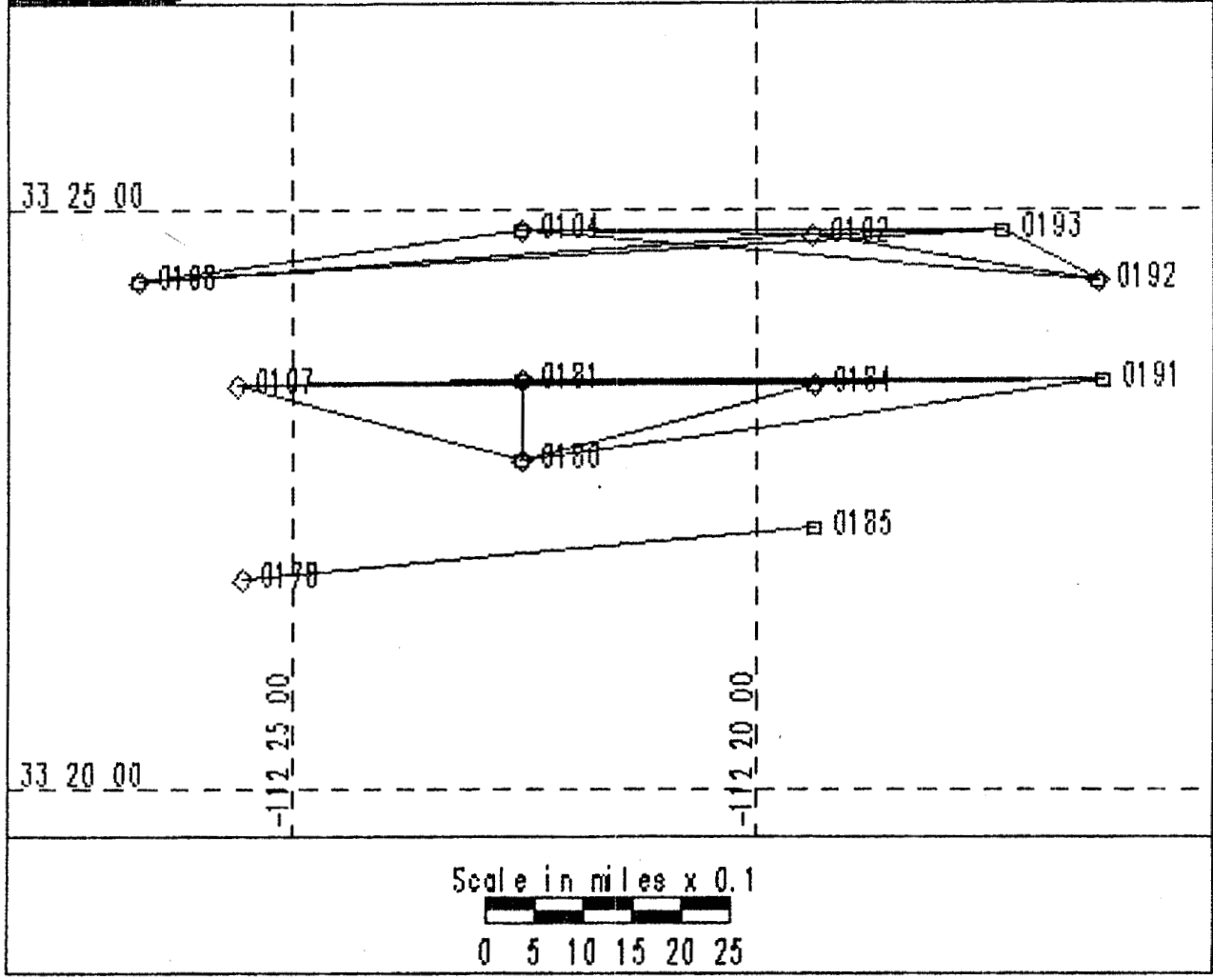
Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 357



F1 - Help

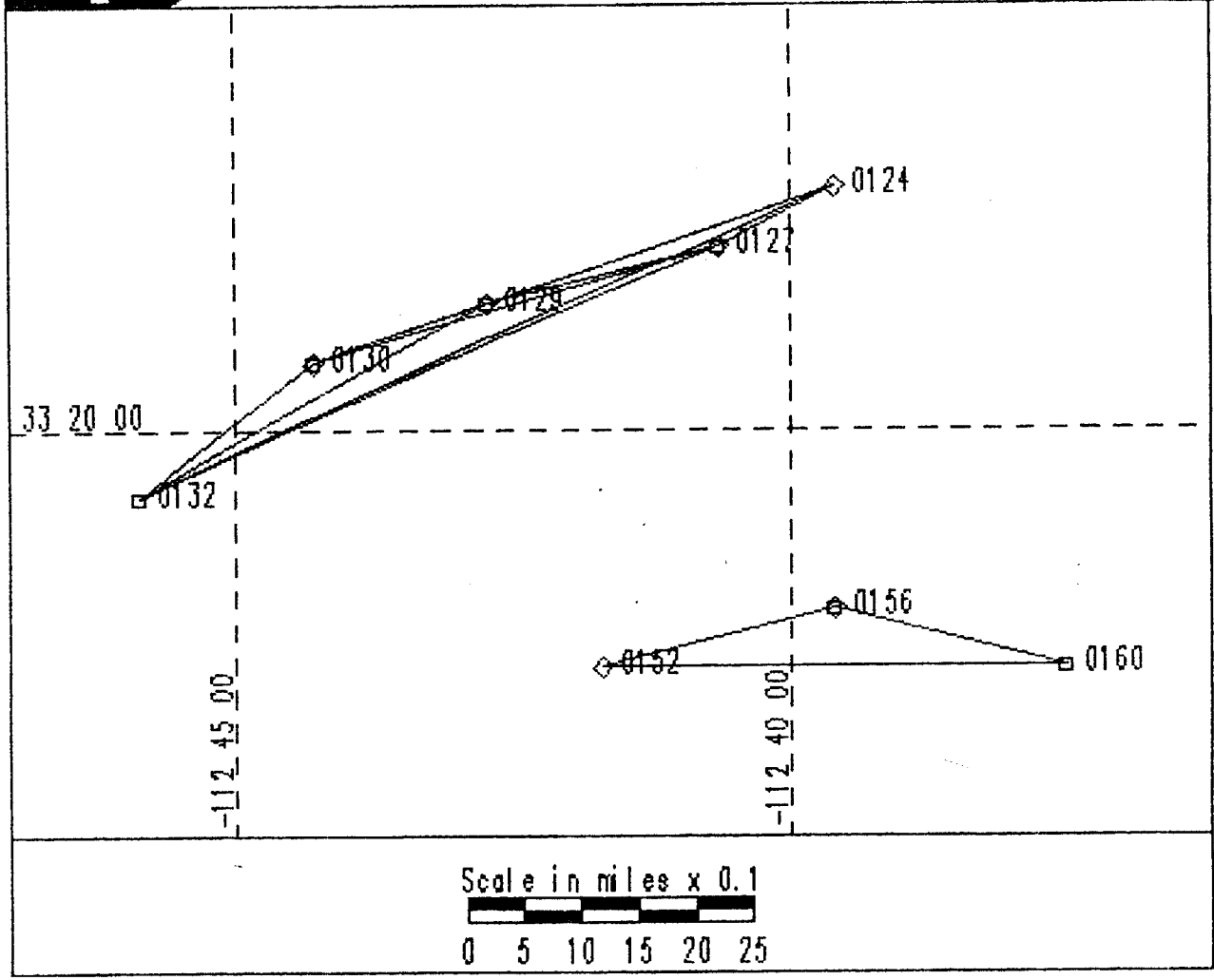
Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 357



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\357\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
357-1	0108	0192	0.028	0.451	n/a *	15988.065	1.849	1.858
357-4	0178	0185	0.034	0.065	3.030	9571.821	1.127	1.527
[illegible]-1	0102	0108	0.039	0.055	4.250	11247.327	1.794	1.849
[illegible]-1	0104	0192	0.031	0.054	4.470	9596.734	1.918	1.858
357-1	0108	0193	0.046	0.053	4.780	14411.360	1.849	1.655
357-3	0129	0132	0.028	0.070	4.860	5453.804	1.912	1.758
357-3	0127	0132	0.029	0.071	8.990	8730.523	1.876	1.758
357-1	0104	0193	0.028	0.058	10.700	7964.414	1.918	1.655
357-3	0124	0132	0.024	0.071	10.730	10501.427	1.874	1.758
357-1	0102	0192	0.023	0.056	11.590	4825.996	1.794	1.858
357-1	0104	0108	0.024	0.054	12.000	6473.930	1.918	1.849
357-4	0152	0160	0.027	0.116	14.540	6436.366	1.578	1.448
357-1	0102	0104	0.022	0.053	15.840	4797.415	1.794	1.918
357-1	0192	0193	0.024	0.058	16.930	1789.120	1.858	1.655
357-3	0130	0132	0.020	0.071	17.360	2987.748	1.668	1.758
357-2	0180	0191	0.022	0.061	22.640	9682.306	1.793	1.878
357-2	0107	0191	0.022	0.053	24.360	14390.658	1.617	1.878
357-3	0127	0129	0.019	0.067	26.460	3337.015	1.876	1.912
357-1	0102	0193	0.016	0.060	27.760	3167.499	1.794	1.655
357-3	0127	0130	0.019	0.067	28.350	5866.202	1.876	1.668
357-3	0124	0130	0.018	0.048	28.610	7616.041	1.874	1.668
357-4	0152	0156	0.018	0.112	29.030	3317.183	1.578	1.377
357-2	0181	0191	0.023	0.049	29.580	9594.073	1.618	1.878
357-3	0129	0130	0.017	0.067	30.020	2533.089	1.912	1.668
357-2	0107	0180	0.020	0.058	30.310	4939.407	1.617	1.793
357-4	0156	0160	0.018	0.107	30.390	3310.085	1.377	1.448
357-3	0124	0129	0.017	0.069	30.680	5083.099	1.874	1.912
[illegible]-2	0180	0184	0.018	0.059	38.280	4988.277	1.793	1.745
[illegible]-3	0124	0127	0.015	0.068	41.490	1774.825	1.874	1.876
357-2	0107	0184	0.019	0.049	50.890	9632.368	1.617	1.745
357-2	0180	0181	0.016	0.058	59.130	1287.029	1.793	1.618
357-2	0107	0181	0.018	0.048	60.770	4797.251	1.617	1.618
357-2	0184	0191	0.017	0.050	67.340	4758.561	1.745	1.878
357-2	0181	0184	0.015	0.048	89.010	4836.636	1.618	1.745

*SUMMARY encountered problems with the files listed below.
A detailed examination of these solution files is necessary.

c:\gps\gila\357\vctr1\52783574.opt
c:\gps\gila\357\vctr1\52853574.opt
c:\gps\gila\357\vctr1\56783574.opt
c:\gps\gila\357\vctr1\56853574.opt
c:\gps\gila\357\vctr1\60783574.opt
c:\gps\gila\357\vctr1\60853574.opt

* DELETED DEPENDENT VECTOR

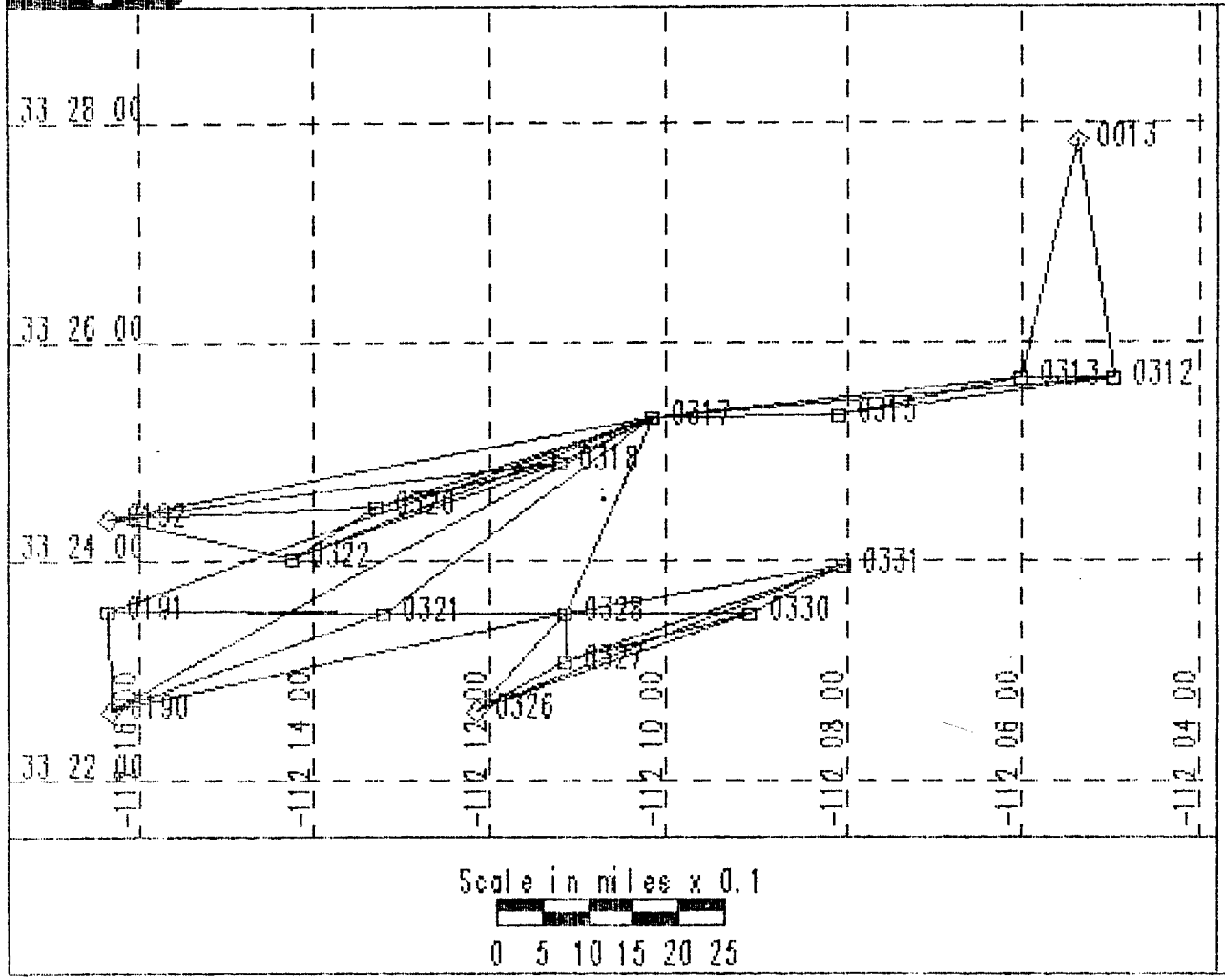
```
02043571 OPT      15135 12-23-91    7:33p
02083571 OPT      15135 12-23-91    7:39p
02923571 OPT      15135 12-23-91    7:44p
   33571 OPT      15135 12-23-91    7:49p
   083571 OPT      15135 12-23-91    7:55p
04923571 OPT      15135 12-23-91    8:01p
04933571 OPT      15135 12-23-91    8:07p
08923571 OPT      14030 12-23-91    8:14p
08933571 OPT      15135 12-23-91    8:20p
92933571 OPT      15135 12-23-91    8:26p
07803572 OPT      15135 12-23-91    8:34p
07813572 OPT      15135 12-23-91    8:41p
07843572 OPT      15135 12-23-91    8:48p
07913572 OPT      15135 12-23-91    8:55p
30813572 OPT      14638 12-23-91    9:01p
30843572 OPT      14638 12-23-91    9:07p
30913572 OPT      14638 12-23-91    9:12p
31843572 OPT      14638 12-23-91    9:19p
31913572 OPT      14638 12-23-91    9:25p
34913572 OPT      14638 12-23-91    9:32p
24273573 OPT      15135 12-23-91    9:37p
24293573 OPT      15135 12-23-91    9:43p
24303573 OPT      15135 12-23-91    9:48p
Press any key to continue . . .

Press any key to continue . . .
24323573 OPT      15135 12-23-91    9:53p
27293573 OPT      15135 12-23-91    9:59p
27303573 OPT      14638 12-23-91   10:05p
   23573 OPT      15135 12-23-91   10:11p
29303573 OPT      15135 12-23-91   10:17p
29323573 OPT      15135 12-23-91   10:22p
30323573 OPT      15135 12-23-91   10:28p
52563574 OPT      14152 12-23-91   10:33p
52603574 OPT      14152 12-23-91   10:40p
52783574 OPT      13367 12-23-91   10:46p
52853574 OPT      13864 12-23-91   10:51p
56603574 OPT      14152 12-23-91   10:57p
56783574 OPT      12881 12-23-91   11:03p
56853574 OPT      13367 12-23-91   11:08p
60783574 OPT      13367 12-23-91   11:13p
60853574 OPT      13864 12-23-91   11:19p
78853574 OPT      15135 12-23-91   11:25p
        40 File(s)    14964736 bytes free

C:\GPS\GILA\357\VCTR1>
C:\GPS\GILA\357\VCTR1>
C:\GPS\GILA\357\VCTR1>
C:\GPS\GILA\357\VCTR1>
C:\GPS\GILA\357\VCTR1>
```

```
                    Batch Processing Utility   Version 91.081
MMMM
```

GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 358



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

ummary of directory: c:\gps\gila\358\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
358-1	0192	0317	0.029	0.455	n/a *	9734.246	1.604	1.945
358-1	0192	0318	0.040	0.060	3.440	8038.287	1.604	1.853
[illegible]-1	0192	0320	0.033	0.062	5.210	4738.378	1.604	1.779
[illegible]1	0317	0320	0.027	0.057	7.710	5078.907	1.945	1.779
358-4	0313	0315	0.018	0.094	8.120	3284.890	1.730	1.766
358-1	0192	0322	0.026	0.059	8.240	3359.141	1.604	1.646
358-1	0318	0320	0.027	0.059	8.360	3332.880	1.853	1.779
358-4	0312	0315	0.022	0.070	9.200	4884.269	1.758	1.766
358-2	0317	0191	0.033	0.049	10.250	10121.655	1.914	1.635
358-4	0013	0313	0.023	0.088	10.330	4093.608	1.506	1.730
358-2	0317	0190	0.028	0.051	10.850	10765.109	1.914	1.630
358-1	0318	0322	0.027	0.055	11.010	4987.153	1.853	1.646
358-1	0320	0322	0.023	0.057	12.680	1718.835	1.779	1.646
358-4	0317	0313	0.020	0.081	12.680	6493.866	1.988	1.730
358-1	0317	0322	0.023	0.054	12.980	6754.042	1.945	1.646
358-2	0191	0328	0.026	0.053	14.390	8061.307	1.635	1.747
358-2	0191	0321	0.023	0.054	14.930	4854.909	1.635	1.777
358-4	0317	0315	0.018	0.066	16.030	3236.393	1.988	1.766
358-2	0190	0328	0.025	0.054	16.150	8205.688	1.630	1.747
358-4	0317	0312	0.024	0.061	16.400	8106.354	1.988	1.758
358-2	0317	0321	0.023	0.052	19.180	5789.988	1.914	1.777
358-4	0013	0312	0.024	0.067	20.220	4015.362	1.506	1.758
358-2	0190	0321	0.022	0.052	20.680	5098.767	1.630	1.777
358-4	0312	0313	0.020	0.073	21.130	1618.660	1.758	1.730
358-2	0317	0328	0.021	0.055	21.330	3688.157	1.914	1.747
358-2	0321	0328	0.022	0.052	22.160	3206.523	1.777	1.747
358-2	0190	0191	0.021	0.050	28.210	1652.069	1.630	1.635
[illegible]-1	0317	0318	0.017	0.054	29.180	1774.350	1.945	1.853
[illegible]-3	0328	0331	0.019	0.077	31.890	4894.211	1.575	1.805
358-3	0326	0331	0.014	0.077	43.410	6853.153	1.774	1.805
358-3	0328	0330	0.018	0.073	44.270	3217.564	1.575	1.870
358-3	0327	0331	0.015	0.076	52.640	5098.269	1.777	1.805
358-3	0328	0327	0.019	0.063	56.110	796.708	1.575	1.777
358-3	0326	0330	0.015	0.072	56.690	5066.539	1.774	1.870
358-3	0330	0331	0.013	0.077	57.830	1800.104	1.870	1.805
358-3	0328	0326	0.019	0.065	65.650	2255.284	1.575	1.774
358-3	0327	0330	0.015	0.072	69.740	3326.911	1.777	1.870
358-3	0326	0327	0.012	0.064	134.770	1769.908	1.774	1.777

* DELETED DEPENDENT VECTOR

```
92183581 OPT      14638 12-24-91    6:04p
92203581 OPT      14638 12-24-91    6:09p
92223581 OPT      14638 12-24-91    6:15p
 183581 OPT       15135 12-24-91    6:21p
  203581 OPT      15135 12-24-91    6:28p
17223581 OPT      15135 12-24-91    6:33p
18203581 OPT      14638 12-24-91    6:39p
18223581 OPT      14638 12-24-91    6:45p
20223581 OPT      14638 12-24-91    6:50p
17903582 OPT      14971 12-24-91    6:56p
17913582 OPT      14971 12-24-91    7:02p
17213582 OPT      14971 12-24-91    7:08p
17283582 OPT      14971 12-24-91    7:14p
90913582 OPT      15135 12-24-91    7:20p
90213582 OPT      15135 12-24-91    7:26p
90283582 OPT      15135 12-24-91    7:31p
91213582 OPT      15135 12-24-91    7:38p
91283582 OPT      15135 12-24-91    7:44p
21283582 OPT      15135 12-24-91    7:50p
28263583 OPT      15135 12-24-91    7:57p
28273583 OPT      15135 12-24-91    8:03p
28303583 OPT      15135 12-24-91    8:10p
28313583 OPT      15135 12-24-91    8:17p
Press any key to continue . . .

Press any key to continue . . .
26273583 OPT      15135 12-24-91    8:24p
26303583 OPT      15135 12-24-91    8:30p
26313583 OPT      15135 12-24-91    8:37p
2  03583 OPT      15135 12-24-91    8:43p
27313583 OPT      15135 12-24-91    8:49p
30313583 OPT      15135 12-24-91    8:55p
17133584 OPT      15135 12-24-91    9:15p
17123584 OPT      15135 12-24-91    9:08p
17153584 OPT      15135 12-24-91    9:21p
13123584 OPT      15135 12-24-91    9:27p
13133584 OPT      15135 12-24-91    9:33p
13153584 OPT      15135 12-24-91    9:59p
12133584 OPT      15135 12-24-91    9:46p
12153584 OPT      15135 12-24-91    9:53p
        37 File(s)    15759360 bytes free

C:\GPS\GILA\358\VCTR1>
C:\GPS\GILA\358\VCTR1>
C:\GPS\GILA\358\VCTR1>
C:\GPS\GILA\358\VCTR1>
C:\GPS\GILA\358\VCTR1>
C:\GPS\GILA\358\VCTR1>
C:\GPS\GILA\358\VCTR1>
C:\GPS\GILA\358\VCTR1>
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                    Batch Processing Utility   Version 91.081
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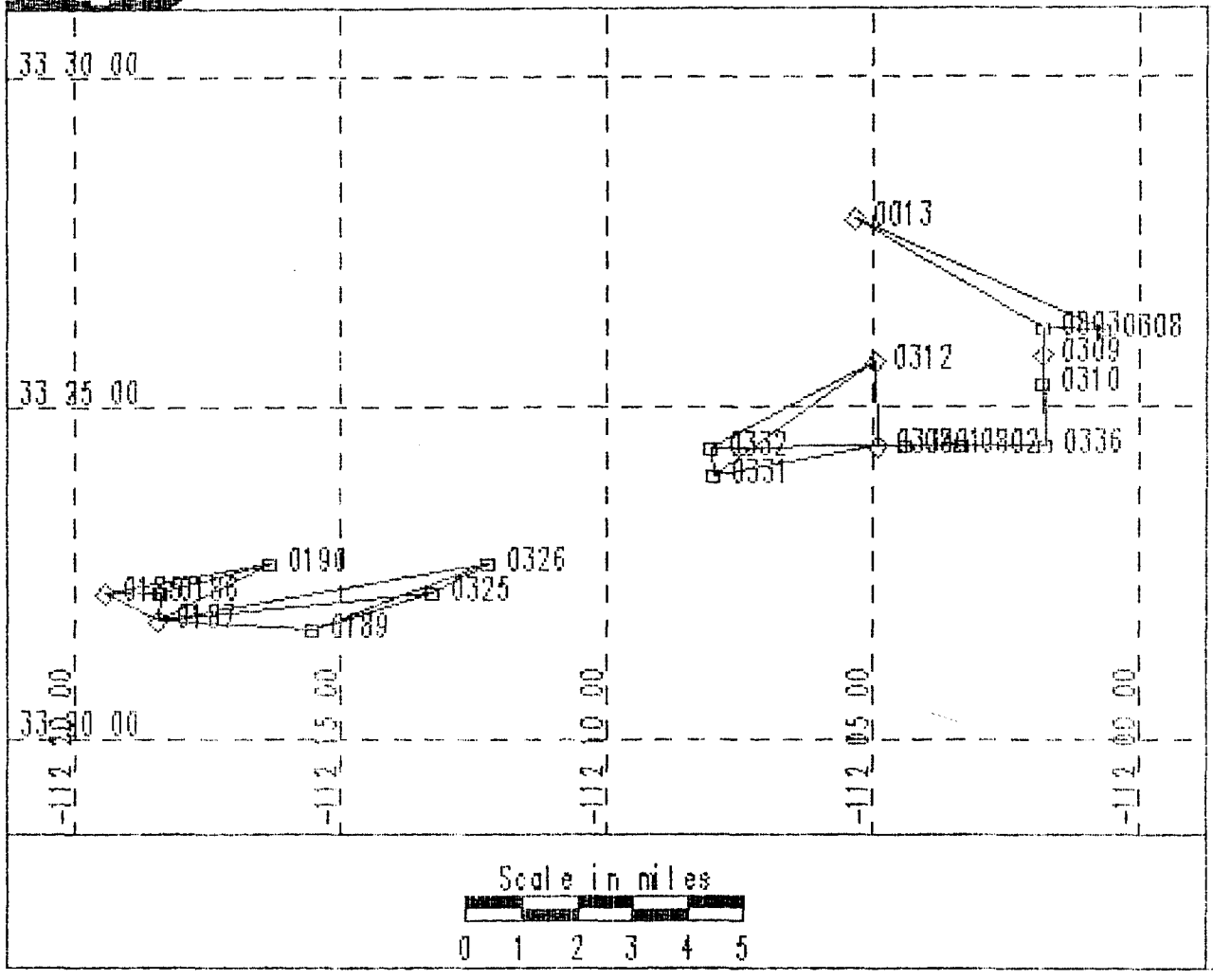
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 360



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow Keys - Rect.

Esc to exit

p - Print graph

ummary of directory: c:\gps\gila\360\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
360-1	0013	0306	0.018	0.778	n/a	7862.409	1.590	1.754
360-1	0013	0803	0.018	0.722	n/a	6243.187	1.590	1.859
[illegible]3	0336	0801	0.017	0.071	10.450	4051.932	1.806	1.916
[illegible]1	0308	0803	0.015	0.112	11.350	1771.011	1.754	1.859
360-5	0187	0325	0.020	0.085	11.760	8061.823	1.612	1.609
360-4	0334	0332	0.032	0.071	13.320	4835.495	1.812	1.711
360-5	0187	0326	0.020	0.078	15.480	9796.293	1.612	1.782
360-2	0803	0336	0.018	0.046	15.870	3311.709	1.863	1.777
360-4	0312	0332	0.037	0.045	17.220	5363.230	1.606	1.711
360-2	0803	0310	0.017	0.047	19.940	1609.408	1.863	1.785
360-4	0334	0312	0.021	0.075	21.980	2373.263	1.812	1.606
360-3	0336	0334	0.021	0.058	22.270	4855.564	1.806	1.828
360-5	0187	0189	0.015	0.074	22.910	4448.032	1.612	1.546
360-2	0310	0336	0.016	0.046	23.840	1703.063	1.785	1.777
360-4	0334	0331	0.022	0.071	28.570	4872.411	1.812	1.777
360-4	0312	0331	0.030	0.044	29.580	5728.839	1.606	1.777
360-6	0187	0190	0.020	0.162	29.690	3577.320	1.418	1.577
360-5	0189	0326	0.019	0.058	30.180	5529.311	1.546	1.782
360-2	0309	0310	0.014	0.046	31.780	804.631	1.783	1.785
360-2	0803	0309	0.014	0.044	32.380	804.777	1.863	1.783
360-3	0801	0802	0.017	0.057	36.300	1630.960	1.916	1.877
360-3	0336	0802	0.017	0.057	38.450	2420.994	1.806	1.877
360-3	0334	0801	0.018	0.061	39.440	803.637	1.828	1.916
360-2	0309	0336	0.012	0.045	39.730	2507.191	1.783	1.777
360-5	0325	0326	0.017	0.058	39.840	1828.390	1.609	1.782
360-6	0185	0190	0.019	0.129	40.360	4845.787	1.552	1.577
360-3	0334	0802	0.020	0.056	40.970	2434.596	1.828	1.877
[illegible]-5	0189	0325	0.018	0.054	42.900	3720.533	1.546	1.609
[illegible]-6	0187	0186	0.016	0.163	46.300	773.873	1.418	1.357
360-6	0186	0190	0.018	0.132	51.670	3287.213	1.357	1.577
360-6	0185	0186	0.013	0.132	89.680	1594.593	1.552	1.357
360-4	0331	0332	0.017	0.046	95.630	779.070	1.777	1.711
360-6	0187	0185	0.011	0.162	109.070	1759.860	1.418	1.552

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                    Batch Processing Utility   Version 91.081
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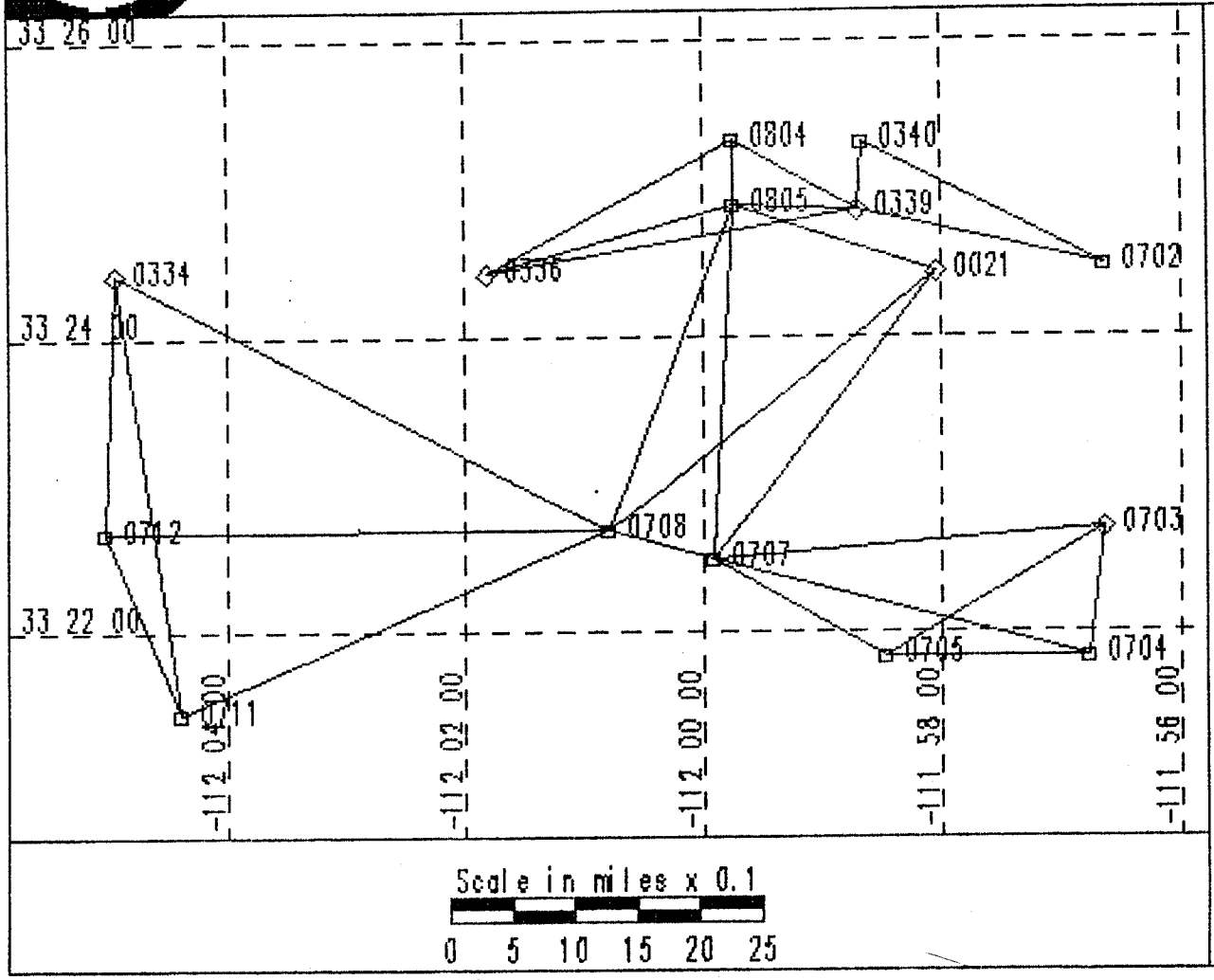
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 361



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\361\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
361-1	0339	0702	0.015	0.098	6.710	3258.124	1.775	1.647
361-5	0805	0708	0.025	0.063	8.790	4367.644	1.751	1.980
-1	0340	0702	0.015	0.091	9.100	3488.170	1.665	1.647
[illegible]-5	0805	0707	0.023	0.060	10.730	4431.318	1.751	1.557
361-5	0021	0708	0.024	0.061	12.370	5301.371	1.587	1.980
361-5	0021	0707	0.024	0.056	13.700	4581.340	1.587	1.557
361-1	0339	0340	0.011	0.097	14.020	850.346	1.775	1.665
361-3	0707	0704	0.029	0.049	14.420	5032.080	1.497	1.855
361-3	0707	0703	0.026	0.052	16.820	5082.522	1.497	1.791
361-4	0708	0711	0.026	0.066	17.600	6027.445	2.065	1.565
361-2	0339	0336	0.017	0.048	19.330	4873.481	1.621	1.907
361-2	0339	0804	0.016	0.049	21.700	1835.071	1.621	1.848
361-2	0336	0804	0.016	0.049	23.150	3600.916	1.907	1.848
361-2	0339	0805	0.015	0.044	23.450	1611.118	1.621	1.684
361-5	0805	0021	0.016	0.059	25.320	2754.653	1.751	1.587
361-2	0336	0805	0.015	0.047	26.170	3310.666	1.907	1.684
361-3	0707	0705	0.020	0.053	26.370	2534.943	1.497	1.745
361-3	0704	0705	0.021	0.053	26.890	2662.413	1.855	1.745
361-4	0708	0712	0.023	0.067	28.510	6561.700	2.065	1.712
361-4	0708	0334	0.021	0.079	31.250	7182.498	2.065	1.913
361-2	0804	0805	0.014	0.049	31.270	809.874	1.848	1.684
361-4	0334	0711	0.016	0.081	33.790	5550.404	1.913	1.565
361-3	0703	0705	0.016	0.058	36.610	3275.619	1.791	1.745
361-3	0703	0704	0.018	0.051	51.710	1625.582	1.791	1.855
361-5	0707	0708	0.017	0.059	57.250	1395.527	1.557	1.980
361-4	0334	0712	0.015	0.076	64.000	3216.896	1.913	1.712
361-4	0711	0712	0.016	0.067	65.060	2474.466	1.565	1.712

Jackson
1-12-92

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                    Batch Processing Utility   Version 91.081
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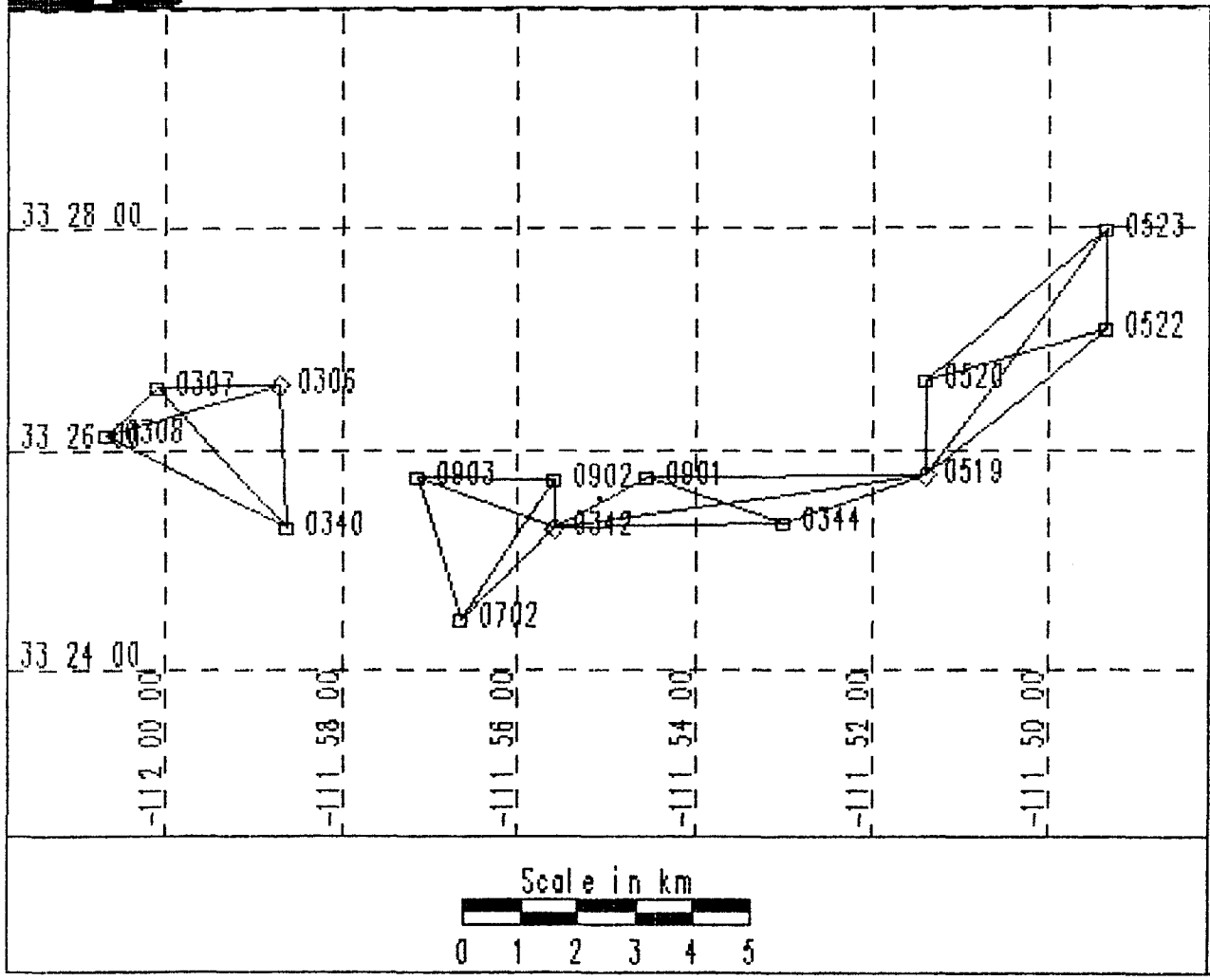
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 364



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\364\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
364-1	0519	0523	0.033	0.469	n/a *	5162.952	1.964	1.538
364-1	0520	0523	0.025	0.480	n/a *	3995.115	1.890	1.538
364-1	0519	0522	0.036	0.050	3.190	3992.261	1.964	1.818
364-1	0520	0522	0.037	0.050	3.510	3256.326	1.890	1.818
364-2	0519	0342	0.047	0.054	3.800	6572.573	1.837	1.755
364-2	0519	0901	0.043	0.055	4.890	4904.692	1.837	1.757
364-2	0342	0344	0.036	0.066	5.500	4028.589	1.755	1.815
364-1	0522	0523	0.025	0.051	7.090	1657.573	1.818	1.538
364-3	0702	0903	0.040	0.055	7.140	2516.428	1.688	1.728
364-1	0519	0520	0.024	0.051	7.290	1617.236	1.964	1.890
364-2	0342	0901	0.026	0.057	7.320	1833.166	1.755	1.757
364-2	0519	0344	0.031	0.068	7.370	2610.926	1.837	1.815
364-2	0344	0901	0.034	0.060	7.710	2547.311	1.815	1.757
364-3	0702	0902	0.029	0.061	8.200	2874.985	1.688	1.693
364-3	0902	0903	0.030	0.060	10.140	2423.492	1.693	1.728
364-3	0342	0702	0.030	0.055	10.500	2232.829	1.614	1.688
364-3	0342	0903	0.030	0.058	11.140	2573.943	1.614	1.728
364-3	0342	0902	0.026	0.059	12.090	843.728	1.614	1.693
364-4	0306	0308	0.022	0.090	12.800	3163.284	1.724	1.512
364-4	0308	0340	0.023	0.089	13.320	3535.285	1.512	1.699
364-4	0306	0340	0.021	0.087	15.020	2462.752	1.724	1.699
364-4	0306	0307	0.022	0.087	15.900	2165.591	1.724	1.672
364-4	0307	0308	0.019	0.090	19.940	1190.812	1.672	1.512
364-4	0307	0340	0.020	0.079	26.990	3308.015	1.672	1.699

* DELETED DEPENDENT VECTOR

Jampool
1-11-92

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05190520 OPT      14638 01-10-92   5:48p
05190522 OPT      14638 01-10-92   5:54p
05200522 OPT      14638 01-10-92   6:07p
05220523 OPT      14638 01-10-92   6:19p
0[illegible]0342 OPT      15135 01-10-92   6:25p
0[illegible]70344 OPT      15135 01-10-92   6:33p
05190901 OPT      15135 01-10-92   6:40p
03420344 OPT      15135 01-10-92   6:46p
03420901 OPT      15135 01-10-92   6:53p
03440901 OPT      15135 01-10-92   6:59p
03420702 OPT      14638 01-10-92   7:06p
03420902 OPT      14474 01-10-92   7:13p
03420903 OPT      14474 01-10-92   7:20p
07020902 OPT      14474 01-10-92   7:26p
07020903 OPT      14474 01-10-92   7:34p
09020903 OPT      14310 01-10-92   7:41p
03060307 OPT      14638 01-10-92   7:47p
03060308 OPT      14474 01-10-92   7:52p
03060340 OPT      14638 01-10-92   8:01p
03070308 OPT      14474 01-10-92   8:08p
03070340 OPT      14638 01-10-92   8:14p
03080340 OPT      14474 01-10-92   8:20p
       22 File(s)    15663104 bytes free

C:\GPS\GILA\364\VCTR1>
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                    Batch Processing Utility   Version 91.081
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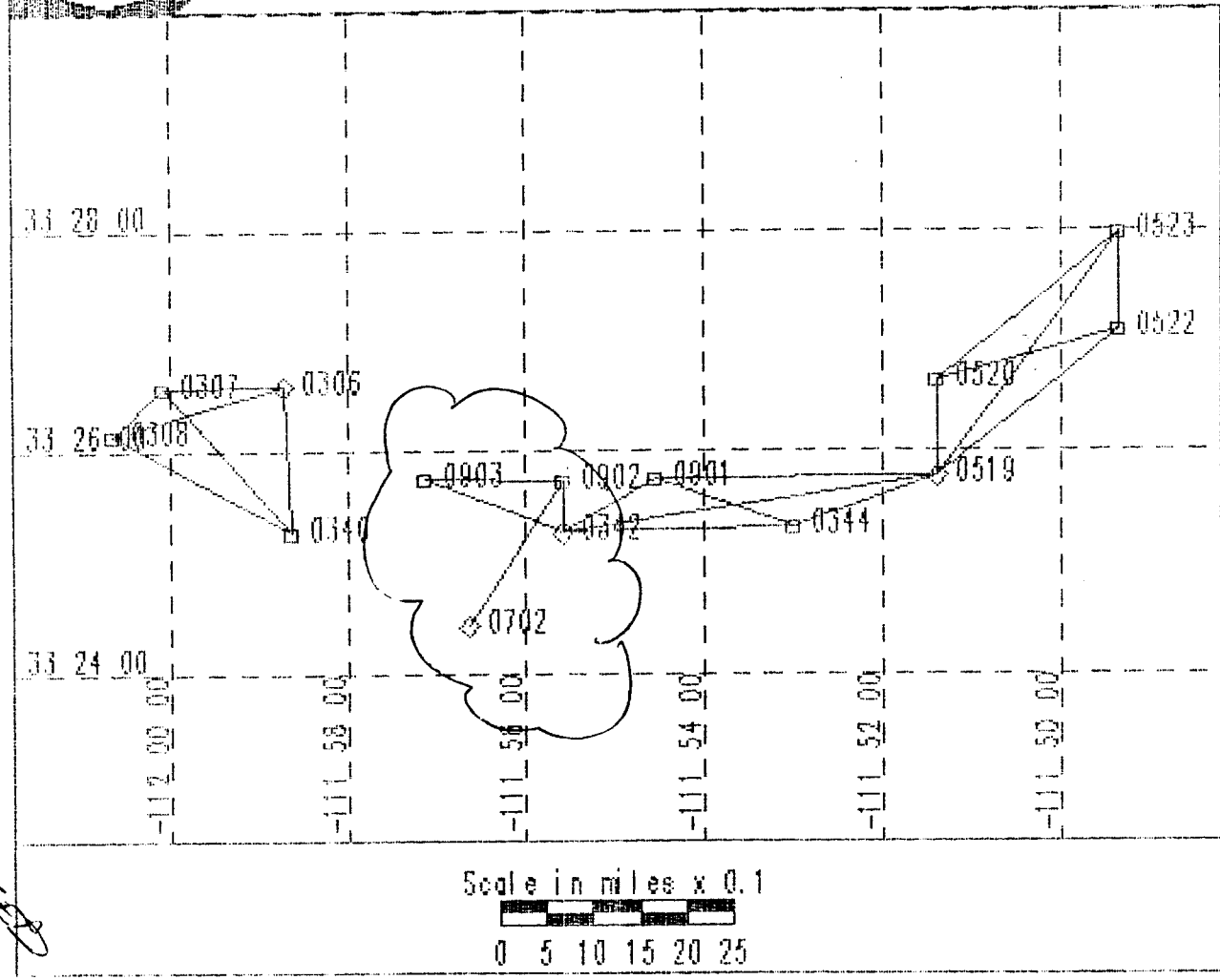
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 364



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

REPROCESSED
SEE NOTE
Jackson

Summary of directory: c:\gps\gila\364\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
364-1	0519	0523	0.033	0.469	n/a	5162.952	1.964	1.538
364-1	0520	0523	0.025	0.480	n/a	3995.115	1.890	1.538
[illegible]-1	0519	0522	0.036	0.050	3.190	3992.261	1.964	1.818
[illegible]-1	0520	0522	0.037	0.050	3.510	3256.326	1.890	1.818
364-2	0519	0342	0.047	0.054	3.800	6572.573	1.837	1.755
364-2	0519	0901	0.043	0.055	4.890	4904.692	1.837	1.757
364-2	0342	0344	0.036	0.066	5.500	4028.589	1.755	1.815
364-1	0522	0523	0.025	0.051	7.090	1657.573	1.818	1.538
364-1	0519	0520	0.024	0.051	7.290	1617.236	1.964	1.890
364-2	0342	0901	0.026	0.057	7.320	1833.166	1.755	1.757
364-2	0519	0344	0.031	0.068	7.370	2610.926	1.837	1.815
364-2	0344	0901	0.034	0.060	7.710	2547.311	1.815	1.757
364-3	0702	0902	0.029	0.061	8.200	2874.985	1.688	1.693
364-3	0902	0903	0.030	0.060	10.140	2423.492	1.693	1.728
364-3	0342	0903	0.030	0.058	11.140	2573.943	1.614	1.728
364-3	0342	0902	0.026	0.059	12.090	843.728	1.614	1.693
364-4	0306	0308	0.022	0.090	12.800	3163.284	1.724	1.512
364-4	0308	0340	0.023	0.089	13.320	3535.285	1.512	1.699
364-4	0306	0340	0.021	0.087	15.020	2462.752	1.724	1.699
364-4	0306	0307	0.022	0.087	15.900	2165.591	1.724	1.672
364-4	0307	0308	0.019	0.090	19.940	1190.812	1.672	1.512
364-4	0307	0340	0.020	0.079	26.990	3308.015	1.672	1.699

REPROCESSED

NOTE:

0702 TO 0902

PROCESSED 02-02

DID NOT SHOW

ALL VECTORS —

REPROCESSED "FULL"

ATTACHED

Johnson

1-11-92

Batch Processing Utility Version 91.081

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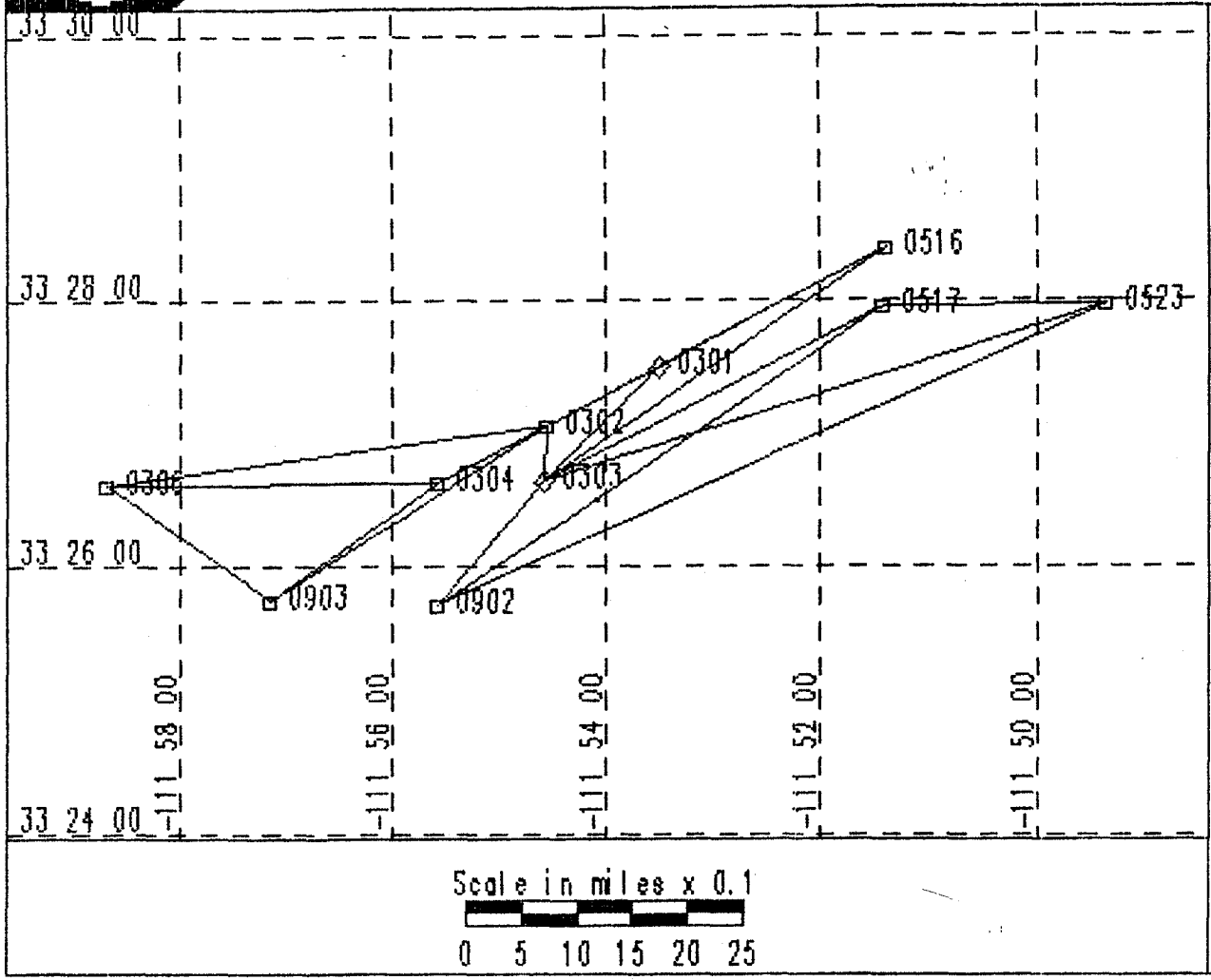
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 365



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\365\vctr1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
365-3	0302	0306	0.021	0.060	6.320	6484.295	1.853	1.654
365-3	0304	0903	0.018	0.059	6.860	2922.350	1.984	1.615
365-1	0303	0523	0.022	0.072	7.470	8457.505	1.745	1.487
365-2	0303	0301	0.015	0.052	10.450	2295.271	1.516	1.776
365-2	0303	0516	0.020	0.052	10.630	5888.321	1.516	1.686
365-1	0523	0902	0.023	0.165	10.830	10498.210	1.487	1.698
365-2	0302	0516	0.019	0.063	12.430	5462.770	1.699	1.686
365-3	0302	0903	0.020	0.058	14.930	4700.023	1.853	1.615
365-2	0301	0302	0.014	0.063	20.740	1804.866	1.776	1.699
365-1	0517	0902	0.021	0.069	20.850	7660.140	1.656	1.698
365-3	0306	0903	0.017	0.057	22.140	2926.737	1.654	1.615
365-2	0303	0302	0.014	0.063	22.310	782.288	1.516	1.699
365-3	0304	0306	0.020	0.059	24.650	4835.658	1.984	1.654
365-1	0303	0517	0.018	0.071	25.640	5473.099	1.745	1.656
365-2	0301	0516	0.016	0.050	29.090	3657.912	1.776	1.686
365-1	0517	0523	0.015	0.073	35.160	3182.556	1.656	1.487
365-3	0302	0304	0.015	0.059	43.600	1787.732	1.853	1.984
365-1	0303	0902	0.013	0.080	47.320	2302.815	1.745	1.698

Johnson
1-11-97

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                    Batch Processing Utility   Version 91.081
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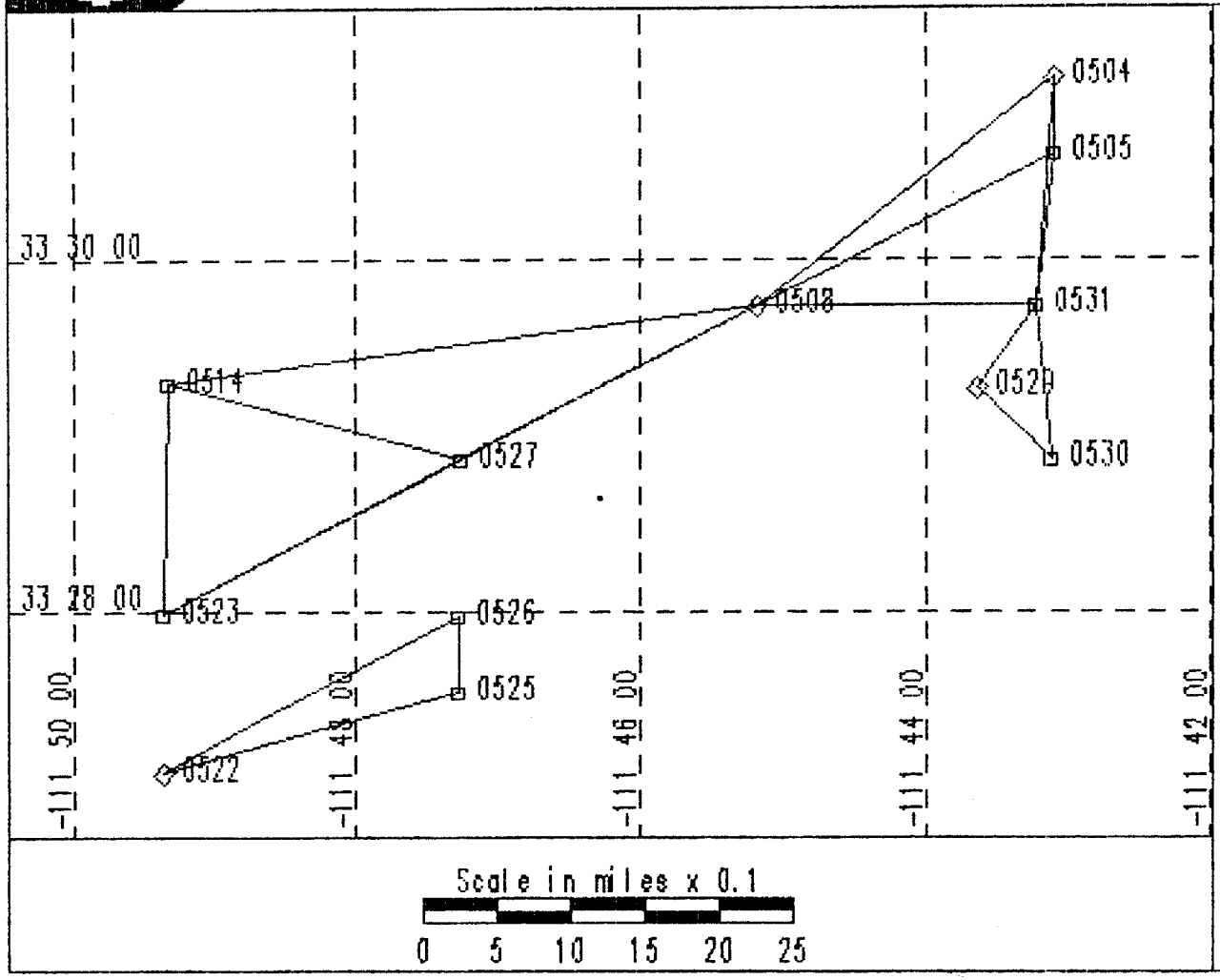
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 002



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

ummary of directory: c:\gps\gila\002\vctr1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
002-4	0522	0525	0.019	0.106	15.750	3349.723	1.825	1.938
002-2	0505	0531	0.021	0.063	19.370	1619.675	1.599	1.634
[illegible]-4	0522	0526	0.016	0.104	23.670	3646.377	1.825	1.822
[illegible]1	0508	0523	0.017	0.063	24.360	7252.035	1.726	1.510
002-1	0523	0527	0.019	0.059	25.580	3644.821	1.510	1.729
002-3	0531	0530	0.018	0.069	27.900	1604.497	1.628	1.673
002-4	0525	0526	0.015	0.096	33.650	810.450	1.938	1.822
002-1	0514	0523	0.018	0.054	35.240	2390.446	1.819	1.510
002-2	0504	0531	0.019	0.064	35.520	2421.904	1.300	1.634
002-3	0531	0529	0.015	0.068	36.740	1066.895	1.628	1.592
002-2	0508	0505	0.019	0.059	37.130	3597.162	1.602	1.599
002-1	0514	0527	0.016	0.054	41.710	3310.891	1.819	1.729
002-1	0508	0514	0.015	0.052	42.970	6498.239	1.726	1.819
002-1	0508	0527	0.015	0.055	45.250	3607.245	1.726	1.729
002-3	0529	0530	0.015	0.069	45.850	1094.955	1.592	1.673
002-2	0504	0505	0.017	0.063	49.120	805.987	1.300	1.599
002-2	0508	0531	0.016	0.057	71.090	3027.344	1.602	1.634
002-2	0508	0504	0.014	0.063	87.090	4022.728	1.602	1.300

Jackson
1-13-96

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                    Batch Processing Utility   Version 91.081
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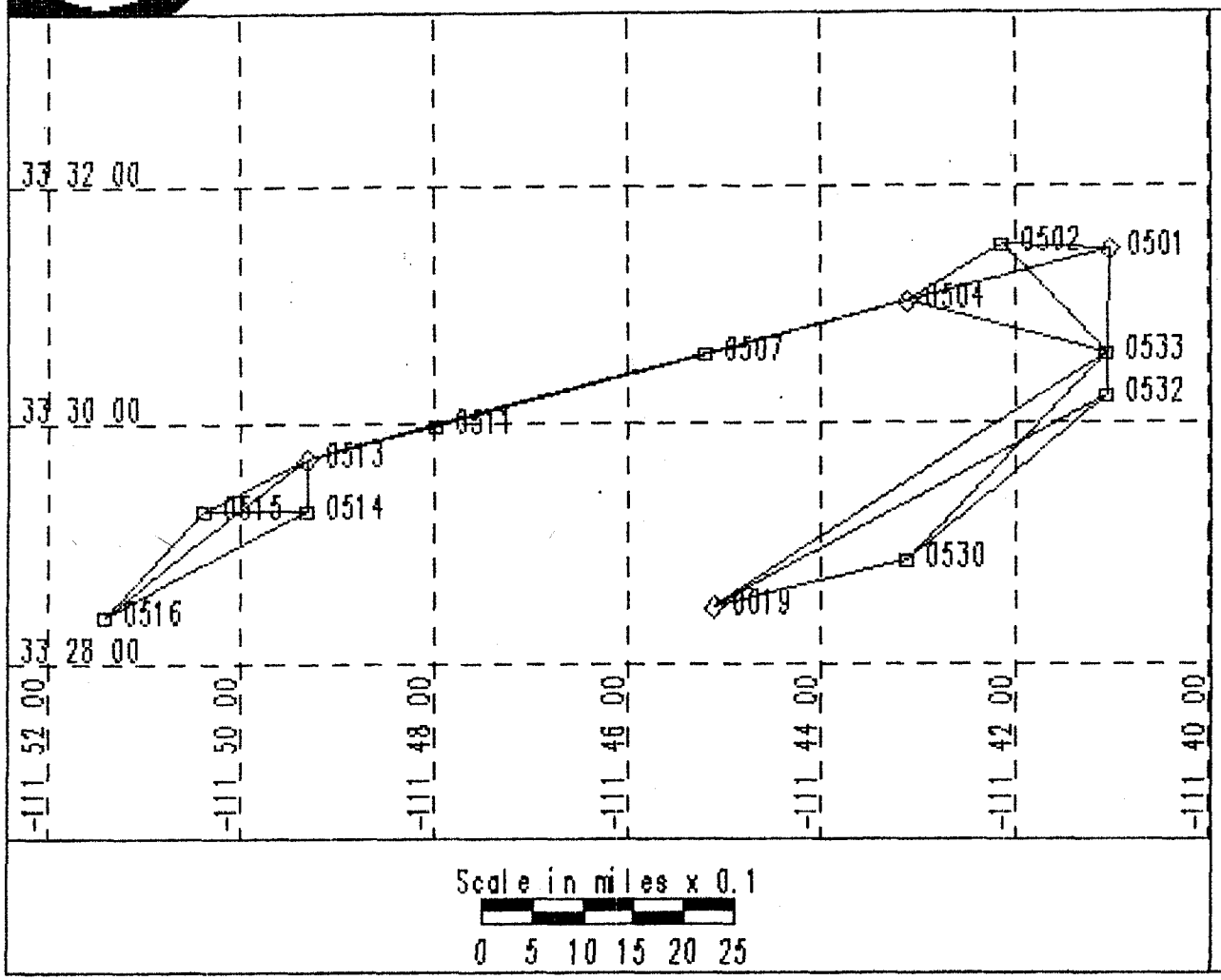
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 003



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\003\vctr1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
003-2	0513	0504	0.049	0.058	3.600	9964.011	2.005	1.345
003-2	0504	0511	0.041	0.058	4.960	7822.904	1.345	1.642
-2	0504	0507	0.029	0.059	6.590	3318.597	1.345	1.653
003-2	0513	0507	0.038	0.051	6.630	6645.425	2.005	1.653
003-4	0533	0019	0.026	0.083	6.750	7417.431	1.271	1.502
003-2	0507	0511	0.030	0.049	9.500	4504.405	1.653	1.642
003-4	0533	0530	0.030	0.073	10.460	4530.873	1.271	1.854
003-2	0513	0511	0.024	0.053	12.030	2141.434	2.005	1.642
003-4	0019	0532	0.023	0.079	12.600	7082.446	1.502	1.607
003-1	0513	0516	0.020	0.059	12.920	4033.822	2.053	1.567
003-4	0530	0532	0.026	0.070	14.900	4076.859	1.854	1.607
003-1	0514	0516	0.019	0.060	15.430	3605.863	1.800	1.567
003-1	0513	0514	0.017	0.059	17.560	804.270	2.053	1.800
003-1	0515	0516	0.018	0.060	17.800	2282.182	1.853	1.567
003-1	0513	0515	0.017	0.060	18.280	1803.309	2.053	1.853
003-4	0019	0530	0.027	0.067	19.180	3181.712	1.502	1.854
003-1	0514	0515	0.017	0.060	19.600	1608.866	1.800	1.853
003-4	0533	0532	0.021	0.069	19.870	685.353	1.271	1.607
003-3	0504	0533	0.023	0.059	25.990	3277.323	1.259	1.396
003-3	0504	0501	0.023	0.051	26.560	3315.779	1.259	1.636
003-3	0501	0502	0.020	0.049	38.090	1712.171	1.636	1.560
003-3	0501	0533	0.017	0.061	39.210	1616.517	1.636	1.396
003-3	0502	0533	0.020	0.059	39.580	2376.277	1.560	1.396
003-3	0504	0502	0.017	0.050	57.870	1745.073	1.259	1.560

Footpoint
1-11-92

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  Data Directory  : c:\gps\gila\003
  Output Directory: c:\gps\gila\003\vctr1

  Pseudo Range Processing: Yes          [No, Yes]
  Antenna Correction .....: MicroST     [Use spacebar to toggle antenna types
                                         or press F9 to select from a list]
  Name Generation ........: Last        [First, Full, Last, NoNames]

  Baseline Processor .....: MBP-Single  [MBP-Single, MBP-Multi, 640-Single]
  Coordinate Seeding .....: Yes         [No, Yes]
  Display Computations ...: No          [No, Yes]
  Quality Summary ........: Yes         [No, Yes]


ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD?
3 Esc   - Quit              F1 - Help                F10 - Begin Processing 3
3 Space - Toggle Options    F2 - Directory Info                             3
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDY
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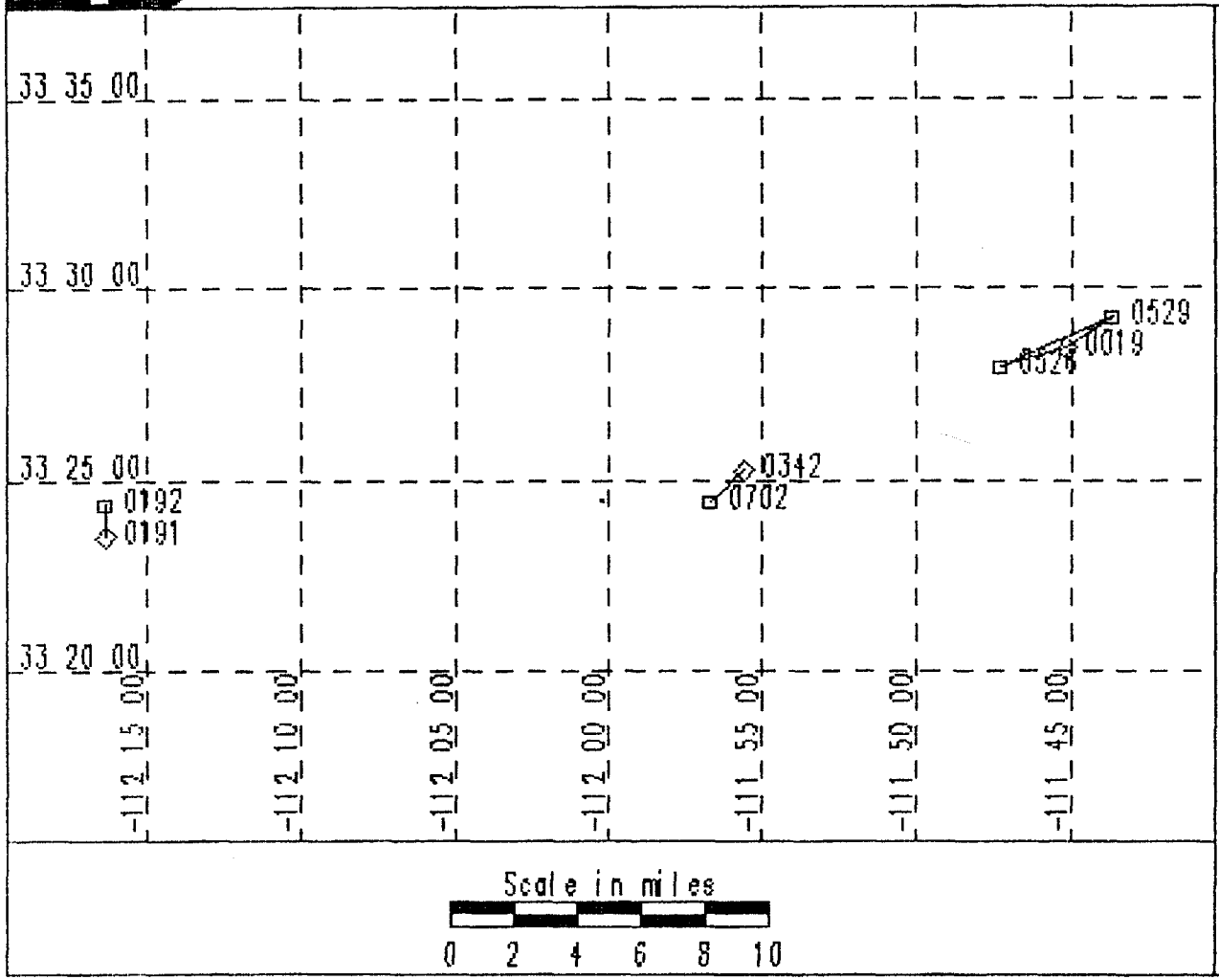
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 009



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\009\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
009-3	0019	0526	0.032	0.073	4.940	3438.968	1.494	1.665
009-3	0526	0529	0.027	0.071	5.290	6091.816	1.665	1.653
[illegible]-3	0019	0529	0.025	0.065	16.130	2715.629	1.494	1.653
[illegible]-1	0342	0702	0.025	0.068	19.990	2232.832	1.639	1.637
009-2	0191	0192	0.017	0.106	47.800	1570.147	1.765	1.799

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                    Batch Processing Utility   Version 91.081
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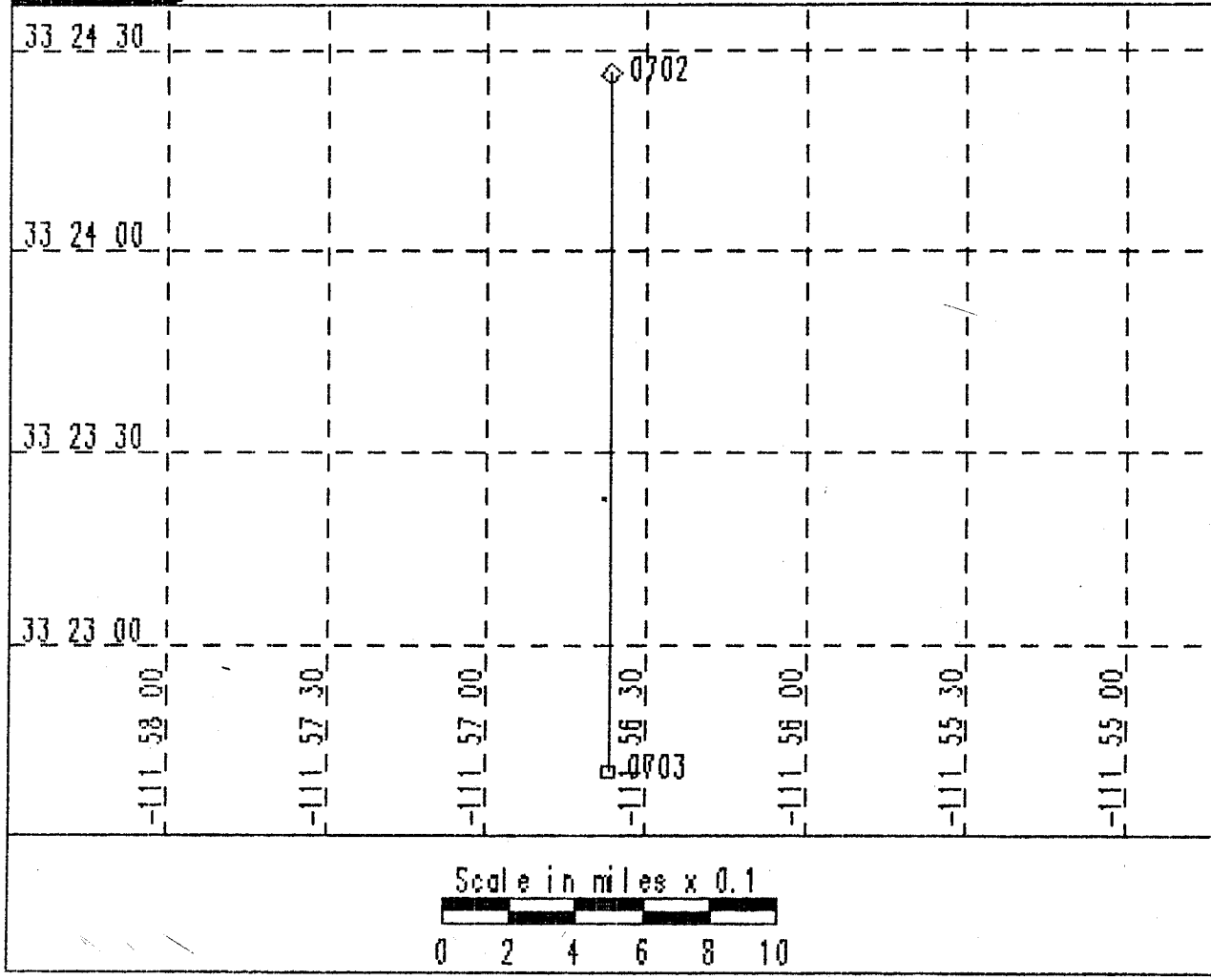
GILA SALT RIVER BASIN G.P.S. CONTROL SURVEY - DAY 014



F1 - Help

Toggle on/off:
F2 - Baselines
F3 - Sta. Names
F4 - Sta. symbols
F5 - Scale (Km/Mi)

Zoom rectangle:
F6 - Start rect.
F7 - Reset rect.
F8 - Unzoom
F10/Enter = Zoom
Arrow keys - Rect.

Esc to exit

p - Print graph

Summary of directory: c:\gps\gila\014\VCTR1

Session	From	To	rms	rdop	ratio	distance(m)	ah1(m)	ah2(m)
014-1	0702	0703	0.016	0.064	42.270	3251.645	1.640	1.815

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                    Batch Processing Utility   Version 91.081
MMMM
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