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Identification_Information:
        Citation:
                Citation_Information:
                        Originator: Darren Townsend(ed.)
                        Publication_Date: 20050518
                        Publication_Time: Unknown
                        Title: S.F.W.M.D. Well  HE-854
                        Publication_Information:
                                Publication_Place: 20060116
                                Publisher: None
                        Online_Linkage: darrent@cooner.com
        Description:
                Abstract:
                        South Florida Water Management District
                        HE-854
                Purpose:
                        To establish NAVD 88 and NGVD 29 elevations on the
                        well from nearby, existing benchmarks.  Also, to
                        establish an on-site benchmark.
                Supplemental_Information:
                        ACCOMPANYING DIGITAL FILES
                        HE-854.GEN , CORPSMET95 FILE
                        HE-854.MET, CORPSMET95 FILE
                        HE-854-2005.DOC , BENCHMARK RECOVERY FORM
                        HE-854.PDF , SCANNED COPIES OF
                        FIELD NOTES,
                        VERTCON CALCULATONS (IF APPLICABLE)
                        HE-854.PPT , POWER POINT FILES OF WELL SITE
                        PICTURES
                        HE854.LST, LEAST SQUARES ADJUSTMENT
        Time_Period_of_Content:
                Time_Period_Information:
                        Range_of_Dates/Times:
                                Beginning_Date: 20050720
                                Ending_Date: 20050907
                Currentness_Reference: Publication Date
        Status:
                Progress: Complete
                Maintenance_and_Update_Frequency: Unknown
        Spatial_Domain:
                Bounding_Coordinates:
                        West_Bounding_Coordinate: -081°02'06.49"
                        East_Bounding_Coordinate: -081°02'06.40"
                        North_Bounding_Coordinate: +26°35'11.15"
                        South_Bounding_Coordinate: +26°35'11.02"
        Keywords:
                Theme:
                        Theme_Keyword_Thesaurus: None
                        Theme_Keyword: Record Survey
                        Theme_Keyword: Well Site
                Place:
                        Place_Keyword_Thesaurus: None
                        Place_Keyword: SFWMD WELL HE-854
                        Place_Keyword: SEC.9, TWP 454 S, RGE 33 E
                        Place_Keyword: HENDRY COUNTY FLORIDA
        Access_Constraints: None
        Use_Constraints: None
        Point_of_Contact:
                Contact_Information:
                        Contact_Person_Primary:
                                Contact_Person: Elvie Ebanks
                                Contact_Organization: South Florida Water Management
District
```

Darren Townsend
Cooner & Associates

Purpose

Deliverables

Survey Date

Elvie Ebanks
SFWMD

Contact_Position: Professional Surveyor & Mapper
Contact_Address:
Address_Type: mailing and physical address
Address: 3301 Gun Club Road
City: West Palm Beach
State_or_Province: Florida
Postal_Code: 33406
Country: USA
Contact_Voice_Telephone: (561) 753-2400, Ext. 4717
Contact_Electronic_Mail_Address: eebanks@sfwmd.gov
Hours_of_Service: 8:00 am to 5:00 pm EST

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:

Equipment Used

The horizontal location of the wells and benchmark was performed using differentially corrected TRIMBLE GPS PATHFINDER PRO XR reciever. The vertical data was collected using a TOPCON DL-101C electronic digital level. Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 83/99. Elevations are based on NAVD 88.

Logical_Consistency_Report:
Horizontal data was established using differentially corrected GPS signals from U.S. Coast Guard Beacon at Eggmont Key. Vertical data was established using existing NGS benchmarks R530 and Q530.

Completeness_Report:

Project Results

WELL SITE
Horizontal location taken at center of pipe for well.
Lat. +26°35'11.15"
Long. -081°02'06.40"
N 818842.46 feet
E 644691.84 feet
Elevation taken on top of PVC pipe for well (cap taken off) at black mark.
23.90 feet (NAVD 88)
25.25 feet (NGVD 29) calculated using 1.35 feet offset value based on NGS NGVD 29 adjustment of CERP vertical network for control points R530 and Q530.
NEW SITE BENCHMARK
HE-854 is a standard SFWMD brass disk set in top of a class "C" concrete monument, flush with the ground. A magnet was set on the south side of the monument.
From the intersection of U.S.27/ S.R.80 and C.R. 835 (Evercane Rd.) travel south on C.R.835 for 15.1 miles to a dirt on right (Hill Grade Rd) go west on Hill Grade Rd. for 3.0 miles to the mark on the right 32 feet from centerline Rd. 35.19 feet South southwest of the west steel I-Beam gatepost on a dirt drive. And 123.20 feet west of a wood power pole.
Lat. +26°35'11.02"
Long. -081°02'06.49"
N 818829.65 feet
E 644684.09 feet
21.48 feet (NAVD 88)
22.83 feet (NGVD 29) calculated using 1.35 feet offset value based on NGS NGVD 29 adjustment of CERP vertical network for control points R530 and Q530.

Positional_Accuracy:

Horizontal

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        Horizontal_Positional_Accuracy:
                Horizontal_Positional_Accuracy_Report:
                        The horizontal positions of the well and set
benchmark
                        were established with differentially
                        corrected GPS signals from U.S. Coast Guard Beacon
at
                        Eggmont Key.
                Quantitative_Horizontal_Positional_Accuracy_Assessment:
                        Horizontal_Positional_Accuracy_Value: sub meter
                        Horizontal_Positional_Accuracy_Explanation: The
intended  positional accuracy for this survey is sub meter.
        Vertical_Positional_Accuracy:
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Level Line

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                Vertical_Positional_Accuracy_Report:
                        A level line was run originating on NGS benchmark
R530
                        with an NAVD 88 elevation running through new site
                        benchmark HE-854 and terminating on NGS benchmark
                        Q530 in accordance with Florida Minimum
                        Technical Standards (Chapter 61G17-6).  The pipe for
the
                        well site was then elevated by a level line
originating on
                        new site benchmark HE-854 with an newly
                        established NAVD 88 elevation running through the
top of
                        pipe and terminating on new site benchmark HE-854 in
                        accordance with Florida Minimum Technical Standards
                        (Chapter 61G17-6).
                Quantitative_Vertical_Positional_Accuracy_Assessment:
                        Vertical_Positional_Accuracy_Value: 0.003 ft
                        Vertical_Positional_Accuracy_Explanation: NAVD 88
level run to set BM, 0.003 ft closure in 67476.34 ft, max. allowed 0.1072 ft (MTS)
                Quantitative_Vertical_Positional_Accuracy_Assessment:
                        Vertical_Positional_Accuracy_Value: 0.000 ft
                        Vertical_Positional_Accuracy_Explanation: NAVD 88
level run from set BM to well, 0.000 ft closure
        Lineage:
                Process_Step:
                        Process_Description:
                                The horizontal work was performed using a Trimble
GPS
                                Pathfinder Pro XR reciever using U.S. Coast Guard
                                beacon at Eggmont Key. The level line was performed
                                using a Topcon DL-101C electronic digital level.
                        Process_Date: 20060130
Metadata_Reference_Information:
        Metadata_Date: 20060130
        Metadata_Contact:
                Contact_Information:
                        Contact_Person_Primary:
                                Contact_Person: Darren Townsend
                                Contact_Organization: Cooner & Associates, Inc.
                        Contact_Position: Project Surveyor
                        Contact_Address:
                                Address_Type: mailing and physical address
                                Address: 5670 Zip Drive
                                City: Fort Myers
                                State_or_Province: Florida
                                Postal_Code: 33905
                                Country: USA
                        Contact_Voice_Telephone: (239) 277-0722
                        Contact_Facsimile_Telephone: (239) 277-7179
```

Contact_Electronic_Mail_Address: darrent@cooner.com
Hours_of_Service: 8:00 am to 5:00 pm EST
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: 19980601

HE -854

- COONER & ASSOCIATES, INC.
- Date of photo: September 1, 2005
- View: Looking North at BM

HE -854

- COONER & ASSOCIATES, INC.
- Date of photo: September 21, 2005
- View: Looking at top view of BM 854

HE -854

- COONER & ASSOCIATES, INC.
- Date of photo: September 1, 2005
- View: Looking at Elevation mark on well

HE -854

- COONER & ASSOCIATES, INC.
- Date of photo: September 1, 2005
- View: Looking North at well

8-18-05 HE 854

HE 17
D. LOOKABILL
T. ROSENBERG

BS	DIST	HI	FS	DIST	EL	DESC
9.062	195.96	34.012			24.95' NAVD 88	R530 FND STEEL ROD STAMPED "R530 2004"
5.755	219.56	32.779	6.986	194.62	27.026	TP1 (SET HUB ON E. SIDE OF 832)
4.064	213.88	31.911	4.932	183.22	27.847	TP2 (SET HUB ON E SIDE OF 833)
6.093	217.44	34.110	3.894	197.78	28.017	TP3 (SET HUB ON E. SIDE OF 833)
5.178	208.40	34.083	5.205	197.46	28.905	TP4 (SET HUE ON E. SIDE OF 833)
5.304	200.24	33.987	5.400	197.44	28.683	TP5 (SET HUB ON E SIDE OF 832)

818-05 HE 854

HE 18
D. LOCKABILL
T. ROSENBERG

BS	DIST	HI	FS	DIST	EL	DESC
4.956	200.38	33.948	4.995	200.50	28.992	TP6 (SET HUB ON E SIDE OF 853)
5.082	198.24	34.045	4.985	198.70	28.963	TP7 (SET HUB ON E. SIDE OF 853)
5.135	205.30	33.918	5.262	198.18	28.783	TP8 (SET HUB ON E SIDE OF 833)
5.534	226.10	33.477	5.975	188.34	27.943	HE-854-1 SET 5/8" IR ON SLANT IN HOLE ±200 SOUTH OF HILL ±10' E OF 833 EP TP9
					27.94' Adjusted	
5.394	194.90	33.110	5.761	188.40	27.716	TP 10 (SET HUB ON S. SIDE HILL GRADE)
4.761	218.78	32.791	5.080	178.60	28.030	TP 11 (SET HUB ON S. SIDE OF HILL GRADE)

8-18-05 HE 854

HE 19
D. LOOKABILL
T. ROSENBERG

BS	DIST	HI	FS	DIST	EL	DESC.
4.642	181.44	32.690	4.743	194.74	28.048	TP12 (SET HUB S. SIDE OF HILL GRADE)
4.990	197.06	32.599	5.081	194.40	27.609	TP 13 (SET HUB S. SIDE OF HILL GRADE RD)
5.268	207.86	33.005	4.862	205.38	27.737	TP 14 (SET HUB S. SIDE OF HILL GRADE RD)
5.237	103.96	32.650	5.592	199.66	27.413	HE-854-2 (SET 1/2 S. SIDE OF HILL GRADE RD SLANTED) TP-15
					27.41' Adjusted	
5.038	204.20	32.452	5.236	103.26	27.414	TP16 (SET NAIL ON S. SIDE OF HILL GRADE)
5.052	205.84	32.822	4.682	201.64	27.770	TP17 (SET NAIL ON S. SIDE OF HILL GRADE

8-19-05 HE 854

HE 20
D. LOOKABILL
T. ROSENBERG

BS	DIST	HI	FS	DIST	EL	DESC.
5.059	227.30	32.574	5.307	202.56	27.515	TP 18 (SET NAIL ON S. SIDE OF HILL GRADE)
5.555	209.58	32.897	5.232	203.02	27.342	TP 19 (SET NAIL ON S. SIDE OF HILL GRADE)
5.359	194.38	32.974	5.278	208.54	27.619	TP 20 (SET NAIL ON S. SIDE OF HILL GRADE)
5.162	203.24	32.749	5.387	222.66	27.587	TP 21 (SET NAIL ON S. SIDE OF HILL GRADE RD)
4.710	208.14	32.132	5.327	210.18	27.422	TP 22 (SET NAIL ON S. SIDE OF HILL GRADE Rd)
5.796	200.80	32.607	5.321	197.08	26.811	HE-854-3 SET IR S. SIDE OF HILL GRADE Rd)
						HE-854-3
						TP 23

26.81'
Adjusted.

8-23-05

HE 854
CONT.

HE 21
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.387	201.82	33.151	4.843	200.60	27.764	IP24 (SET NAIL ON S. SIDE OF HILL GRADE Rd)
5.306	198.92	32.772	5.685	195.54	27.466	IP25 (SET NAIL ON S. SIDE OF HILL GRADE)
5.853	199.30	33.475	5.150	199.82	27.622	IP26 (SET NAIL ON S. SIDE OF HILL GRADE)
4.911	226.72	33.152	5.234	202.02	28.241	IP27 (SET IR ON S. SIDE OF HILL GRADE RD)
					28.24' Adjusted	
5.176	222.24	32.965	5.363	201.08	27.789	IP28 (SET NAIL ON S. SIDE OF HILL GRADE)
5.532	201.50	33.248	5.249	200.10	27.716	IP29 (SET NAIL ON S. SIDE OF HILL GRADE)

8-23-05

HE 854
CONT.

HE 22
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.307	205.16	32.993	5.562	206.02	27.686	HE-854-4 (SET IR ON S. SIDE OF HILL GRADE) TP30
					27.68' Adjusted	
5.102	204.18	32.708	5.387	200.72	27.606	TP31 (SET NAIL ON S. SIDE OF HILL GRADE)
5.216	204.44	32.260	5.664	198.08	27.044	TP32 (SET NAIL ON S. SIDE OF HILL GRADE)
5.322	203.44	32.879	4.703	199.94	27.557	TP33 (SET NAIL ON S. SIDE OF HILL GRADE)
5.479	203.04	33.029	5.329	301.04	27.550	TP34 (SET NAIL ON S. SIDE OF HILL GRADE)
5.051	203.84	32.774	5.306	203.70	27.725	TP35 (SET NAIL ON S. SIDE OF HILL GRADE)

8-23-05

HE 854
CONT.

BS	DIST	HI	FS	DIST	EL	DESC
5.146	203.90	32.731	5.189	201.02	27.585	TP36 (SET NAIL ON S. SIDE OF HILL GRADE)
5.316	212.62	32.845	5.262	196.34	27.409	HE-854-5 (SET IRON ON S. SIDE OF HILL GRADE)
					27.47' Adjusted	TP 37
4.994	199.54	32.282	5.557	217.86	27.288	TP38 (SET NAIL ON S. SIDE OF HILL GRADE)
5.104	202.96	32.645	4.741	205.42	27.541	TP39 (SET NAIL)
5.327	213.60	32.767	5.205	200.12	27.440	TP40 (SET NAIL)
5.310	200.72	33.107	4.970	193.96	27.797	TP41 (SET NAIL)

HE 23
D. LOOKABILL
M. LOOKABILL

8-24-05

HE-854
CONT.

HE 24
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
4.854	200.36	32.711	5.250	201.20	27.857	TP 42 (SET NAIL ON S. SIDE OF HILL GRADE)
5.515	201.70	32.375	5.851	196.96	26.860	HE-854-6 (SET IR ON S. SIDE OF HILL GRADE) TP 43
					26.86' Adjusted	
5.538	197.32	32.689	5.224	222.50	27.151	TP 44 (SET NAIL)
5.065	201.20	32.519	5.235	203.36	27.454	TP 45 (SET NAIL)
5.218	203.90	32.370	5.367	206.52	27.152	TP 46 (SET NAIL)
5.136	202.10	32.272	5.234	200.16	27.136	TP 47 (SET NAIL)

8-24-05

HE-854
Cont

HE 25
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC
5.018	216.44	32.187	5.103	184.16	27.169	TP 48 (SET NAIL ON S. SIDE OF HILL GRADE)
5.532	237.44	32.410	5.309	202.04	26.878	TP 49 (SET NAIL)
4.693	212.06	31.604	5.499	212.36	26.911	TP 50 (SET NAIL)
5.927	211.22	32.045	5.486	206.80	26.118	HE-854-7 (SET IR ON S. SIDE OF HILL GRADE)
						TP 51
					26.12' Adjusted	
5.297	204.64	31.794	5.548	206.64	26.497	TP 52 (SET NAIL)
5.190	207.42	31.647	5.337	203.42	26.457	TP 53 (SET NAIL)

8-24-05

HE-854
CONT.

HE 26
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.431	204.76	31.918	5.160	199.82	26.487	TP 54 (SET NAIL)
5.631	208.02	32.139	5.410	202.32	26.508	TP 55 (SET NAIL)
5.210	205.86	31.722	5.627	203.56	26.512	TP 56 (SET NAIL)
5.661	212.90	31.751	5.632	204.38	26.090	HE-854-8 (SET IR ON S. SIDE OF HILL GRADE) TP 57
					26.091 Adjusted	
5.220	205.64	31.670	5.301	201.88	26.450	TP 58 (SET NAIL)
4.944	205.92	31.256	5.358	198.86	26.312	TP 59 (SET NAIL)

8-24-05

HE-854
CONT.

HE 27
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.035	211.34	31.107	5.184	201.02	26.072	TP 60 (SET NAIL)
5.069	204.26	30.848	5.328	199.98	25.779	TP 61 (SET NAIL)
5.197	204.04	30.810	5.235	201.10	25.613	TP 62 (SET NAIL)
4.936	208.96	30.584	5.162	205.80	25.648	TP 63 (SET NAIL)
5.309	218.40	29.965	5.926	200.90	24.656	TP 64 HE-854-9 (SET IR ON S. SIDE OF HILL GRADE)
					24.65'	Adjusted
5.407	206.86	29.982	5.390	190.96	24.575	TP 65 (SET NAIL)

8-25-05

HE-854 CONT.

HE 28
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC
5.269	208.36	30.088	5.163	202.10	24.819	TP66 (SET NAIL)
5.555	203.06	30.095	5.348	198.56	24.740	TP67 (SET NAIL)
5.124	201.32	29.907	5.312	201.30	24.785	TP68 (SET NAIL)
5.334	199.58	30.114	5.127	201.40	24.780	TP69 (SET NAIL)
5.457	195.36	29.619	5.952	202.60	24.162	TP 70 HE-854-10 (SET IR ON S. SIDE OF HILL GRADE)
					24.16'	Adjusted
5.202	203.56	29.968	4.853	202.38	24.766	TP 71 (SET NAIL)

8-25-05

HE-859
Cont.

HE 29
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.224	205.82	30.017	5.175	198.12	24.793	TP 72 (SET NAIL)
5.567	206.74	30.038	5.546	199.76	24.471	TP 73 (SET NAIL)
5.247	205.80	29.526	5.759	202.86	24.279	TP 74 (SET NAIL)
4.649	205.66	29.110	5.265	199.64	24.261	TP 75 (SET NAIL)
5.310	201.26	29.296	5.124	198.94	23.986	TP 76 (SET NAIL)
5.514	208.30	29.239	5.571	205.18	23.725	TP 77 HE-859-11 (SET IR)
					23.72'	Adjusted

8-25-05

HE-854
Cont.

HE 30
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.097	217.56	29.034	5.302	201.08	23.937	TP78 (SET NAIL)
5.577	204.66	28.673	5.738	201.52	23.296	TP79 (SET NAIL)
5.192	205.90	28.140	5.725	203.04	22.948	TP80 (SET NAIL)
4.778	211.62	27.896	5.022	200.92	23.118	TP81 (SET IR)
5.117	205.78	27.928	5.085	188.26	22.811	TP82 (SET NAIL)
5.707	214.50	28.218	5.417	205.18	22.511	TP 83 HE-854-12 (SET IR ON S. SIDE OF HILL GRADE)
					22.51'	Adjusted

8-25-04

HE-854
CONT.

HE-31
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
4.913	216.74	27.830	5.301	203.84	22.917	TP 84 (SET NAIL)
5.585	194.72	28.116	5.299	203.56	22.531	TP 85 (SET NAIL)
6.415	148.10	27.900	6.631	147.50	21.485	HE-854 FND CON. MON WITH SFWMD BRASS DISK STAMPED "HE 854 2005" TP 86
					21.48'	Adjusted
5.199	202.46	27.730	5.369	194.08	22.531	TP 87 (AKA 85) 0.000
5.251	201.52	28.167	4.814	217.02	22.916	TP 88 (AKA 86) -0.001
5.808	205.02	28.319	5.656	216.72	22.511	HE-854-12 0.000 (HE-854-A ~~STARTS HERE~~ ON BS)
					22.51'	Adjusted

9-6-05 HE-854- CONT.

BS	DIST	HI	FS	DIST	EL	DESC
5.262	203.60	28.074	5.507	205.90	22.812	TP91 (AKA TP82) +0.001
5.104	202.98	28.224	4.954	196.64	23.120	TP92 (AKA TP81) +0.002
5.792	204.92	28.757	5.259	201.52	22.965	TP93 (SET 60d NAIL)
6.142	214.92	29.440	5.459	204.94	23.298	TP94 (AKA TP 79) +0.002
5.365	199.70	29.219	5.586	207.88	23.854	TP95 (SET NAIL)
5.581	205.66	29.308	5.492	205.58	23.727	TP96 HE-854-T1 +0.002

FILE: HE854-A

HE 32
D.LOOKABILL
M.LOOKABILL

9-6-05

HE-854
CONT.

HE-33
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC	
5.267	209.34	29.301	5.274	199.10	24.034	97 TP~~1~~ (SET 60d NAIL)	
5.358	200.44	29.619	5.040	196.62	24.261	98 TP8 (AKA TP 75)	0.000
5.663	202.88	29.941	5.341	204.76	24.278	99 TP9 (AKA TP 74)	-0.001
5.588	200.26	30.061	5.468	206.52	24.473	100 TP~~100~~ (AKA TP 73)	+0.002
5.221	198.80	30.016	5.266	205.06	24.795	101 ~~102~~ TP~~11~~ (AKA TP 72)	+0.002
5.064	202.94	29.827	5.253	202.70	24.763	102 ~~103~~ TP~~12~~ (AKA TP 71)	-0.003

9-6-05 HE-854

HE 34
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.	
						103 104 TP HS	
5.996	203.44	30.155	5.668	194.70	24.159	HE-854-10	-0.003
						104 105 H4	
5.248	203.56	30.021	5.382	198.50	24.773	TP 4 (AKA 69)	-0.007
						105 106 H5	
5.431	200.88	30.208	5.244	199.02	24.777	TP 5 (AKA 68)	-0.006
						106 107 H6	
5.467	202.96	30.199	5.476	203.28	24.732	TP 6 (AKA 67)	-0.008
						107 108 H7	
5.244	202.60	30.056	5.387	203.76	24.812	TP 7 (AKA 66)	-0.007
						108 109 H8	
5.564	203.18	30.138	5.482	206.02	24.574	TP 8 (AKA 65)	-0.001

9-6-05 HE-854

HE 35
D.LOOKABILL
M.LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.	
5.942	203.56	30.513	5.487	206.00	24.65	TP 109 HE-854-9	-0.005
5.119	210.46	30.760	4.592	206.00	25.64	110 TP ~~20~~ (AKA TP 62)	-0.007
5.349	200.02	30.960	5.149	199.30	25.61	111 TP ~~21~~ (AKA TP 62)	-0.002
5.384	203.02	31.175	5.169	205.28	25.79	112 TP ~~22~~ (AKA TP 61)	+0.012
5.162	204.32	31.236	5.101	208.20	26.074	113 TP ~~23~~ (AKA TP 60)	+0.002
5.385	203.04	31.699	4.922	202.56	26.314	114 TP ~~24~~ (AKA TP 59)	+0.002

9-6-05

HE-854
CONT.

HE 36
D. LOCKABILL
M. LOCKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.224	202.62	31.657	5.248	201.46	26.451	115 TP 25 (AKA TP 58) = +0.001
5.491	205.08	31.582	5.584	212.28	26.091	TP 116 HE-854-8 +0.001
5.689	203.48	32.198	5.073	205.12	26.509	117 TP 27 (AKA TP 56) -0.003
5.434	202.96	31.943	5.689	208.02	26.509	118 TP 28 (AKA TP 55) +0.001
5.212	201.86	31.702	5.453	203.92	26.490	119 TP 29 (AKA TP 54) +0.003
5.461	203.34	31.918	5.245	205.42	26.457	120 TP 30 (AKA TP 53) 0.000

9-6-05

HE-854
CONT.

HE 37
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC
5.601	218.80	32.099	5.420	204.78	26.498	121 IP ~~21~~ (AKA 52) +0.002
5.584	210.70	31.709	5.974	199.32	26.125	TP 122 HE-854-7 +0.007
5.581	213.18	32.498	4.792	207.94	26.927	123 IP ~~25~~ (AKA TP 50) +0.016
5.559	202.24	32.430	5.627	236.58	26.871	124 IP ~~24~~ (AKA TP 49) -0.007
5.360	185.46	32.532	5.258	216.28	27.172	125 TP ~~35~~ (AKA TP 48) +0.003
5.337	203.00	32.478	5.391	200.60	27.141	126 IP ~~36~~ (AKA TP 47) +0.005

9-6-05

HE-854
CONT.

HE 38
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC.
5.467	207.76	32.621	5.324	201.12	27.154	127 TP ~~37~~ (AKA TP 46)
5.358	200.80	32.820	5.159	199.88	27.462	128 TP ~~38~~ (AKA TP 45)
5.283	223.00	32.445	5.658	200.52	27.162	129 TP ~~39~~ (AKA TP 44)
6.063	227.92	32.930	5.578	201.34	26.867	TP 130 HE-854-6 +0.007
5.446	202.20	33.311	5.065	169.56	27.865	131 TP ~~41~~ (AKA TP 42)
5.098	205.36	32.906	5.503	199.90	27.808	132 TP ~~42~~ (AKA TP 41)

HE-854
CONT.

BS	DIST	HI	FS	DIST	EL	DESC
5.491	200.44	32.937	5.458	202.30	27.448	133 TP43 (AKA TP 40)
5.215	203.48	32.755	5.399	202.62	27.540	134 TP44 (AKA TP 39)
5.738	217.54	33.022	5.471	203.70	27.284	135 TP45 (AKA TP 38)
5.390	196.56	32.854	5.558	212.94	27.464	TP 136 HE-854-5
5.427	200.76	32.975	5.306	203.88	27.548	137 TP47 (AKA TP 36)
5.555	205.72	33.262	5.268	203.98	27.707	138 TP48 (AKA TP 35)

HE-39
D. LOOKABILL
M. LOOKABILL

9-7-05

HE-854
Cont.

HE 40
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC
						139
5.541	202.28	33.071	5.732	201.00	27.530	TP49 (AKA TP 34)
						140
4.831	200.78	32.367	5.535	202.26	27.536	TP50 (AKA TP 33)
						141
5.817	198.80	32.849	5.335	203.60	27.032	TP51 (AKA TP 32)
						142
5.531	202.34	33.125	5.255	203.30	27.594	TP52 (AKA TP 31)
						TP 143
5.763	202.38	33.436	5.452	203.48	27.673	HE-854-4 -0.03
						144
5.454	226.44	33.140	5.750	205.04	27.686	TP 54 (AKA TP 29)

9-7-05

HE-854
CONT.

HE 41
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC	
						145	
5.653	198.56	33.429	5.364	195.86	27.776	TP 55 (AKA TP 28)	
						146	
5.206	201.50	33.434	5.201	229.08	28.228	TP 56 (AKA TP 27)	-0.013
						147	
5.147	200.10	32.740	5.841	199.88	27.593	TP 57 (AKA TP 26)	
						148	
5.754	194.72	33.285	5.209	199.14	27.531	TP 58 (SET 60d NAIL)	
						149	
4.968	198.16	32.721	5.532	202.16	27.753	TP 59 (AKA TP 24)	
						TP 150	
5.551	197.08	32.353	5.919	203.24	26.802	HE-854-3	-0.009

9-7-05

HE-854
CONT.

HE 42
D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC
						151
5.674	209.60	33.085	4.942	208.26	27.411	TP 61 (AKA TP 22)
						152
5.494	221.86	33.066	5.513	203.64	27.572	TP 62 (AKA TP 21)
						153
5.418	207.98	33.028	5.456	195.14	27.610	TP 63 (AKA TP 20)
						154
5.754	229.30	33.091	5.691	210.32	27.337	TP 64 (AKA TP 19)
						155
5.553	203.32	33.041	5.603	201.38	27.488	TP 65 (AKA TP 18)
						156
4.881	212.38	32.632	5.290	205.12	27.751	TP 66 (AKA TP 17)

HE 4'S
D. LOOKABILL
M. LOOKABILL

4-7-05

HE-854
CONT.

BS	DIST	HI	FS	DIST	EL	DESC
						157
5.379	99.44	32.788	5.223	193.18	27.409	TP 67 (AKA TP 16)
						TP 158
5.724	204.30	33.129	5.383	107.90	27.405	HE-854-2
						159
5.111	204.32	32.838	5.402	203.04	27.727	TP 69 (AKA TP 14)
						160
5.346	194.80	32.942	5.242	198.36	27.596	TP 70 (AKA TP 13)
						161
4.922	194.98	32.953	4.911	181.02	28.031	TP 71 (AKA TP 12)
						162
5.284	178.52	33.290	4.947	218.50	28.006	TP 72 (AKA TP 11)

4-7-05

HE-854
CONT.

D. LOOKABILL
M. LOOKABILL

BS	DIST	HI	FS	DIST	EL	DESC
						163
6.263	215.08	33.954	5.599	194.76	27.691	TP ~~73~~ (AKA TP10)
						164
5.141	211.56	34.106	4.989	232.70	28.965	TP ~~74~~ (SET HUB E. SIDE OF 832)
						165
5.408	227.30	34.228	5.286	197.44	28.820	TP ~~75~~ (SET HUB E. SIDE OF 833)
						166
5.096	231.00	34.137	5.187	191.92	29.041	TP ~~76~~ (SET HUB E. SIDE OF 833)
						167
4.790	146.44	33.937	4.990	208.90	29.147	TP ~~77~~ (SET HUB E. SIDE OF 833)
			8.034	77.28	25.903	FND U.S.ACOE. CON. MON W/ BRASS DISK STAMPED "Q530 2001" (EL= 25.90) TO TOP

Misclosure = +0.003

Total Dist = 67456.34'

Allowable Misclosure = $0.03 \times \sqrt{\frac{67456.34}{5280}}$

= +/- 0.1072'

020801.OL HENDRY CO. WELLS

HE- 854 WELL ELEVATION 21.48'

PT	BS	HI	FS	EL	
	6.052'	27.532'		~~300.00~~	~~DEL. 12" CON. W HE-854 22~~
		~~306.05~~'		23.895'	
1	3.535'	27.430'	3.637'	~~302.415~~'	HE 854 W
		~~305.95~~'		21.48'	
2			5.950'	~~300.00~~	12" CON. W HE-854 22

MISCLOSURE = 0.000

FILE: HENDRY CO. 7-20-05

MAPPING GRADE GPS COORDINATES

5 POINT GENERIC HE 854 BM N- 818829.65'
E- 644684.09'

6 POINT GENERIC HE 854 WELL N- 818842.46'
E- 644691.84'

(U.S. STATE PLANE 1983, FL EAST ZONE)

C. COLLINS
E. SORENSEN

FB 99 PG. 6

7-20-05

HE-854

N

CANAL FIELDS

N 15° W 35.19(m)

N 45° E 46.75(m)

CANAL

CANAL

HE-854 WELLSITE

HE 854 BM

N 85° E 123.20(m)

HILL GRADE ROAD

CANAL

A) STEEL I-BEAM 35.19

B) STEEL I-BEAM 46.75

C) WOOD POWER POLE 123.20'

020801.05 BASS RANCH

GPS : TRIMBLE 5700

JOBFILE: BASS ALL

BASE @ 152

CHECK IN @ 153

N - 1108237.159

E - 657141.684

ΔH 0.071

RECOLLECTED POINTS: 183, 184, 185, 186, 187, 189, 190, 1048, 1044, 2042 #602

REFERENCED EAST ¼ CORNER OF SECTION 35

C. COLLINS
E. SORENSEN

FB 99 PG 7

7-21-05

584 (184) N - 1108104.904 E - 647026.817

BASE MOVED TO #155

CHECK IN @ 156

N - 1107616.345

E - 647938.858 ΔH 0.186

CHECK IN @ 154

N - 1108319.674

E - 654323.012 ΔH 0.108

CHECK IN @ 153

N - 1108237.192

E - 657141.698

BASE MOVED TO 156

CHECK IN @ 584

N - 1108104.922

E - 647026.733 ΔH 0.085

583 (183)	N - 1108138.535	E - 647229.328
589 (189)	N - 1108493.938	E - 647466.796
590 (190)	N - 1108638.474	E - 647175.417
585 (185)	N - 1108799.529	E - 646312.161
586 (186)	N - 1108893.092	E - 646159.208

0208011.06 BASS RANCH

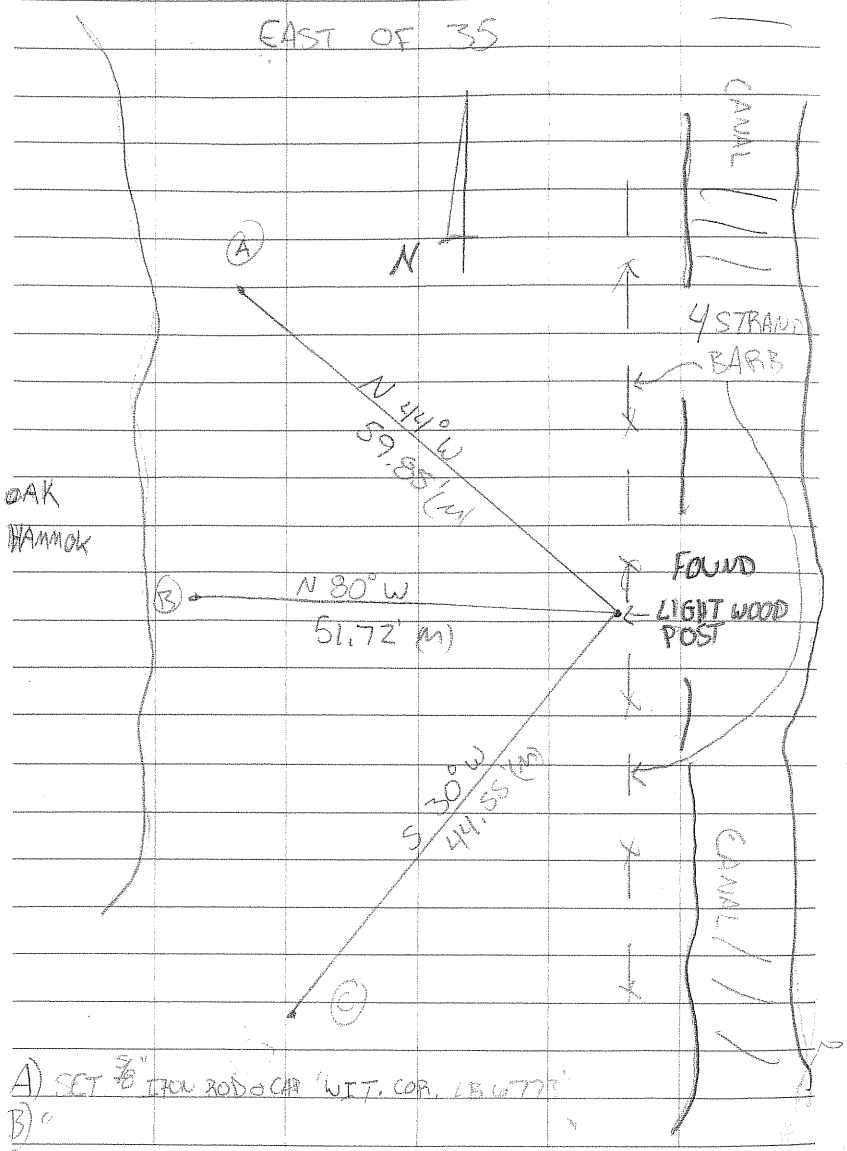
C. COLLINS
E. SORENSEN

FB 99

PG 8

7-21-05

EAST OF 35



1148 (1048)	N - 1108656.891	E - 646338.756
2142 (2042)	N - 1108152.345	E - 647670.663
1144 (1044)	N - ~~1107746.647~~ 1107746.855	E - 647704.362
587 (187)	N - 1107738.666	E - 654592.940
702 (602)	N - 1111284.653	E - 648015.734

BASE @ 154

CHECK IN @ 155

N - 1108414.330

E - 653430.285 ΔH 0.016

A) SET ⅜" IRON ROD & CAP "W.I.T. COR. LB 6777"

B)

C)

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY HENDRY	**PROJECT** HENDRY WELLS	**DESIGNATION** HE-854
SECTION 9	**TOWNSHIP 45 S**	**RANGE 33 E**
GEOGRAPHIC INDEX OF QUAD NE		
Established by X **Recovered by** Cooner & Associates, Inc.	**NAME OF QUADRANGLE** DEVILS GARDEN SLOUGH	
SURVEYOR CGC **DATE** 7 / 14/ 2005	**FIELD BOOK** 99/HE **PAGE** 6/ 17-45	
HORIZONTAL DATUM: **1927** **(1983)** **Other**_____ (circle one) **ZONE** **(E)** or **W**		
VERTICAL DATUM: MSL 1929 **(1988)** **Other** _____ (circle one)		
CONTROL ACCURACY: HORIZONTAL **1 2 3** Sub-meter (circle one) VERTICAL **1 (2) 3**		
STATE PLANE COORDINATES	**X** 818829.65'	**Y** 644684.09' **EL.** 21.48'
LATITUDE 26° 35' 11.02" N	LONGITUDE 081° 02' 06.49" W	
DESCRIPTION Poured concrete monument with brass SFWMD disk stamped "HE-854 2005		

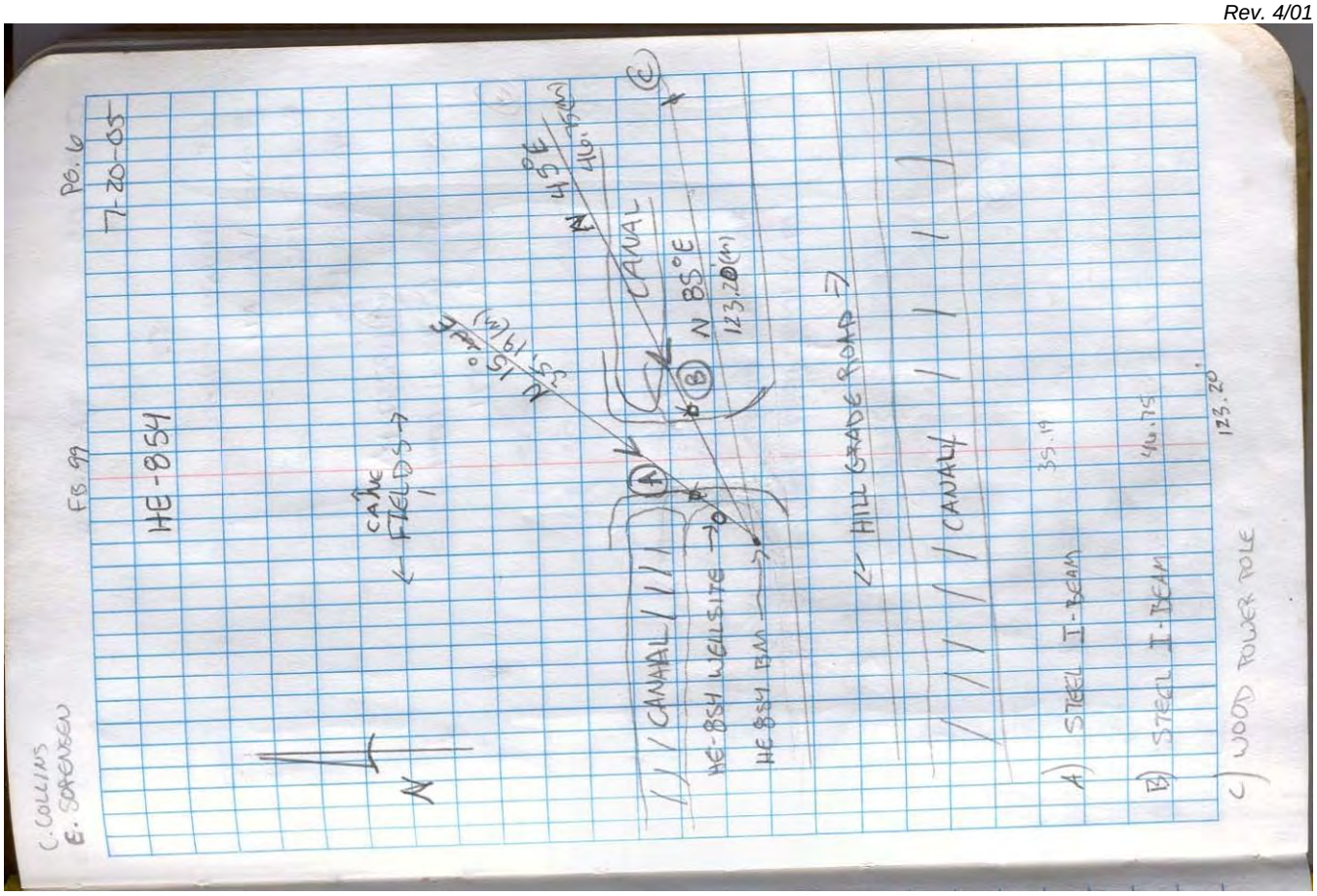
To Reach: From the intersection of U.S.27/ S.R.80 and C.R. 835 (Evercane Rd.) travel south on C.R.835 for 15.1 miles to a dirt on right (Hill Grade Rd) go west on Hill Grade Rd. for 3.0 miles to the mark on the right 32' from centerline Rd. 35.19' South southwest of the west steel I-Beam gatepost on a dirt drive. And 123.20' west of a wood power pole.

Notable Land marks:

SKETCH

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01



From the NGS Adjustment file "ngvd29.txt" for the CERP Geodetic Vertical Control Project.
Line/Part: L26225 SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark ID	SSN	PID	Designation	Geopotential	Elevation	Codes
1484	2214	AJ7602	Q 530	8.1398	8.3059	
1485	2215	AJ7617	R 530	7.8557	8.0161	

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
PROGRAM = datasheet95, VERSION = 8.7
1         National Geodetic Survey,    Retrieval Date = JULY  1, 2015
 AJ7602 ***********************************************************************
 AJ7602  DESIGNATION -  Q 530
 AJ7602  PID         -  AJ7602
 AJ7602  STATE/COUNTY-  FL/HENDRY
 AJ7602  COUNTRY     -  US
 AJ7602  USGS QUAD   -  GRAHAM MARSH (1971)
 AJ7602
 AJ7602                        *CURRENT SURVEY CONTROL
 AJ7602  ______________________________________________________________________
 AJ7602* NAD 83(2011) POSITION- 26 35 33.21496(N) 081 07 37.39645(W)   ADJUSTED
 AJ7602* NAD 83(2011) ELLIP HT-   -16.640 (meters)        (06/27/12)   ADJUSTED
 AJ7602* NAD 83(2011) EPOCH    -  2010.00
 AJ7602* NAVD 88 ORTHO HEIGHT -     7.895 (meters)       25.90  (feet) ADJUSTED
 AJ7602  ______________________________________________________________________
 AJ7602  NAD 83(2011) X  -    880,304.187 (meters)                     COMP
 AJ7602  NAD 83(2011) Y  - -5,638,923.981 (meters)                     COMP
 AJ7602  NAD 83(2011) Z  -  2,837,911.536 (meters)                     COMP
 AJ7602  LAPLACE CORR    -         -0.74  (seconds)                    DEFLEC12B
 AJ7602  GEOID HEIGHT    -        -24.55  (meters)                     GEOID12B
 AJ7602  DYNAMIC HEIGHT  -          7.882 (meters)       25.86  (feet) COMP
 AJ7602  MODELED GRAVITY -    979,087.5   (mgal)                       NAVD 88
 AJ7602
 AJ7602  VERT ORDER      -  FIRST     CLASS II
 AJ7602
 AJ7602  Network accuracy estimates per FGDC Geospatial Positioning Accuracy
 AJ7602  Standards:
 AJ7602         FGDC (95% conf, cm)     Standard deviation (cm)      CorrNE
 AJ7602            Horiz  Ellip          SD_N   SD_E   SD_h       (unitless)
 AJ7602  ------------------------------------------------------------------
 AJ7602  NETWORK    3.43   5.49          1.40   1.40   2.80      -0.05762586
 AJ7602  ------------------------------------------------------------------
 AJ7602  Click here for local accuracies and other accuracy information.
 AJ7602
 AJ7602
 AJ7602.The horizontal coordinates were established by GPS observations
 AJ7602.and adjusted by the National Geodetic Survey in June 2012.
 AJ7602
 AJ7602.NAD 83(2011) refers to NAD 83 coordinates where the reference
 AJ7602.frame has been affixed to the stable North American tectonic plate. See
 AJ7602.NA2011 for more information.
 AJ7602
 AJ7602.The horizontal coordinates are valid at the epoch date displayed above
 AJ7602.which is a decimal equivalence of Year/Month/Day.
 AJ7602
 AJ7602.The orthometric height was determined by differential leveling and
 AJ7602.adjusted by the NATIONAL GEODETIC SURVEY
 AJ7602.in February 2002.
 AJ7602
 AJ7602.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ7602
 AJ7602.The Laplace correction was computed from DEFLEC12B derived deflections.
 AJ7602
 AJ7602.The ellipsoidal height was determined by GPS observations
```

```
AJ7602.and is referenced to NAD 83.
AJ7602
AJ7602.The dynamic height is computed by dividing the NAVD 88
AJ7602.geopotential number by the normal gravity value computed on the
AJ7602.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7602.degrees latitude (g = 980.6199 gals.).
AJ7602
AJ7602.The modeled gravity was interpolated from observed gravity values.
AJ7602
AJ7602. The following values were computed from the NAD 83(2011) position.
AJ7602
AJ7602;                    North         East     Units Scale Factor Converg.
AJ7602;SPC FL E     -   250,268.471   187,344.820   MT  0.99994315   -0 03 24.8
AJ7602;SPC FL E     -   821,089.14    614,647.13   sFT  0.99994315   -0 03 24.8
AJ7602;UTM  17      - 2,941,315.062   487,349.138   MT  0.99960198   -0 03 24.8
AJ7602
AJ7602!             -  Elev Factor  x  Scale Factor =   Combined Factor
AJ7602!SPC FL E     -   1.00000261  x   0.99994315  =   0.99994576
AJ7602!UTM  17      -   1.00000261  x   0.99960198  =   0.99960459
AJ7602
AJ7602                          SUPERSEDED SURVEY CONTROL
AJ7602
AJ7602  NAD 83(2007)-  26 35 33.21510(N)    081 07 37.39713(W) AD(2002.00) 0
AJ7602  ELLIP H (02/10/07)  -16.621  (m)                       GP(2002.00)
AJ7602  NAD 83(1999)-  26 35 33.21518(N)    081 07 37.39721(W) AD(       ) 1
AJ7602  ELLIP H (12/12/02)  -16.624  (m)                       GP(       ) 3 1
AJ7602  NAVD 88 (12/12/02)    7.90   (m)           25.9    (f) LEVELING    3
AJ7602
AJ7602.Superseded values are not recommended for survey control.
AJ7602
AJ7602.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AJ7602.See file dsdata.txt to determine how the superseded data were derived.
AJ7602
AJ7602_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK8734941315(NAD 83)
AJ7602
AJ7602_MARKER: DD = SURVEY DISK
AJ7602_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AJ7602_STAMPING: Q 530 2001 CERP
AJ7602_MARK LOGO: USE
AJ7602_PROJECTION: RECESSED 5 CENTIMETERS
AJ7602_MAGNETIC: O = OTHER; SEE DESCRIPTION
AJ7602_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AJ7602+STABILITY: SURFACE MOTION
AJ7602_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ7602+SATELLITE: SATELLITE OBSERVATIONS - April 26, 2002
AJ7602
AJ7602  HISTORY     - Date     Condition        Report By
AJ7602  HISTORY     - 20010528 MONUMENTED       EMCINC
AJ7602  HISTORY     - 20020426 GOOD             MAPTEC
AJ7602  HISTORY     - 20050907 GOOD             INDIV
AJ7602
AJ7602                          STATION DESCRIPTION
AJ7602
AJ7602'DESCRIBED BY EMC INCORPORATED 2001 (MKC)
AJ7602'THE MARK IS LOCATED ABOUT 27.4 KILOMETERS (17.0 MILES) SOUTH
AJ7602'SOUTHWEST OF MOORE HAVEN, FLORIDA ABOUT 35.5 KILOMETERS (22.0
AJ7602'MILES) EAST NORTHEAST OF IMMOKALEE, FLORIDA, ON THE RIGHT OF WAY
AJ7602'OF COUNTY ROAD 833. LOCATED ON THE GRAHAM MARSH QUAD, SECTION 3,
AJ7602'TOWNSHIP 45 SOUTH, RANGE 32 EAST.
AJ7602'
AJ7602'OWNERSHIP  FLDT
AJ7602'
AJ7602'TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 80 AND
AJ7602'COUNTY ROAD 833 ABOUT 17.7 KILOMETERS (11.0 MILES) WEST OF
```

AJ7602'CLEWISTON, FLORIDA, GO SOUTH ON COUNTY ROAD 833 17.9 KILOMETERS
AJ7602'(11.1 MILES) TO THE MARK ON THE LEFT (EAST) SIDE OF THE ROAD.
AJ7602'ALSO TO REACH THE MARK FROM THE INTERSECTION OF COUNTY ROAD
AJ7602'833 AND COUNTY ROAD 846 ABOUT 32.2 KILOMETERS (20.0 MILES) EAST OF
AJ7602'IMMOKALEE, FLORIDA GO NORTH ON COUNTY ROAD 833 14.75
AJ7602'KILOMETERS (9.15 MILES) TO THE MARK ON THE RIGHT.
AJ7602'
AJ7602'THE MARK IS 17.0 METERS (55.8 FEET) EAST OF THE CENTER OF COUNTY
AJ7602'ROAD 833, 5.0 METERS (16.4 FEET) NORTH OF THE CENTER OF A FIELD
AJ7602'ACCESS ROAD TO THE EAST, 0.35 METERS (1.1 FEET) WEST OF A CARSONITE
AJ7602'WITNESS POST SET IN A NORTH-SOUTH BARBWIRE FENCE, AND 0.25 METERS
AJ7602'(0.8 FEET) SOUTH OF A MAGNET BURIED 0.1 METERS (0.3 FEET) BELOW
AJ7602'GROUND.
AJ7602'
AJ7602'
AJ7602'
AJ7602'
AJ7602'
AJ7602
AJ7602 STATION RECOVERY (2002)
AJ7602
AJ7602'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CP)
AJ7602'THE MARK IS LOCATED ABOUT 27.4 KILOMETERS (17.0 MILES) SOUTH
AJ7602'SOUTHWEST OF MOORE HAVEN, FLORIDA ABOUT 35.5 KILOMETERS (22.0
AJ7602'MILES) EAST NORTHEAST OF IMMOKALEE, FLORIDA, ON THE RIGHT OF WAY
AJ7602'OF COUNTY ROAD 833. LOCATED ON THE GRAHAM MARSH QUAD, SECTION 3,
AJ7602'TOWNSHIP 45 SOUTH, RANGE 32 EAST.
AJ7602'
AJ7602'OWNERSHIP FLDT
AJ7602'
AJ7602'TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 80 AND
AJ7602'COUNTY ROAD 833 ABOUT 17.7 KILOMETERS (11.0 MILES) WEST OF
AJ7602'CLEWISTON, FLORIDA, GO SOUTH ON COUNTY ROAD 833 17.9 KILOMETERS
AJ7602'(11.1 MILES) TO THE MARK ON THE LEFT (EAST) SIDE OF THE ROAD.
AJ7602'ALSO TO REACH THE MARK FROM THE INTERSECTION OF COUNTY ROAD
AJ7602'833 AND COUNTY ROAD 846 ABOUT 32.2 KILOMETERS (20.0 MILES) EAST OF
AJ7602'IMMOKALEE, FLORIDA GO NORTH ON COUNTY ROAD 833 14.75
AJ7602'KILOMETERS (9.15 MILES) TO THE MARK ON THE RIGHT.
AJ7602'
AJ7602'THE MARK IS 17.0 METERS (55.8 FEET) EAST OF THE CENTER OF COUNTY
AJ7602'ROAD 833, 5.0 METERS (16.4 FEET) NORTH OF THE CENTER OF A FIELD
AJ7602'ACCESS ROAD TO THE EAST, 0.35 METERS (1.1 FEET) WEST OF A CARSONITE
AJ7602'WITNESS POST SET IN A NORTH-SOUTH BARBWIRE FENCE, AND 0.25 METERS
AJ7602'(0.8 FEET) SOUTH OF A MAGNET BURIED 0.1 METERS (0.3 FEET) BELOW
AJ7602'GROUND.
AJ7602'
AJ7602'STATION RECOVERY (2002)
AJ7602'RECOVERY NOTE BY MAPTECH, INCORPORATED 2002 (CP)
AJ7602'RECOVERED AS DESCRIBED.
AJ7602'
AJ7602'
AJ7602'
AJ7602'
AJ7602
AJ7602 STATION RECOVERY (2005)
AJ7602
AJ7602'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2005 (DL)
AJ7602'RECOVERED AS DESCRIBED

*** retrieval complete.
Elapsed Time = 00:00:04

The NGS Data Sheet

From the NGS Adjustment file "ngvd29.txt" for the CERP Geodetic Vertical Control Project.
Line/Part: L26225 SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark ID	SSN	PID	Designation	Geopotential	Elevation	Codes
1484	2214	AJ7602	Q 530	8.1398	8.3059	
1485	2215	AJ7617	R 530	7.8557	8.0161	

See file dsdata.txt for more information about the datasheet.

```
PROGRAM = datasheet95, VERSION = 8.7
1        National Geodetic Survey,   Retrieval Date = JULY  1, 2015
 AJ7617 ***********************************************************************
 AJ7617  DESIGNATION -  R 530
 AJ7617  PID         -  AJ7617
 AJ7617  STATE/COUNTY-  FL/HENDRY
 AJ7617  COUNTRY     -  US
 AJ7617  USGS QUAD   -  GRAHAM MARSH (1971)
 AJ7617
 AJ7617                        *CURRENT SURVEY CONTROL
 AJ7617  ______________________________________________________________________
 AJ7617* NAD 83(2011) POSITION- 26 34 38.35089(N) 081 07 36.69558(W)   ADJUSTED
 AJ7617* NAD 83(2011) ELLIP HT-   -16.945 (meters)        (06/27/12)   ADJUSTED
 AJ7617* NAD 83(2011) EPOCH    -  2010.00
 AJ7617* NAVD 88 ORTHO HEIGHT -     7.604 (meters)       24.95  (feet) ADJUSTED
 AJ7617  ______________________________________________________________________
 AJ7617  NAD 83(2011) X  -    880,439.864 (meters)                    COMP
 AJ7617  NAD 83(2011) Y  - -5,639,667.341 (meters)                    COMP
 AJ7617  NAD 83(2011) Z  -  2,836,401.382 (meters)                    COMP
 AJ7617  LAPLACE CORR    -         -0.69  (seconds)                   DEFLEC12B
 AJ7617  GEOID HEIGHT    -        -24.56  (meters)                    GEOID12B
 AJ7617  DYNAMIC HEIGHT  -          7.592 (meters)       24.91  (feet) COMP
 AJ7617  MODELED GRAVITY -    979,085.0   (mgal)                      NAVD 88
 AJ7617
 AJ7617  VERT ORDER      -  FIRST     CLASS II
 AJ7617
 AJ7617  Network accuracy estimates per FGDC Geospatial Positioning Accuracy
 AJ7617  Standards:
 AJ7617         FGDC (95% conf, cm)     Standard deviation (cm)      CorrNE
 AJ7617            Horiz  Ellip           SD_N   SD_E   SD_h      (unitless)
 AJ7617  ------------------------------------------------------------------
 AJ7617  NETWORK    2.43   3.74           0.92   1.06   1.91      0.04508415
 AJ7617  ------------------------------------------------------------------
 AJ7617  Click here for local accuracies and other accuracy information.
 AJ7617
 AJ7617
 AJ7617.The horizontal coordinates were established by GPS observations
 AJ7617.and adjusted by the National Geodetic Survey in June 2012.
 AJ7617
 AJ7617.NAD 83(2011) refers to NAD 83 coordinates where the reference
 AJ7617.frame has been affixed to the stable North American tectonic plate. See
 AJ7617.NA2011 for more information.
 AJ7617
 AJ7617.The horizontal coordinates are valid at the epoch date displayed above
 AJ7617.which is a decimal equivalence of Year/Month/Day.
 AJ7617
 AJ7617.The orthometric height was determined by differential leveling and
 AJ7617.adjusted by the NATIONAL GEODETIC SURVEY
 AJ7617.in February 2002.
 AJ7617
 AJ7617.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ7617
 AJ7617.The Laplace correction was computed from DEFLEC12B derived deflections.
 AJ7617
 AJ7617.The ellipsoidal height was determined by GPS observations
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AJ7617.and is referenced to NAD 83.
AJ7617
AJ7617.The dynamic height is computed by dividing the NAVD 88
AJ7617.geopotential number by the normal gravity value computed on the
AJ7617.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7617.degrees latitude (g = 980.6199 gals.).
AJ7617
AJ7617.The modeled gravity was interpolated from observed gravity values.
AJ7617
AJ7617. The following values were computed from the NAD 83(2011) position.
AJ7617
AJ7617;                    North         East     Units Scale Factor Converg.
AJ7617;SPC FL E     -   248,580.000   187,362.538   MT  0.99994315   -0 03 24.3
AJ7617;SPC FL E     -   815,549.55    614,705.26   sFT  0.99994315   -0 03 24.3
AJ7617;UTM  17      - 2,939,627.167   487,366.850   MT  0.99960197   -0 03 24.3
AJ7617
AJ7617!             -  Elev Factor  x  Scale Factor =   Combined Factor
AJ7617!SPC FL E     -   1.00000266  x   0.99994315  =   0.99994581
AJ7617!UTM  17      -   1.00000266  x   0.99960197  =   0.99960463
AJ7617
AJ7617                          SUPERSEDED SURVEY CONTROL
AJ7617
AJ7617  NAD 83(2007)-  26 34 38.35102(N)    081 07 36.69626(W) AD(2002.00) 0
AJ7617  ELLIP H (02/10/07)  -16.926  (m)                       GP(2002.00)
AJ7617  NAD 83(1999)-  26 34 38.35110(N)    081 07 36.69633(W) AD(       ) 1
AJ7617  ELLIP H (12/12/02)  -16.929  (m)                       GP(       ) 3 1
AJ7617  NAVD 88 (12/12/02)    7.60   (m)           24.9    (f) LEVELING    3
AJ7617
AJ7617.Superseded values are not recommended for survey control.
AJ7617
AJ7617.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AJ7617.See file dsdata.txt to determine how the superseded data were derived.
AJ7617
AJ7617_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK8736639627(NAD 83)
AJ7617
AJ7617_MARKER: F = FLANGE-ENCASED ROD
AJ7617_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
AJ7617_STAMPING: R 530 2001 CERP
AJ7617_MARK LOGO: NONE
AJ7617_PROJECTION: RECESSED 15 CENTIMETERS
AJ7617_MAGNETIC: O = OTHER; SEE DESCRIPTION
AJ7617_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AJ7617_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ7617+SATELLITE: SATELLITE OBSERVATIONS - May 06, 2002
AJ7617_ROD/PIPE-DEPTH: 18.2 meters
AJ7617
AJ7617  HISTORY     - Date     Condition        Report By
AJ7617  HISTORY     - 20010528 MONUMENTED       EMCINC
AJ7617  HISTORY     - 20020506 GOOD             MAPTEC
AJ7617  HISTORY     - 20050818 GOOD             INDIV
AJ7617
AJ7617                          STATION DESCRIPTION
AJ7617
AJ7617'DESCRIBED BY EMC INCORPORATED 2001 (MKC)
AJ7617'THE MARK IS LOCATED ABOUT 29.0 KILOMETERS (18.0 MILES) SOUTH
AJ7617'SOUTHWEST OF MOORE HAVEN, FLORIDA ABOUT 35.5 KILOMETERS (22.0
AJ7617'MILES) EAST, NORTHEAST OF IMMOKALEE, FLORIDA, ON THE RIGHT OF WAY
AJ7617'OF COUNTY ROAD 833. LOCATED ON THE GRAHAM MARSH QUAD,
AJ7617'SECTION 15, TOWNSHIP 45 SOUTH, RANGE 32 EAST.
AJ7617'
AJ7617'OWNERSHIP  FLDT
AJ7617'
AJ7617'TO REACH THE MARK FROM THE INTERSECTION OF COUNTY ROAD 846
AJ7617'AND COUNTY ROAD 833 ABOUT 32.2 KILOMETERS (20.0 MILES) EAST OF
```

AJ7617'IMMOKALEE, FLORIDA GO NORTH ON COUNTY ROAD 833 FOR 13.06
AJ7617'KILOMETERS (8.1 MILES) TO THE MARK ON THE RIGHT(EAST) SIDE OF
AJ7617'THE ROAD.
AJ7617'
AJ7617'THE MARK IS 16.9 METERS (55.5 FEET) EAST OF THE CENTER OF COUNTY
AJ7617'ROAD 833, 10.65 METERS (35.0 FEET) NORTH OF A POWER POLE, 1.5 METERS
AJ7617'(5.0 FEET) SOUTH OF THE SOUTH GATE POST AT A FIELD ENTRANCE LEADING
AJ7617'EAST, AND 0.45 METERS (1.5 FEET) WEST OF A CARSONITE WITNESS POST
AJ7617'SET IN A NORTH-SOUTH BARBWIRE FENCE.
AJ7617'THE MARK IS A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT 18.28
AJ7617'METERS, LOCATED IN A 5-INCH LOGO COVER, RECESSED 0.1 METERS (0.3
AJ7617'FEET). A MAGNET WAS PLACED INSIDE THE LOGO COVER.
AJ7617'
AJ7617'
AJ7617'
AJ7617'
AJ7617'
AJ7617
AJ7617 STATION RECOVERY (2002)
AJ7617
AJ7617'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CP)
AJ7617'THE MARK IS LOCATED ABOUT 29.0 KILOMETERS (18.0 MILES) SOUTH
AJ7617'SOUTHWEST OF MOORE HAVEN, FLORIDA ABOUT 35.5 KILOMETERS (22.0
AJ7617'MILES) EAST, NORTHEAST OF IMMOKALEE, FLORIDA, ON THE RIGHT OF WAY
AJ7617'OF COUNTY ROAD 833. LOCATED ON THE GRAHAM MARSH QUAD,
AJ7617'SECTION 15, TOWNSHIP 45 SOUTH, RANGE 32 EAST.
AJ7617'
AJ7617'OWNERSHIP FLDT
AJ7617'
AJ7617'TO REACH THE MARK FROM THE INTERSECTION OF COUNTY ROAD 846
AJ7617'AND COUNTY ROAD 833 ABOUT 32.2 KILOMETERS (20.0 MILES) EAST OF
AJ7617'IMMOKALEE, FLORIDA GO NORTH ON COUNTY ROAD 833 FOR 13.06
AJ7617'KILOMETERS (8.1 MILES) TO THE MARK ON THE RIGHT(EAST) SIDE OF
AJ7617'THE ROAD.
AJ7617'
AJ7617'THE MARK IS 16.9 METERS (55.5 FEET) EAST OF THE CENTER OF COUNTY
AJ7617'ROAD 833, 10.65 METERS (35.0 FEET) NORTH OF A POWER POLE, 1.5 METERS
AJ7617'(5.0 FEET) SOUTH OF THE SOUTH GATE POST AT A FIELD ENTRANCE LEADING
AJ7617'EAST, AND 0.45 METERS (1.5 FEET) WEST OF A CARSONITE WITNESS POST
AJ7617'SET IN A NORTH-SOUTH BARBWIRE FENCE.
AJ7617'THE MARK IS A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT 18.28
AJ7617'METERS, LOCATED IN A 5-INCH LOGO COVER, RECESSED 0.1 METERS (0.3
AJ7617'FEET). A MAGNET WAS PLACED INSIDE THE LOGO COVER.
AJ7617'
AJ7617'STATION RECOVERY (2002)
AJ7617'RECOVERY NOTE BY MAPTECH, INCORPORATED 2002 (CP)
AJ7617'RECOVERED AS DESCRIBED.
AJ7617'
AJ7617'
AJ7617'
AJ7617'
AJ7617'
AJ7617'
AJ7617
AJ7617 STATION RECOVERY (2005)
AJ7617
AJ7617'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2005 (DL)
AJ7617'RECOVERED AS DESCRIBED

*** retrieval complete.
Elapsed Time = 00:00:10

STAR*NET-LEV Version 6.0.25

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Run Date: Tue Dec 20 2005 13:58:56

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name HE854
Project Folder J:\2002\A020801.06\STARNET
Data File List he854.dat

Project Option Settings

STAR*NET Run Mode : Adjust with Error Propagation
Type of Adjustment : Lev
Project Units : FeetUS
Input/Output Coordinate Order : North-East
Create Coordinate File : Yes

Instrument Standard Error Settings

Project Default Instrument
  Differential Levels : 0.010000 FeetUS / Mile

Listing of Input Data

[File: J:\2002\A020801.06\STARNET\HE854.DAT]
.Units FeetUS
.Sep   -
.3D

#NAVD88 BM ELEVATIONS
E   R530   24.95   !
E   Q530   25.90   !

#ELEVATION DIFFERENCE RECORDS

#STATIONS		DIFFERENCE	DIST	DESCRIPTOR
L	R530-1		2.07600	390.58000
L	1-2		0.82100	402.78000
L	2-3		0.17000	411.66000
L	3-4		0.88800	414.90000
L	4-5		-0.22200	405.84000
L	5-6		0.30900	400.74000
L	6-7		-0.02900	399.08000
L	7-8		-0.18000	396.42000
L	8-9		-0.84000	393.64000
L	9-10		-0.22700	414.50000
L	10-11		0.31400	373.50000
L	11-12		0.01800	413.52000
L	12-13		-0.43900	375.84000
L	13-14		0.12800	402.44000
L	14-15		-0.32400	407.52000
L	15-16		0.00100	207.22000
L	16-17		0.35600	405.84000
L	17-18		-0.25500	408.40000
L	18-19		-0.17300	657.76000
L	19-20		0.27700	418.12000
L	20-21		-0.03200	417.04000
L	21-22		-0.16500	413.42000
L	22-23		-0.61100	405.22000
L	23-24		0.95300	401.40000
L	24-25		-0.29800	397.36000
L	25-26		0.15600	398.74000
L	26-27		0.61900	401.32000
L	27-28		-0.45200	427.80000
L	28-29		-0.07300	422.34000
L	29-30		-0.03000	407.52000
L	30-31		-0.08000	405.88000
L	31-32		-0.56200	402.26000
L	32-33		0.51300	404.38000
L	33-34		-0.00700	404.48000
L	34-35		0.17300	406.74000
L	35-36		-0.13800	404.86000
L	36-37		-0.11600	400.24000
L	37-38		-0.18100	430.48000
L	38-39		0.25300	404.96000

L	39-40	-0.10100	403.08000
L	40-41	0.35700	407.56000
L	41-42	0.06000	401.92000
L	42-43	-0.99700	397.32000
L	43-44	0.29100	424.20000
L	44-45	0.30300	400.68000
L	45-46	-0.30200	407.72000
L	46-47	-0.01600	404.06000
L	47-48	0.03300	386.26000
L	48-49	-0.29100	418.48000
L	49-50	0.03300	449.80000
L	50-51	-0.79300	418.86000
L	51-52	0.37900	417.86000
L	52-53	-0.04000	408.06000
L	53-54	0.03000	407.24000
L	54-55	0.02100	407.08000
L	55-56	0.00400	411.58000
L	56-57	-0.42200	410.24000
L	57-58	0.36000	414.78000
L	58-59	-0.13800	404.50000
L	59-60	-0.24000	406.94000
L	60-61	-0.29300	411.32000
L	61-62	-0.16600	405.36000
L	62-63	0.03500	409.84000
L	63-64	-0.99200	409.86000
L	64-65	-0.08100	409.36000
L	65-66	0.24400	408.96000
L	66-67	-0.07900	406.92000
L	67-68	0.04300	404.36000
L	68-69	-0.00300	402.72000
L	69-70	-0.61800	402.18000
L	70-71	0.60400	397.74000
L	71-72	0.02700	401.68000
L	72-73	-0.32200	405.58000
L	73-74	-0.19200	409.60000
L	74-75	-0.01800	405.44000
L	75-76	-0.27500	404.60000
L	76-77	-0.26100	406.44000
L	77-78	0.21200	409.38000
L	78-79	-0.64100	419.08000
L	79-80	-0.34800	407.70000
L	80-81	0.17000	406.82000
L	81-82	-0.30700	399.88000
L	82-83	-0.30000	410.96000
L	83-84	0.40600	418.34000
L	84-85	-0.38600	420.30000
L	85-86	-1.04600	342.22000
L	86-87	1.04600	342.18000
L	87-88	0.38500	419.48000
L	88-HE85412	-0.40500	418.24000
L	HE85412-91	0.30100	410.92000
L	91-92	0.30800	400.24000
L	92-93	-0.15500	404.50000
L	93-94	0.33300	409.86000

L	94-95	0.55600	422.80000
L	95-96	-0.12700	405.28000
L	96-97	0.30700	404.76000
L	97-98	0.22700	405.96000
L	98-99	0.01700	405.20000
L	99-100	0.19500	409.40000
L	100-101	0.32200	405.32000
L	101-102	-0.03200	401.50000
L	102-103	-0.60400	397.64000
L	103-104	0.61400	401.94000
L	104-105	0.00400	402.58000
L	105-106	-0.04500	404.16000
L	106-107	0.08000	406.72000
L	107-108	-0.23800	408.62000
L	108-109	0.07700	409.18000
L	109-110	0.99000	409.56000
L	110-111	-0.03000	409.76000
L	111-112	0.18000	405.30000
L	112-113	0.28300	411.22000
L	113-114	0.24000	406.88000
L	114-115	0.13700	404.50000
L	115-116	-0.36000	414.90000
L	116-117	0.41800	410.20000
L	117-118	0.00000	411.50000
L	118-119	-0.01900	406.88000
L	119-120	-0.03300	407.28000
L	120-121	0.04100	408.12000
L	121-122	-0.37300	418.12000
L	122-123	0.79200	418.64000
L	123-124	-0.04600	449.76000
L	124-125	0.30100	418.52000
L	125-126	-0.03100	386.06000
L	126-127	0.01300	404.12000
L	127-128	0.30800	407.64000
L	128-129	-0.30000	401.32000
L	129-130	-0.29500	424.34000
L	130-131	0.99800	397.48000
L	131-132	-0.05700	402.10000
L	132-133	-0.36000	407.66000
L	133-134	0.09200	403.06000
L	134-135	-0.25600	407.18000
L	135-136	0.18000	430.48000
L	136-137	0.08400	400.44000
L	137-138	0.15900	404.74000
L	138-139	-0.17700	406.72000
L	139-140	0.00600	404.54000
L	140-141	-0.50400	404.38000
L	141-142	0.56200	402.10000
L	142-143	0.07900	405.82000
L	143-144	0.01300	407.42000
L	144-145	0.09000	422.30000
L	145-146	0.45200	427.64000
L	146-147	-0.63500	401.38000
L	147-148	-0.06200	399.24000

L	148-149	0.22200	396.88000
L	149-150	-0.95100	401.40000
L	150-151	0.60900	405.34000
L	151-152	0.16100	413.24000
L	152-153	0.03800	417.00000
L	153-154	-0.27300	418.30000
L	154-155	0.15100	430.68000
L	155-156	0.26300	408.44000
L	156-157	-0.34200	405.56000
L	157-158	-0.00400	207.34000
L	158-159	0.32200	407.34000
L	159-160	-0.13100	402.68000
L	160-161	0.43500	375.82000
L	161-162	-0.02500	413.48000
L	162-163	-0.31500	373.28000
L	163-164	1.27400	447.78000
L	164-165	-0.14500	409.00000
L	165-166	0.22100	419.22000
L	166-167	0.10600	439.90000
L	167-Q530	-3.24400	223.72000

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetUS) = 2

Fixed Stations	Elev	Description
R530	24.9500	
Q530	25.9000	

Number of Differential Level Observations (FeetUS) = 167

From	To	Elev Diff	StdErr	Length
R530	1	2.0760	0.0027	391
1	2	0.8210	0.0028	403
2	3	0.1700	0.0028	412
3	4	0.8880	0.0028	415
4	5	-0.2220	0.0028	406
5	6	0.3090	0.0028	401
6	7	-0.0290	0.0027	399
7	8	-0.1800	0.0027	396
8	9	-0.8400	0.0027	394
9	10	-0.2270	0.0028	415
10	11	0.3140	0.0027	374
11	12	0.0180	0.0028	414
12	13	-0.4390	0.0027	376
13	14	0.1280	0.0028	402
14	15	-0.3240	0.0028	408
15	16	0.0010	0.0020	207
16	17	0.3560	0.0028	406
17	18	-0.2550	0.0028	408
18	19	-0.1730	0.0035	658
19	20	0.2770	0.0028	418
20	21	-0.0320	0.0028	417
21	22	-0.1650	0.0028	413
22	23	-0.6110	0.0028	405
23	24	0.9530	0.0028	401
24	25	-0.2980	0.0027	397
25	26	0.1560	0.0027	399
26	27	0.6190	0.0028	401
27	28	-0.4520	0.0028	428
28	29	-0.0730	0.0028	422
29	30	-0.0300	0.0028	408
30	31	-0.0800	0.0028	406
31	32	-0.5620	0.0028	402
32	33	0.5130	0.0028	404
33	34	-0.0070	0.0028	404
34	35	0.1730	0.0028	407
35	36	-0.1380	0.0028	405
36	37	-0.1160	0.0028	400
37	38	-0.1810	0.0029	430
38	39	0.2530	0.0028	405
39	40	-0.1010	0.0028	403
40	41	0.3570	0.0028	408
41	42	0.0600	0.0028	402

42	43	-0.9970	0.0027	397
43	44	0.2910	0.0028	424
44	45	0.3030	0.0028	401
45	46	-0.3020	0.0028	408
46	47	-0.0160	0.0028	404
47	48	0.0330	0.0027	386
48	49	-0.2910	0.0028	418
49	50	0.0330	0.0029	450
50	51	-0.7930	0.0028	419
51	52	0.3790	0.0028	418
52	53	-0.0400	0.0028	408
53	54	0.0300	0.0028	407
54	55	0.0210	0.0028	407
55	56	0.0040	0.0028	412
56	57	-0.4220	0.0028	410
57	58	0.3600	0.0028	415
58	59	-0.1380	0.0028	405
59	60	-0.2400	0.0028	407
60	61	-0.2930	0.0028	411
61	62	-0.1660	0.0028	405
62	63	0.0350	0.0028	410
63	64	-0.9920	0.0028	410
64	65	-0.0810	0.0028	409
65	66	0.2440	0.0028	409
66	67	-0.0790	0.0028	407
67	68	0.0430	0.0028	404
68	69	-0.0030	0.0028	403
69	70	-0.6180	0.0028	402
70	71	0.6040	0.0027	398
71	72	0.0270	0.0028	402
72	73	-0.3220	0.0028	406
73	74	-0.1920	0.0028	410
74	75	-0.0180	0.0028	405
75	76	-0.2750	0.0028	405
76	77	-0.2610	0.0028	406
77	78	0.2120	0.0028	409
78	79	-0.6410	0.0028	419
79	80	-0.3480	0.0028	408
80	81	0.1700	0.0028	407
81	82	-0.3070	0.0028	400
82	83	-0.3000	0.0028	411
83	84	0.4060	0.0028	418
84	85	-0.3860	0.0028	420
85	86	-1.0460	0.0025	342
86	87	1.0460	0.0025	342
87	88	0.3850	0.0028	419
88	HE85412	-0.4050	0.0028	418
HE85412	91	0.3010	0.0028	411
91	92	0.3080	0.0028	400
92	93	-0.1550	0.0028	405
93	94	0.3330	0.0028	410
94	95	0.5560	0.0028	423
95	96	-0.1270	0.0028	405
96	97	0.3070	0.0028	405

97	98	0.2270	0.0028	406
98	99	0.0170	0.0028	405
99	100	0.1950	0.0028	409
100	101	0.3220	0.0028	405
101	102	-0.0320	0.0028	402
102	103	-0.6040	0.0027	398
103	104	0.6140	0.0028	402
104	105	0.0040	0.0028	403
105	106	-0.0450	0.0028	404
106	107	0.0800	0.0028	407
107	108	-0.2380	0.0028	409
108	109	0.0770	0.0028	409
109	110	0.9900	0.0028	410
110	111	-0.0300	0.0028	410
111	112	0.1800	0.0028	405
112	113	0.2830	0.0028	411
113	114	0.2400	0.0028	407
114	115	0.1370	0.0028	405
115	116	-0.3600	0.0028	415
116	117	0.4180	0.0028	410
117	118	0.0000	0.0028	412
118	119	-0.0190	0.0028	407
119	120	-0.0330	0.0028	407
120	121	0.0410	0.0028	408
121	122	-0.3730	0.0028	418
122	123	0.7920	0.0028	419
123	124	-0.0460	0.0029	450
124	125	0.3010	0.0028	419
125	126	-0.0310	0.0027	386
126	127	0.0130	0.0028	404
127	128	0.3080	0.0028	408
128	129	-0.3000	0.0028	401
129	130	-0.2950	0.0028	424
130	131	0.9980	0.0027	397
131	132	-0.0570	0.0028	402
132	133	-0.3600	0.0028	408
133	134	0.0920	0.0028	403
134	135	-0.2560	0.0028	407
135	136	0.1800	0.0029	430
136	137	0.0840	0.0028	400
137	138	0.1590	0.0028	405
138	139	-0.1770	0.0028	407
139	140	0.0060	0.0028	405
140	141	-0.5040	0.0028	404
141	142	0.5620	0.0028	402
142	143	0.0790	0.0028	406
143	144	0.0130	0.0028	407
144	145	0.0900	0.0028	422
145	146	0.4520	0.0028	428
146	147	-0.6350	0.0028	401
147	148	-0.0620	0.0027	399
148	149	0.2220	0.0027	397
149	150	-0.9510	0.0028	401
150	151	0.6090	0.0028	405

151	152	0.1610	0.0028	413
152	153	0.0380	0.0028	417
153	154	-0.2730	0.0028	418
154	155	0.1510	0.0029	431
155	156	0.2630	0.0028	408
156	157	-0.3420	0.0028	406
157	158	-0.0040	0.0020	207
158	159	0.3220	0.0028	407
159	160	-0.1310	0.0028	403
160	161	0.4350	0.0027	376
161	162	-0.0250	0.0028	413
162	163	-0.3150	0.0027	373
163	164	1.2740	0.0029	448
164	165	-0.1450	0.0028	409
165	166	0.2210	0.0028	419
166	167	0.1060	0.0029	440
167	Q530	-3.2440	0.0021	224

Adjustment Statistical Summary

Number of Stations = 168

Number of Observations = 167
Number of Unknowns = 166
Number of Redundant Obs = 1

Observation	Count	Sum Squares of StdRes	Error Factor
Level Data	167	0.007	0.084
Total	167	0.007	0.084

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.031/2.241)

Adjusted Elevations and Error Propagation (FeetUS)

Station	Elev	StdDev	95%	Description
R530	24.9500	0.000000	0.000000	
Q530	25.9000	0.000000	0.000000	
1	27.0260	0.002712	0.005315	
2	27.8470	0.003854	0.007553	
3	28.0169	0.004735	0.009280	
4	28.9049	0.005472	0.010726	
5	28.6829	0.006101	0.011957	
6	28.9919	0.006656	0.013046	
7	28.9629	0.007161	0.014035	
8	28.7829	0.007624	0.014942	
9	27.9428	0.008051	0.015780	
10	27.7158	0.008473	0.016606	
11	28.0298	0.008830	0.017307	
12	28.0478	0.009205	0.018042	
13	27.6088	0.009529	0.018677	
14	27.7368	0.009860	0.019325	
15	27.4127	0.010179	0.019950	
16	27.4137	0.010336	0.020257	
17	27.7697	0.010633	0.020840	
18	27.5147	0.010919	0.021401	
19	27.3417	0.011357	0.022259	
20	27.6186	0.011621	0.022777	
21	27.5866	0.011875	0.023274	
22	27.4216	0.012117	0.023749	
23	26.8106	0.012346	0.024198	
24	27.7636	0.012565	0.024628	
25	27.4656	0.012775	0.025039	
26	27.6215	0.012979	0.025438	
27	28.2405	0.013177	0.025827	
28	27.7885	0.013382	0.026228	
29	27.7155	0.013577	0.026611	
30	27.6855	0.013759	0.026968	
31	27.6054	0.013935	0.027313	
32	27.0434	0.014104	0.027644	
33	27.5564	0.014269	0.027966	
34	27.5494	0.014428	0.028279	
35	27.7224	0.014584	0.028584	
36	27.5844	0.014734	0.028878	
37	27.4683	0.014878	0.029160	
38	27.2873	0.015028	0.029454	
39	27.5403	0.015164	0.029722	
40	27.4393	0.015296	0.029980	
41	27.7963	0.015425	0.030233	
42	27.8562	0.015548	0.030474	
43	26.8592	0.015666	0.030706	
44	27.1502	0.015788	0.030945	
45	27.4532	0.015900	0.031163	
46	27.1512	0.016010	0.031378	
47	27.1352	0.016115	0.031585	
48	27.1681	0.016212	0.031775	

49	26.8771	0.016314	0.031975
50	26.9101	0.016419	0.032181
51	26.1171	0.016514	0.032367
52	26.4961	0.016605	0.032544
53	26.4560	0.016690	0.032712
54	26.4860	0.016772	0.032872
55	26.5070	0.016851	0.033027
56	26.5110	0.016927	0.033177
57	26.0890	0.017000	0.033320
58	26.4490	0.017071	0.033459
59	26.3109	0.017137	0.033589
60	26.0709	0.017201	0.033713
61	25.7779	0.017262	0.033833
62	25.6119	0.017320	0.033946
63	25.6469	0.017375	0.034054
64	24.6548	0.017427	0.034157
65	24.5738	0.017477	0.034254
66	24.8178	0.017523	0.034345
67	24.7388	0.017567	0.034430
68	24.7818	0.017607	0.034510
69	24.7788	0.017645	0.034584
70	24.1607	0.017680	0.034653
71	24.7647	0.017712	0.034716
72	24.7917	0.017742	0.034774
73	24.4697	0.017770	0.034828
74	24.2777	0.017795	0.034877
75	24.2596	0.017817	0.034921
76	23.9846	0.017837	0.034959
77	23.7236	0.017854	0.034993
78	23.9356	0.017868	0.035021
79	23.2946	0.017881	0.035045
80	22.9466	0.017890	0.035063
81	23.1165	0.017896	0.035076
82	22.8095	0.017900	0.035084
83	22.5095	0.017902	0.035087
84	22.9155	0.017901	0.035084
85	22.5295	0.017897	0.035077
86	21.4834	0.017891	0.035066
87	22.5294	0.017884	0.035052
88	22.9144	0.017873	0.035030
HE85412	22.5094	0.017859	0.035003
91	22.8104	0.017843	0.034971
92	23.1184	0.017824	0.034934
93	22.9633	0.017803	0.034893
94	23.2963	0.017778	0.034845
95	23.8523	0.017751	0.034791
96	23.7253	0.017721	0.034733
97	24.0323	0.017689	0.034670
98	24.2593	0.017655	0.034602
99	24.2762	0.017617	0.034529
100	24.4712	0.017577	0.034450
101	24.7932	0.017534	0.034366
102	24.7612	0.017489	0.034278
103	24.1572	0.017442	0.034185

104	24.7711	0.017391	0.034086
105	24.7751	0.017338	0.033981
106	24.7301	0.017281	0.033871
107	24.8101	0.017222	0.033754
108	24.5721	0.017159	0.033631
109	24.6491	0.017093	0.033502
110	25.6390	0.017024	0.033367
111	25.6090	0.016952	0.033226
112	25.7890	0.016878	0.033080
113	26.0720	0.016799	0.032926
114	26.3120	0.016719	0.032768
115	26.4489	0.016635	0.032604
116	26.0889	0.016546	0.032430
117	26.5069	0.016455	0.032251
118	26.5069	0.016360	0.032065
119	26.4879	0.016263	0.031874
120	26.4549	0.016162	0.031676
121	26.4958	0.016057	0.031471
122	26.1228	0.015946	0.031254
123	26.9148	0.015831	0.031029
124	26.8688	0.015703	0.030778
125	27.1698	0.015580	0.030536
126	27.1387	0.015463	0.030306
127	27.1517	0.015336	0.030058
128	27.4597	0.015204	0.029799
129	27.1597	0.015070	0.029537
130	26.8647	0.014924	0.029250
131	27.8627	0.014782	0.028973
132	27.8056	0.014635	0.028684
133	27.4456	0.014480	0.028381
134	27.5376	0.014323	0.028073
135	27.2816	0.014159	0.027751
136	27.4616	0.013980	0.027400
137	27.5455	0.013808	0.027063
138	27.7045	0.013628	0.026711
139	27.5275	0.013442	0.026346
140	27.5335	0.013251	0.025971
141	27.0295	0.013053	0.025584
142	27.5915	0.012850	0.025186
143	27.6704	0.012638	0.024771
144	27.6834	0.012419	0.024340
145	27.7734	0.012182	0.023877
146	28.2254	0.011934	0.023390
147	27.5904	0.011692	0.022917
148	27.5283	0.011443	0.022428
149	27.7503	0.011186	0.021923
150	26.7993	0.010915	0.021393
151	27.4083	0.010630	0.020835
152	27.5693	0.010328	0.020242
153	27.6073	0.010008	0.019615
154	27.3342	0.009672	0.018956
155	27.4852	0.009307	0.018242
156	27.7482	0.008943	0.017528
157	27.4062	0.008560	0.016777

158	27.4022	0.008355	0.016376
159	27.7242	0.007934	0.015550
160	27.5931	0.007487	0.014675
161	28.0281	0.007040	0.013797
162	28.0031	0.006504	0.012749
163	27.6881	0.005973	0.011708
164	28.9621	0.005257	0.010303
165	28.8170	0.004492	0.008805
166	29.0380	0.003528	0.006914
167	29.1440	0.002055	0.004028

Adjusted Observations and Residuals

Adjusted Differential Level Observations (FeetUS)

From	To	Elev Diff	Residual	StdErr	StdRes
R530	1	2.0760	-0.0000	0.0027	0.0
1	2	0.8210	-0.0000	0.0028	0.0
2	3	0.1700	-0.0000	0.0028	0.0
3	4	0.8880	-0.0000	0.0028	0.0
4	5	-0.2220	-0.0000	0.0028	0.0
5	6	0.3090	-0.0000	0.0028	0.0
6	7	-0.0290	-0.0000	0.0027	0.0
7	8	-0.1800	-0.0000	0.0027	0.0
8	9	-0.8400	-0.0000	0.0027	0.0
9	10	-0.2270	-0.0000	0.0028	0.0
10	11	0.3140	-0.0000	0.0027	0.0
11	12	0.0180	-0.0000	0.0028	0.0
12	13	-0.4390	-0.0000	0.0027	0.0
13	14	0.1280	-0.0000	0.0028	0.0
14	15	-0.3240	-0.0000	0.0028	0.0
15	16	0.0010	-0.0000	0.0020	0.0
16	17	0.3560	-0.0000	0.0028	0.0
17	18	-0.2550	-0.0000	0.0028	0.0
18	19	-0.1730	-0.0000	0.0035	0.0
19	20	0.2770	-0.0000	0.0028	0.0
20	21	-0.0320	-0.0000	0.0028	0.0
21	22	-0.1650	-0.0000	0.0028	0.0
22	23	-0.6110	-0.0000	0.0028	0.0

23	24	0.9530	-0.0000	0.0028
0.0				
24	25	-0.2980	-0.0000	0.0027
0.0				
25	26	0.1560	-0.0000	0.0027
0.0				
26	27	0.6190	-0.0000	0.0028
0.0				
27	28	-0.4520	-0.0000	0.0028
0.0				
28	29	-0.0730	-0.0000	0.0028
0.0				
29	30	-0.0300	-0.0000	0.0028
0.0				
30	31	-0.0800	-0.0000	0.0028
0.0				
31	32	-0.5620	-0.0000	0.0028
0.0				
32	33	0.5130	-0.0000	0.0028
0.0				
33	34	-0.0070	-0.0000	0.0028
0.0				
34	35	0.1730	-0.0000	0.0028
0.0				
35	36	-0.1380	-0.0000	0.0028
0.0				
36	37	-0.1160	-0.0000	0.0028
0.0				
37	38	-0.1810	-0.0000	0.0029
0.0				
38	39	0.2530	-0.0000	0.0028
0.0				
39	40	-0.1010	-0.0000	0.0028
0.0				
40	41	0.3570	-0.0000	0.0028
0.0				
41	42	0.0600	-0.0000	0.0028
0.0				
42	43	-0.9970	-0.0000	0.0027
0.0				
43	44	0.2910	-0.0000	0.0028
0.0				
44	45	0.3030	-0.0000	0.0028
0.0				
45	46	-0.3020	-0.0000	0.0028
0.0				
46	47	-0.0160	-0.0000	0.0028
0.0				
47	48	0.0330	-0.0000	0.0027
0.0				
48	49	-0.2910	-0.0000	0.0028
0.0				
49	50	0.0330	-0.0000	0.0029
0.0				

50	51	-0.7930	-0.0000	0.0028
0.0				
51	52	0.3790	-0.0000	0.0028
0.0				
52	53	-0.0400	-0.0000	0.0028
0.0				
53	54	0.0300	-0.0000	0.0028
0.0				
54	55	0.0210	-0.0000	0.0028
0.0				
55	56	0.0040	-0.0000	0.0028
0.0				
56	57	-0.4220	-0.0000	0.0028
0.0				
57	58	0.3600	-0.0000	0.0028
0.0				
58	59	-0.1380	-0.0000	0.0028
0.0				
59	60	-0.2400	-0.0000	0.0028
0.0				
60	61	-0.2930	-0.0000	0.0028
0.0				
61	62	-0.1660	-0.0000	0.0028
0.0				
62	63	0.0350	-0.0000	0.0028
0.0				
63	64	-0.9920	-0.0000	0.0028
0.0				
64	65	-0.0810	-0.0000	0.0028
0.0				
65	66	0.2440	-0.0000	0.0028
0.0				
66	67	-0.0790	-0.0000	0.0028
0.0				
67	68	0.0430	-0.0000	0.0028
0.0				
68	69	-0.0030	-0.0000	0.0028
0.0				
69	70	-0.6180	-0.0000	0.0028
0.0				
70	71	0.6040	-0.0000	0.0027
0.0				
71	72	0.0270	-0.0000	0.0028
0.0				
72	73	-0.3220	-0.0000	0.0028
0.0				
73	74	-0.1920	-0.0000	0.0028
0.0				
74	75	-0.0180	-0.0000	0.0028
0.0				
75	76	-0.2750	-0.0000	0.0028
0.0				
76	77	-0.2610	-0.0000	0.0028
0.0				

77	78	0.2120	-0.0000	0.0028
0.0				
78	79	-0.6410	-0.0000	0.0028
0.0				
79	80	-0.3480	-0.0000	0.0028
0.0				
80	81	0.1700	-0.0000	0.0028
0.0				
81	82	-0.3070	-0.0000	0.0028
0.0				
82	83	-0.3000	-0.0000	0.0028
0.0				
83	84	0.4060	-0.0000	0.0028
0.0				
84	85	-0.3860	-0.0000	0.0028
0.0				
85	86	-1.0460	-0.0000	0.0025
0.0				
86	87	1.0460	-0.0000	0.0025
0.0				
87	88	0.3850	-0.0000	0.0028
0.0				
88	HE85412	-0.4050	-0.0000	0.0028
0.0				
HE85412	91	0.3010	-0.0000	0.0028
0.0				
91	92	0.3080	-0.0000	0.0028
0.0				
92	93	-0.1550	-0.0000	0.0028
0.0				
93	94	0.3330	-0.0000	0.0028
0.0				
94	95	0.5560	-0.0000	0.0028
0.0				
95	96	-0.1270	-0.0000	0.0028
0.0				
96	97	0.3070	-0.0000	0.0028
0.0				
97	98	0.2270	-0.0000	0.0028
0.0				
98	99	0.0170	-0.0000	0.0028
0.0				
99	100	0.1950	-0.0000	0.0028
0.0				
100	101	0.3220	-0.0000	0.0028
0.0				
101	102	-0.0320	-0.0000	0.0028
0.0				
102	103	-0.6040	-0.0000	0.0027
0.0				
103	104	0.6140	-0.0000	0.0028
0.0				
104	105	0.0040	-0.0000	0.0028
0.0				

105	106	-0.0450	-0.0000	0.0028
0.0				
106	107	0.0800	-0.0000	0.0028
0.0				
107	108	-0.2380	-0.0000	0.0028
0.0				
108	109	0.0770	-0.0000	0.0028
0.0				
109	110	0.9900	-0.0000	0.0028
0.0				
110	111	-0.0300	-0.0000	0.0028
0.0				
111	112	0.1800	-0.0000	0.0028
0.0				
112	113	0.2830	-0.0000	0.0028
0.0				
113	114	0.2400	-0.0000	0.0028
0.0				
114	115	0.1370	-0.0000	0.0028
0.0				
115	116	-0.3600	-0.0000	0.0028
0.0				
116	117	0.4180	-0.0000	0.0028
0.0				
117	118	-0.0000	-0.0000	0.0028
0.0				
118	119	-0.0190	-0.0000	0.0028
0.0				
119	120	-0.0330	-0.0000	0.0028
0.0				
120	121	0.0410	-0.0000	0.0028
0.0				
121	122	-0.3730	-0.0000	0.0028
0.0				
122	123	0.7920	-0.0000	0.0028
0.0				
123	124	-0.0460	-0.0000	0.0029
0.0				
124	125	0.3010	-0.0000	0.0028
0.0				
125	126	-0.0310	-0.0000	0.0027
0.0				
126	127	0.0130	-0.0000	0.0028
0.0				
127	128	0.3080	-0.0000	0.0028
0.0				
128	129	-0.3000	-0.0000	0.0028
0.0				
129	130	-0.2950	-0.0000	0.0028
0.0				
130	131	0.9980	-0.0000	0.0027
0.0				
131	132	-0.0570	-0.0000	0.0028
0.0				

132	133	-0.3600	-0.0000	0.0028
0.0				
133	134	0.0920	-0.0000	0.0028
0.0				
134	135	-0.2560	-0.0000	0.0028
0.0				
135	136	0.1800	-0.0000	0.0029
0.0				
136	137	0.0840	-0.0000	0.0028
0.0				
137	138	0.1590	-0.0000	0.0028
0.0				
138	139	-0.1770	-0.0000	0.0028
0.0				
139	140	0.0060	-0.0000	0.0028
0.0				
140	141	-0.5040	-0.0000	0.0028
0.0				
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02 00000216 Entered Stations
03 00000218 Fixed Elevations
02 00000222 Differential Level Observations
01 00000393 Adjustment Statistical Summary
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