```
Identification_Information:
        Citation:
                Citation_Information:
                        Originator: Darren Townsend(ed.)
                        Publication_Date: 20050518
                        Publication_Time: Unknown
                        Title: S.F.W.M.D. Well  LAKE LOTELLA
                        Series_Information:
                        Publication_Information:
                                Publication_Place: 20050518
                                Publisher: None
                        Online_Linkage: darrent@cooner.com
                        Larger_Work_Citation:
                                Citation_Information:
                                        Series_Information:
                                        Publication_Information:
        Description:
                Abstract:
                        South Florida Water Management District
                        Well LAKE LOTELLA
                Purpose:
                        To establish NAVD 88 and NGVD 29 elevations on the
                        wells reference marks from nearby, existing benchmarks.
                Supplemental_Information:
                        ACCOMPANYING DIGITAL FILES
                        LAKE LOTELLA.GEN , CORPSMET95 FILE
                        LAKE LOTELLA.DOC , BENCHMARK RECOVERY FORM
                        LAKE LOTELLA.PDF , SCANNED COPIES OF FIELD
                        NOTES, VERTCON CALCULATONS (IF APPLICABLE)
                        AND LEAST SQUARES ADJUSTMENT
                        LAKE LOTELLA.PPT , POWER POINT FILES OF WELL
                        SITE PICTURES
        Time_Period_of_Content:
                Time_Period_Information:
                        Single_Date/Time:
                        Range_of_Dates/Times:
                                Beginning_Date: 20050330
                                Ending_Date: 20050330
                        Multiple_Dates/Times:
                Currentness_Reference: Publication Date
        Status:
                Progress: Complete
                Maintenance_and_Update_Frequency: Unknown
        Spatial_Domain:
                Bounding_Coordinates:
                        West_Bounding_Coordinate: -081°26'07.59"
                        East_Bounding_Coordinate: -081°26'07.59"
                        North_Bounding_Coordinate: +27°35'28.43"
                        South_Bounding_Coordinate: +27°35'28.38"
        Keywords:
                Theme:
                        Theme_Keyword_Thesaurus: None
                        Theme_Keyword: Record Survey
                        Theme_Keyword: Well Site
                Place:
                        Place_Keyword_Thesaurus: None
                        Place_Keyword: SFWMD WELL LAKE LOTELLA
                        Place_Keyword: SEC. 20, TWP. 33 S, RGE 29 E
                        Place_Keyword: HIGHLANDS COUNTY, FL
                Stratum:
                Temporal:
        Access_Constraints: None
        Use_Constraints:
                The wells have keyed  or combination locks.
                See point of contact for key or combination.
        Point_of_Contact:
                Contact_Information:
                        Contact_Person_Primary:
                                Contact_Person: Elvie D. Ebanks
                                Contact_Organization: South Florida Water Management District
                        Contact_Organization_Primary:
                        Contact_Position: Professional Surveyor & Mapper
```

Darren Townsend
Cooner & Associates, Inc.

Purpose

Survey Date

Elvie Ebanks
SFWMD

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
Security_Information:
Cross_Reference:
Citation_Information:
Series_Information:
Publication_Information:
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 LEICA NA3003 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 Cape Canaveral. Vertical data was established using existing NGS control points S115 and R115.
Completeness_Report:

Project Results

Horizontal location taken at approximate center of well.
Well LAKE LOTELLA
Lat. +27.35'28.43'
Long. -081°26'07.59'
N 1184345.344'
E 515126.774'
Elevation taken on top of pipe extending above the well platform at the tip of a black triangle. Rim of pipe has a black mark at spot elevated.
New leveled elevations.
91.75' (NAVD 88)
92.72' (NGVD 29) cacluated using 0.97' offset value based on
difference between superseded survey control
NAVD88 and NGVD29 elevations as posted on existing
NGS data sheet for benchmark R115.
92.73' (NGVD 29) cacluated using 0.98' offset value based on
difference between superseded survey control
NAVD88 and NGVD29 elevations as posted on existing
NGS data sheet for benchmark S115.
.
NEW SITE BENCHMARK
TELL5 is a standard SFWMD aluminum
disk set in top of a class "C" concrete monument, flush with the ground. A magnet was set on the south side of the mark. From intersection of US Highway 27 and State Road 64 in Avon Park, FL, go east on State Road 64 to Avon Pines Road. Turn right at fork in the road, ~1.3 miles to mark on the left in pasture. Mark is in fenced well area.
Lat. +27.35'28.38'
Long. -081°26'07.59'
N 1184339.546'
E 515126.151'
88.64' (NAVD 88)
89.61' (NGVD 29) cacluated using 0.97' offset value based on
difference between superseded survey control
NAVD88 and NGVD29 elevations as posted on existing
NGS data sheet for benchmark R115.
89.62' (NGVD 29) cacluated using 0.98' offset value

based on
difference between superseded survey control
NAVD88 and NGVD29 elevations as posted on existing
NGS data sheet for benchmark S115.

Positional_Accuracy:
Horizontal_Positional_Accuracy:

Horizontal

Horizontal_Positional_Accuracy_Report:
The horizontal positions of the well and benchmark TELL5 were established with differentially corrected GPS signals from U.S. Coast Guard Beacon at Cape Canaveral.
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:

Level Line

Vertical_Positional_Accuracy_Report:
AA level line was run originating on NGS benchmark S115 with an NAVD 88 elevation and running through new site benchmarkTELL5 and terminating on NGS benchmark G198 in accordance with Florida Minimum Technical Standards (Chapter 61G17-6). The well platform was then elevated by a level line originating on new site benchmarkTELL5 with an newly established NAVD 88 elevation running through mark on well platform and terminating on new site benchmark TELLN5 in accordance with Florida Minimum Technical Standards (Chapter 61G17-6).
Quantitative_Vertical_Positional_Accuracy_Assessment:
Vertical_Positional_Accuracy_Value: 0.047 ft
Vertical_Positional_Accuracy_Explanation: NAVD 88 level run, 0.047 ft closure in 26245.7 ft, max. allowed 0.067 ft (MTS)
Quantitative_Vertical_Positional_Accuracy_Assessment:
Vertical_Positional_Accuracy_Value: 0.001 ft
Vertical_Positional_Accuracy_Explanation: NAVD 88 level run, 0.001 ft closure in 78.3 ft, max. allowed 0.004 ft (MTS)
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Series_Information:
Publication_Information:
Larger_Work_Citation:
Citation_Information:
Series_Information:
Publication_Information:
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Range_of_Dates/Times:
Multiple_Dates/Times:
Process_Step:
Process_Description:
The horizontal work was performed using a Trimble GPS Pathfinder Pro XR reciever using U.S. Coast Guard beacon at Cape Canaveral. The level line was performed using a Leica NA3003 electronic digital level.
Process_Date: 20050424
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Organization_Primary:
Contact_Address:
Spatial_Data_Organization_Information:
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Planar:
Map_Projection:
Albers_Conical_Equal_Area:
Azimuthal_Equidistant:
Equidistant_Conic:

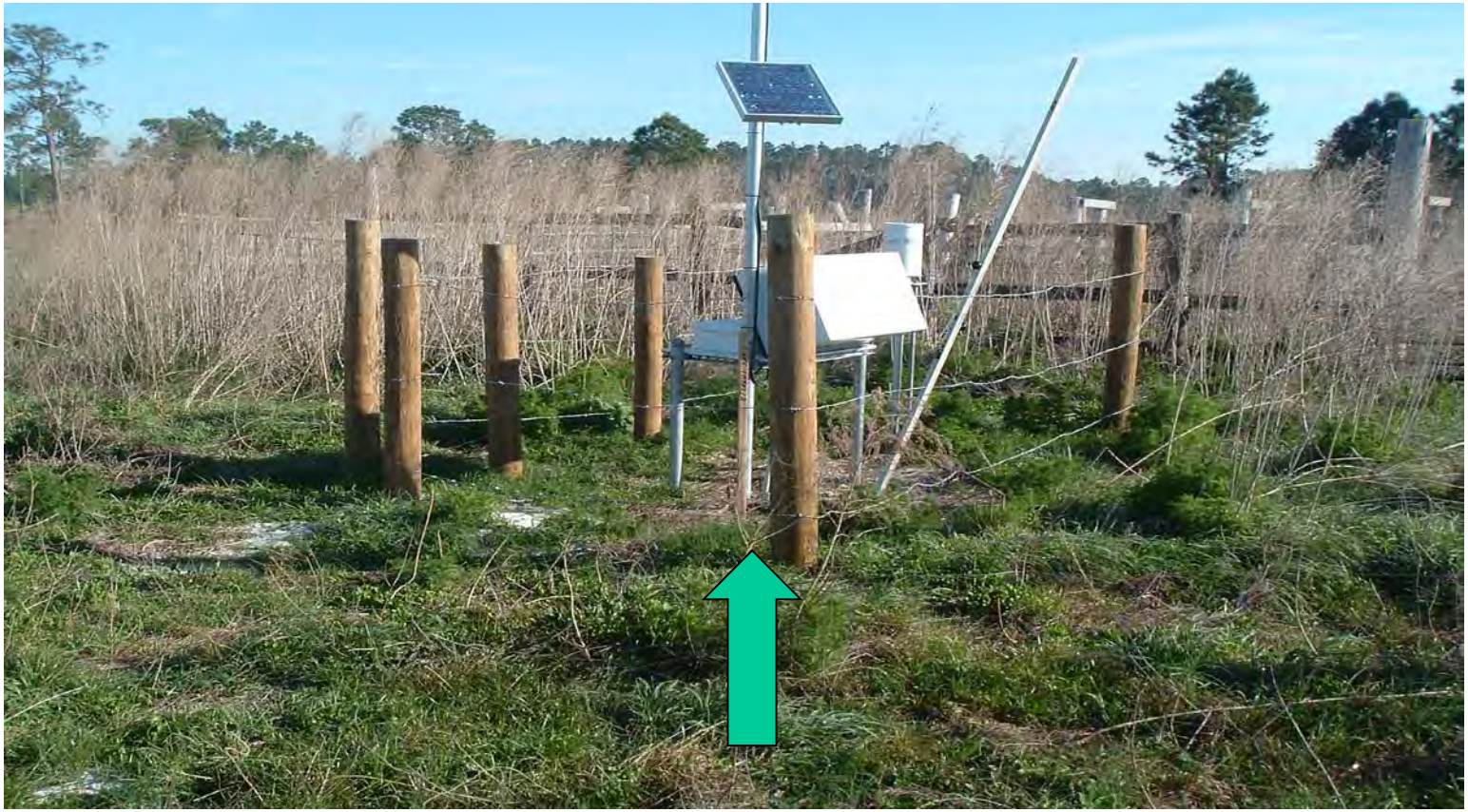
```
                                        Equirectangular:
                                        General_Vertical_Near-sided_Perspective:
                                        Gnomonic:
                                        Lambert_Azimuthal_Equal_Area:
                                        Lambert_Conformal_Conic:
                                        Mercator:
                                        Modified_Stereographic_for_Alaska:
                                        Miller_Cylindrical:
                                        Oblique_Mercator:
                                                Oblique_Line_Point:
                                        Orthographic:
                                        Polar_Stereographic:
                                        Polyconic:
                                        Robinson:
                                        Sinusoidal:
                                        van_der_Grinten:
                                        Space_Oblique_Mercator_(Landsat):
                                        Stereographic:
                                        Transverse_Mercator:
                                        van_der_Grinten:
                                Grid_Coordinate_System:
                                        Universal_Transverse_Mercator:
                                                Transverse_Mercator:
                                        Universal_Polar_Stereographic:
                                                Polar_Stereographic:
                                        State_Plane_Coordinate_System:
                                                Lambert_Conformal_Conic:
                                                Transverse_Mercator:
                                                Oblique_Mercator:
                                                        Oblique_Line_Point:
                                                Polyconic:
                                        ARC_Coordinate_System:
                                                Equirectangular:
                                                Azimuthal_Equidistant:
                                Local_Planar:
                                Planar_Coordinate_Information:
                                        Coordinate_Representation:
                                        Distance_and_Bearing_Representation:
                        Local:
                        Geodetic_Model:
                                Horizontal_Datum_Name: North American Datum of 1983
                                Ellipsoid_Name: Geodetic Reference System 80
                Vertical_Coordinate_System_Definition:
                        Altitude_System_Definition:
                        Depth_System_Definition:
Entity_and_Attribute_Information:
        Detailed_Description:
                Entity_Type:
                Attribute:
                        Attribute_Domain_Values:
                        Attribute_Value_Accuracy_Information:
        Overview_Description:
Distribution_Information:
        Distributor:
                Contact_Information:
                        Contact_Person_Primary:
                        Contact_Organization_Primary:
                        Contact_Address:
        Standard_Order_Process:
                Digital_Form:
                        Digital_Transfer_Information:
                        Digital_Transfer_Option:
                                Online_Option:
                                        Computer_Contact_Information:
                                                Network_Address:
                                                Dialup_Instructions:
                                OffLine_Option:
                                        Recording_Capacity:
        Available_Time_Period:
                Time_Period_Information:
                        Single_Date/Time:
                        Range_of_Dates/Times:
```

```
                        Multiple_Dates/Times:
Metadata_Reference_Information:
        Metadata_Date: 20050518
        Metadata_Contact:
                Contact_Information:
                        Contact_Person_Primary:
                                Contact_Person: Darren Townsend
                                Contact_Organization: Cooner & Associates, Inc.
                        Contact_Organization_Primary:
                        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
        Metadata_Security_Information:
```

LAKE LOTELLA

- COONER & ASSOCIATES, INC.
- Date of photo: January 26, 2005
- View: Looking North at well

LAKE LOTELLA



- COONER & ASSOCIATES, INC.
- Date of photo: January 26, 2005
- View: Looking North at BM TELL5

LAKE LOTELLA

- COONER & ASSOCIATES, INC.
- Date of photo: January 26, 2005
- View: Looking at top view of BM TELL5

LAKE LOTELLA

- COONER & ASSOCIATES, INC.
- Date of photo: January 26, 2005
- View: Looking at Elevation mark on well

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY Highlands	**PROJECT** Lake Lotella	**DESIGNATION** TELL 5
SECTION 20	**TOWNSHIP** 33S	**RANGE** 29E
GEOGRAPHIC INDEX OF QUAD		
Established by X **Recovered by** Cooner & Associates, Inc. (Field Work by EF Gaines)	**NAME OF QUADRANGLE** Lake Arbuckle SW	
SURVEYOR A. Johnson **DATE** 04 / 18 / 2005	**FIELD BOOK** 140 **PAGE** 4-6	
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** 515126.15'	**Y** 1184339.55' **EL.** 88.64' **89.61 NGVD29**
LATITUDE 27° 35' 28.38" N	LONGITUDE 081° 26' 07.59" W	
DESCRIPTION SFWMD ALUM. DISK IN CONCRETE "TELL5"		

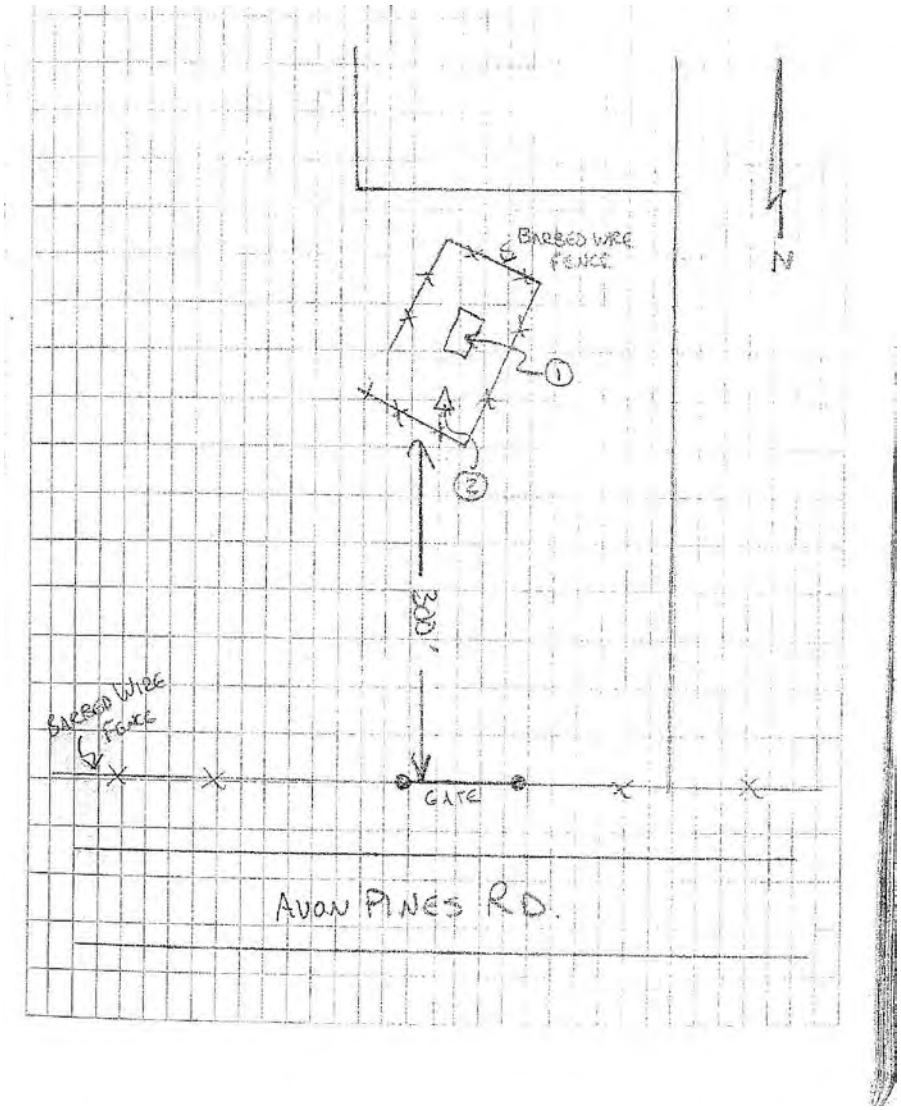
To Reach:

From intersection of US Highway 27 and State Road 64 in Avon Park, FL, go east on State Road 64 to Avon Pines Road.
Turn right at fork in the road, ~1.3 miles to mark on the left in pasture.

Notable Land marks:

Mark is in fenced well area.

SKETCH


Barbed wire fence
N
1
2
300'
Barbed Wire Fence
GATE
AVON PINES RD.

The NGS Data Sheet

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

```
PROGRAM = datasheet95, VERSION = 8.11
1         National Geodetic Survey,   Retrieval Date = MARCH  2, 2017
 AF6100 ***********************************************************************
 AF6100  DESIGNATION -  S 115
 AF6100  PID         -  AF6100
 AF6100  STATE/COUNTY-  FL/HIGHLANDS
 AF6100  COUNTRY     -  US
 AF6100  USGS QUAD   -  LAKE ARBUCKLE SW (1972)
 AF6100
 AF6100                        *CURRENT SURVEY CONTROL
 AF6100  ______________________________________________________________________
 AF6100* NAD 83(2011) POSITION- 27 36 42.96467(N) 081 26 22.68267(W)   ADJUSTED
 AF6100* NAD 83(2011) ELLIP HT-     2.533 (meters)        (06/27/12)   ADJUSTED
 AF6100* NAD 83(2011) EPOCH   -  2010.00
 AF6100* NAVD 88 ORTHO HEIGHT -    28.709 (meters)       94.19  (feet) ADJUSTED
 AF6100  ______________________________________________________________________
 AF6100  GEOID HEIGHT    -        -26.171 (meters)                     GEOID12B
 AF6100  NAD 83(2011) X  -    841,870.813 (meters)                     COMP
 AF6100  NAD 83(2011) Y  - -5,592,774.785 (meters)                     COMP
 AF6100  NAD 83(2011) Z  -  2,938,468.111 (meters)                     COMP
 AF6100  LAPLACE CORR    -         -2.27  (seconds)                    DEFLEC12B
 AF6100  DYNAMIC HEIGHT  -         28.665 (meters)       94.05  (feet) COMP
 AF6100  MODELED GRAVITY -    979,128.3   (mgal)                       NAVD 88
 AF6100
 AF6100  VERT ORDER      -  SECOND    CLASS I
 AF6100
 AF6100  Network accuracy estimates per FGDC Geospatial Positioning Accuracy
 AF6100  Standards:
 AF6100         FGDC (95% conf, cm)     Standard deviation (cm)     CorrNE
 AF6100            Horiz  Ellip          SD_N   SD_E   SD_h      (unitless)
 AF6100  ------------------------------------------------------------------
 AF6100  NETWORK    1.15   1.69          0.47   0.46   0.86      0.24780396
 AF6100  ------------------------------------------------------------------
 AF6100  Click here for local accuracies and other accuracy information.
 AF6100
 AF6100
 AF6100.The horizontal coordinates were established by GPS observations
 AF6100.and adjusted by the National Geodetic Survey in June 2012.
 AF6100
 AF6100.NAD 83(2011) refers to NAD 83 coordinates where the reference frame has
 AF6100.been affixed to the stable North American tectonic plate. See
 AF6100.NA2011 for more information.
 AF6100
 AF6100.The horizontal coordinates are valid at the epoch date displayed above
 AF6100.which is a decimal equivalence of Year/Month/Day.
 AF6100
 AF6100.The orthometric height was determined by differential leveling and
 AF6100.adjusted by the NATIONAL GEODETIC SURVEY
 AF6100.in May 2008.
 AF6100
 AF6100.Significant digits in the geoid height do not necessarily reflect accuracy.
```

```
AF6100.GEOID12B height accuracy estimate available here.
AF6100
AF6100.Photographs are available for this station.
AF6100
AF6100.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF6100
AF6100.The Laplace correction was computed from DEFLEC12B derived deflections.
AF6100
AF6100.The ellipsoidal height was determined by GPS observations
AF6100.and is referenced to NAD 83.
AF6100
AF6100.The dynamic height is computed by dividing the NAVD 88
AF6100.geopotential number by the normal gravity value computed on the
AF6100.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AF6100.degrees latitude (g = 980.6199 gals.).
AF6100
AF6100.The modeled gravity was interpolated from observed gravity values.
AF6100
AF6100. The following values were computed from the NAD 83(2011) position.
AF6100
AF6100;                      North          East      Units Scale Factor Converg.
AF6100;SPC FL E     -   363,284.699   156,605.155   MT  0.99996441   -0 12 13.6
AF6100;SPC FL E     - 1,191,876.55    513,795.41    sFT  0.99996441   -0 12 13.6
AF6100;SPC FL W     -   363,332.901   255,312.087   MT  0.99997893   +0 15 35.0
AF6100;SPC FL W     - 1,192,034.69    837,636.41    sFT  0.99997893   +0 15 35.0
AF6100;UTM  17      - 3,054,292.729   456,619.961   MT  0.99962323   -0 12 13.6
AF6100
AF6100!             -  Elev Factor  x  Scale Factor =   Combined Factor
AF6100!SPC FL E     -   0.99999960  x   0.99996441  =   0.99996401
AF6100!SPC FL W     -   0.99999960  x   0.99997893  =   0.99997853
AF6100!UTM  17      -   0.99999960  x   0.99962323  =   0.99962283
AF6100
AF6100_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML5661954292(NAD 83)
AF6100
AF6100                           SUPERSEDED SURVEY CONTROL
AF6100
AF6100  NAD 83(2007)-  27 36 42.96482(N)    081 26 22.68348(W) AD(2002.00) 0
AF6100  ELLIP H (02/10/07)    2.541  (m)                       GP(2002.00)
AF6100  NAD 83(1999)-  27 36 42.96442(N)    081 26 22.68354(W) AD(       ) 1
AF6100  ELLIP H (06/19/01)    2.570  (m)                       GP(       ) 4 1
AF6100  NAD 83(1990)-  27 36 42.96440(N)    081 26 22.68327(W) AD(       ) 1
AF6100  ELLIP H (11/23/93)    2.530  (m)                       GP(       ) 3 2
AF6100  NAVD 88              28.69   (m)           94.1    (f) LEVELING    3
AF6100  NAVD 88 (06/15/91)   28.688  (m)           94.12   (f) SUPERSEDED  2 0
AF6100  NGVD 29 (??/??/92)   28.986  (m)           95.10   (f) ADJ UNCH    2 0
AF6100
AF6100.Superseded values are not recommended for survey control.
AF6100
AF6100.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AF6100.See file dsdata.txt to determine how the superseded data were derived.
AF6100
AF6100_MARKER: DB = BENCH MARK DISK
AF6100_SETTING: 32 = SET IN A RETAINING WALL OR CONCRETE LEDGE
AF6100_SP_SET: CULVERT HEADWALL
AF6100_STAMPING: S 115 1945
AF6100_MARK LOGO: CGS
AF6100_MAGNETIC: N = NO MAGNETIC MATERIAL
AF6100_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AF6100+STABILITY: SURFACE MOTION
AF6100_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
```

```
AF6100+SATELLITE: SATELLITE OBSERVATIONS - November 13, 2011
AF6100
AF6100  HISTORY     - Date     Condition        Report By
AF6100  HISTORY     - 1945     MONUMENTED       CGS
AF6100  HISTORY     - 19920727 GOOD             KEISCH
AF6100  HISTORY     - 20031003 GOOD             FL-105
AF6100  HISTORY     - 20050418 GOOD             INDIV
AF6100  HISTORY     - 20060630 GOOD             FLDEP
AF6100  HISTORY     - 20111113 GOOD             PICKET
AF6100
AF6100                          STATION DESCRIPTION
AF6100
AF6100'DESCRIBED BY COAST AND GEODETIC SURVEY 1945
AF6100'4.4 MI NE FROM AVON PARK.
AF6100'4.4 MILES NORTHEAST ALONG FLORIDA HIGHWAY NO 567 FROM THE
AF6100'ATLANTIC COAST LINE RAILWAY STATION IN AVON PARK, 22.7 FEET WEST
AF6100'OF FLA. HWY. NO 567.  A BRONZE DISK SET IN THE SOUTH END OF WEST
AF6100'HEADWALL OF CONCRETE CULVERT.
AF6100
AF6100                          STATION RECOVERY (1992)
AF6100
AF6100'RECOVERY NOTE BY KEITH AND SCHNARS - LAKELAND 1992
AF6100'THE STATION IS LOCATED ABOUT 5 MI (8.0 KM) EAST OF AVON PARK IN THE
AF6100'NORTHWEST RIGHT-OF-WAY OF C.R. 64 IN SECTION 17, TOWNSHIP 33 SOUTH,
AF6100'RANGE 29 EAST, HIGHLANDS COUNTY, FL.
AF6100'TO REACH THE STATION FROM THE INTERSECTION OF C.R. 17A AND C.R. 64
AF6100'EAST OF AVON PARK, GO EAST ON C.R. 64 FOR 1.5 MI (2.4 KM) TO THE
AF6100'INTERSECTION WITH AVON PINES ROAD. CONTINUE NORTHEAST ON C.R. 64 FOR
AF6100'1.85 MI (2.98 KM) TO THE STATION ON THE LEFT. THE STATION LIES 0.3 MI
AF6100'(0.5 KM) SOUTHWEST OF DRESSEL RD AND IMMEDIATELY NORTHEAST OF AN
AF6100'ABANDON GRAIN STORAGE FACILITY. THE STATION IS SET ON THE SOUTHWEST
AF6100'CORNER OF A CONCRETE HEADWALL WITH A SINGLE DRAINAGE PIPE, 30 FT
AF6100'(9.1 M) NORTHEAST OF THE APPROXIMATE CENTER OF A SHELL ROCK DRIVEWAY
AF6100'AND 11 FT (3.4 M) NORTHWEST OF THE NORTHWEST EDGE OF PAVEMENT OF C.R.
AF6100'64.
AF6100'THE STATION IS A USCGS BENCHMARK DISC, SET IN A CONCRETE HEADWALL,
AF6100'STAMPED S 115 1945.
AF6100'REFERENCES--
AF6100'KEITH AND SCHNARS NAIL AND DISC, SET IN A WOOD POWER POLE (ID NO.
AF6100'18-6), MAGNETIC AZIMTUH OF 268 DEGREES AT 78.61 FT (23.96 M) .
AF6100'KEITH AND SCHNARS NAIL AND DISC, SET AT THE EDGE OF PAVEMENT, MAGNETIC
AF6100'AZIMUTH OF 143 DEGREES AT 11.27 FT (3.44 M) .
AF6100'SET A X-CUT IN THE NORTHEAST CORNER OF A CONCRETE HEADWALL, MAGNETIC
AF6100'AZIMUTH OF 46 DEGREES AT 13.85 FT (4.22 M) .
AF6100'KEITH AND SCHNARS NAIL AND DISC, SET IN A WOOD FENCE CORNER, MAGNETIC
AF6100'AZIMUTH OF 23 DEGREES AT 126.59 FT (38.58 M) .
AF6100
AF6100                          STATION RECOVERY (2003)
AF6100
AF6100'RECOVERY NOTE BY POLK COUNTY FLORIDA 2003 (RWY)
AF6100'RECOVERED AS DESCRIBED. RECOVERY NOTE BY POLK COUNTY PROPERTY
AF6100'APPRAISER GIS DEPARTMENT.
AF6100
AF6100                          STATION RECOVERY (2005)
AF6100
AF6100'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2005 (ADJ)
AF6100'RECOVERED IN GOOD CONDITION.
AF6100
AF6100                          STATION RECOVERY (2006)
AF6100
```

```
AF6100'RECOVERY NOTE BY FL DEPT OF ENV PRO 2006 (BPJ)
AF6100'THE MARK IS ABOUT 4.2 MI NORTHEAST OF AVON PARK, IN SECTION 17,
AF6100'TOWNSHIP 33 SOUTH, RANGE  29 EAST.
AF6100'
AF6100'TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY 27, STATE ROAD
AF6100'17 SOUTH AND  STATE ROAD 64 IN AVON PARK, GO EAST ON STATE ROAD 17
AF6100'SOUTH FOR 1.3 MI TO THE JUNCTION OF  COUNTY ROAD 64, CONTINUE EAST ON
AF6100'COUNTY ROAD 64 FOR 3.85 MI TO THE MARK ON THE LEFT, SET  FLUSH IN THE
AF6100'TOP OF A CONCRETE CULVERT HEADWALL LEVEL WITH COUNTY ROAD 64.
AF6100'
AF6100'LOCATED 22.1 FT NORTHWEST OF THE APPROXIMATE CENTERLINE OF COUNTY ROAD
AF6100'64, 14.2 FT  SOUTHWEST OF THE NORTHEAST END OF A CONCRETE HEADWALL AND
AF6100'0.6 FT SOUTHEAST OF A  CARSONITE WITNESS POST.
AF6100
AF6100                          STATION RECOVERY (2011)
AF6100
AF6100'RECOVERY NOTE BY PICKETT AND ASSOCIATES 2011 (CWE)
AF6100'RECOVERED IN GOOD CONDITION.

*** retrieval complete.
Elapsed Time = 00:00:02
```

The NGS Data Sheet

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

```
PROGRAM = datasheet95, VERSION = 8.11
1         National Geodetic Survey,   Retrieval Date = MARCH  2, 2017
 AF6101 ***********************************************************************
 AF6101  DESIGNATION -  R 115
 AF6101  PID         -  AF6101
 AF6101  STATE/COUNTY-  FL/HIGHLANDS
 AF6101  COUNTRY     -  US
 AF6101  USGS QUAD   -  LAKE ARBUCKLE SW (1972)
 AF6101
 AF6101                          *CURRENT SURVEY CONTROL
 AF6101
 AF6101* NAD 83(1986) POSITION- 27 35 59.      (N) 081 27 06.      (W)    SCALED
 AF6101* NAVD 88 ORTHO HEIGHT -     30.139 (meters)        98.88   (feet) ADJUSTED
 AF6101
 AF6101  GEOID HEIGHT    -        -26.116 (meters)                       GEOID12B
 AF6101  DYNAMIC HEIGHT  -         30.093 (meters)        98.73   (feet) COMP
 AF6101  MODELED GRAVITY -    979,127.4   (mgal)                         NAVD 88
 AF6101
 AF6101  VERT ORDER      -  SECOND    CLASS I
 AF6101
 AF6101.The horizontal coordinates were scaled from a topographic map and have
 AF6101.an estimated accuracy of +/- 6 seconds.
 AF6101.
 AF6101.The orthometric height was determined by differential leveling and
 AF6101.adjusted by the NATIONAL GEODETIC SURVEY
 AF6101.in May 2008.
 AF6101
 AF6101.Significant digits in the geoid height do not necessarily reflect accuracy.
 AF6101.GEOID12B height accuracy estimate available here.
 AF6101
 AF6101.Photographs are available for this station.
 AF6101
 AF6101.The dynamic height is computed by dividing the NAVD 88
 AF6101.geopotential number by the normal gravity value computed on the
 AF6101.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AF6101.degrees latitude (g = 980.6199 gals.).
 AF6101
 AF6101.The modeled gravity was interpolated from observed gravity values.
 AF6101
 AF6101;                    North         East     Units  Estimated Accuracy
 AF6101;SPC FL E     -   361,940.      155,410.      MT  (+/- 180 meters Scaled)
 AF6101
 AF6101_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML554529(NAD 83)
 AF6101
 AF6101                           SUPERSEDED SURVEY CONTROL
 AF6101
 AF6101  NAVD 88 (06/15/91)    30.123   (m)            98.83    (f) SUPERSEDED  2 0
 AF6101  NGVD 29 (??/??/92)    30.420   (m)            99.80    (f) ADJ UNCH    2 0
 AF6101
 AF6101.Superseded values are not recommended for survey control.
 AF6101
```

AF6101.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AF6101.See file dsdata.txt to determine how the superseded data were derived.
AF6101
AF6101_MARKER: DB = BENCH MARK DISK
AF6101_SETTING: 32 = SET IN A RETAINING WALL OR CONCRETE LEDGE
AF6101_SP_SET: CULVERT HEADWALL
AF6101_STAMPING: R 115 1945
AF6101_MARK LOGO: CGS
AF6101_MAGNETIC: N = NO MAGNETIC MATERIAL
AF6101_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AF6101+STABILITY: SURFACE MOTION
AF6101_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AF6101+SATELLITE: SATELLITE OBSERVATIONS - June 30, 2006
AF6101
AF6101 HISTORY - Date Condition Report By
AF6101 HISTORY - 1945 MONUMENTED CGS
AF6101 HISTORY - 20031003 GOOD FL-105
AF6101 HISTORY - 20050418 GOOD INDIV
AF6101 HISTORY - 20060630 GOOD FLDEP
AF6101 HISTORY - 20111113 GOOD PICKET
AF6101
AF6101 STATION DESCRIPTION
AF6101
AF6101'DESCRIBED BY COAST AND GEODETIC SURVEY 1945
AF6101'3.2 MI E FROM AVON PARK.
AF6101'3.2 MILES EAST ALONG FLORIDA HIGHWAY NO. 567 FROM THE ATLANTIC
AF6101'COAST LINE RAILWAY STATION IN AVON PARK, 25.7 FEET EAST OF THE
AF6101'CENTER OF FLA. HWY. NO 567. A BRONZE DISK SET IN THE SOUTH END
AF6101'OF THE EAST HEADWALL OF CONCRETE CULVERT. NOTE-- A NEW PAVED
AF6101'ROAD HAS BEEN BUILT SUPERCEDING THE OLD DIRT ROAD.
AF6101
AF6101 STATION RECOVERY (2003)
AF6101
AF6101'RECOVERY NOTE BY POLK COUNTY FLORIDA 2003 (RWY)
AF6101'RECOVERED AS DESCRIBED. RECOVERY NOTE BY POLK COUNTY PROPERTY
AF6101'APPRAISER GIS DEPARTMENT.
AF6101
AF6101 STATION RECOVERY (2005)
AF6101
AF6101'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2005 (ADJ)
AF6101'RECOVERED IN GOOD CONDITION.
AF6101
AF6101 STATION RECOVERY (2006)
AF6101
AF6101'RECOVERY NOTE BY FL DEPT OF ENV PRO 2006 (BPJ)
AF6101'THE MARK IS ABOUT 3.4 MI EAST OF AVON PARK, IN SECTION 19, TOWNSHIP 33
AF6101'SOUTH, RANGE 29 EAST.
AF6101'
AF6101'TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY 27, STATE ROAD
AF6101'17 SOUTH AND STATE ROAD 64 IN AVON PARK, GO EAST ON STATE ROAD 17
AF6101'SOUTH FOR 1.3 MI TO THE JUNCTION OF COUNTY ROAD 64, CONTINUE EAST ON
AF6101'COUNTY ROAD 64 FOR 2.65 MI TO THE MARK ON THE RIGHT, SET FLUSH IN THE
AF6101'TOP OF A CONCRETE CULVERT HEADWALL LEVEL WITH COUNTY ROAD 64.
AF6101'
AF6101'LOCATED 26.1 FT SOUTHEAST OF THE APPROXIMATE CENTERLINE OF COUNTY ROAD
AF6101'64, 46.7 FT NORTHWEST OF A BARB WIRE FENCE, 18.5 FT SOUTHWEST OF THE
AF6101'NORTHEAST END OF A CONCRETE HEADWALL AND 0.6 FT SOUTHEAST OF A
AF6101'CARSONITE WITNESS POST.
AF6101
AF6101 STATION RECOVERY (2011)

```
AF6101
AF6101'RECOVERY NOTE BY PICKETT AND ASSOCIATES 2011 (CWE)
AF6101'RECOVERED IN GOOD CONDITION.

*** retrieval complete.
Elapsed Time = 00:00:02
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The NGS Data Sheet

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

```
PROGRAM = datasheet95, VERSION = 8.11
1         National Geodetic Survey,   Retrieval Date = MARCH  2, 2017
 AF6163 ***********************************************************************
 AF6163  DESIGNATION -  G 198
 AF6163  PID         -  AF6163
 AF6163  STATE/COUNTY-  FL/OSCEOLA
 AF6163  COUNTRY     -  US
 AF6163  USGS QUAD   -  LAKE MARIAN NE (1972)
 AF6163
 AF6163                         *CURRENT SURVEY CONTROL
 AF6163  ______________________________________________________________________
 AF6163* NAD 83(1986) POSITION- 27 52 35.3     (N) 081 00 51.7     (W)    HD_HELD2
 AF6163* NAVD 88 ORTHO HEIGHT -    23.355 (meters)        76.62   (feet) ADJUSTED
 AF6163  ______________________________________________________________________
 AF6163  GEOID HEIGHT    -        -27.236 (meters)                       GEOID12B
 AF6163  DYNAMIC HEIGHT  -         23.320 (meters)       76.51   (feet) COMP
 AF6163  MODELED GRAVITY -    979,165.1   (mgal)                         NAVD 88
 AF6163
 AF6163  VERT ORDER      -  SECOND    CLASS 0
 AF6163
 AF6163.The horizontal coordinates were established by autonomous hand held GPS
 AF6163.observations and have an estimated accuracy of +/- 10 meters.
 AF6163.
 AF6163.The orthometric height was determined by differential leveling and
 AF6163.adjusted by the NATIONAL GEODETIC SURVEY
 AF6163.in June 1991.
 AF6163
 AF6163.Significant digits in the geoid height do not necessarily reflect accuracy.
 AF6163.GEOID12B height accuracy estimate available here.
 AF6163
 AF6163.The dynamic height is computed by dividing the NAVD 88
 AF6163.geopotential number by the normal gravity value computed on the
 AF6163.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AF6163.degrees latitude (g = 980.6199 gals.).
 AF6163
 AF6163.The modeled gravity was interpolated from observed gravity values.
 AF6163
 AF6163;                    North         East     Units  Estimated Accuracy
 AF6163;SPC FL E     -   392,521.      198,586.      MT  (+/- 10 meters HH2 GPS)
 AF6163
 AF6163_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML9858683518(NAD 83)
 AF6163
 AF6163                          SUPERSEDED SURVEY CONTROL
 AF6163
 AF6163  NGVD 29 (??/??/92)    23.726  (m)             77.84    (f) ADJ UNCH    2 0
 AF6163
 AF6163.Superseded values are not recommended for survey control.
 AF6163
 AF6163.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AF6163.See file dsdata.txt to determine how the superseded data were derived.
 AF6163
```

```
AF6163_MARKER: DB = BENCH MARK DISK
AF6163_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AF6163_STAMPING: G 198 1960
AF6163_MARK LOGO: CGS
AF6163_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AF6163+STABILITY: SURFACE MOTION
AF6163
AF6163  HISTORY     - Date     Condition        Report By
AF6163  HISTORY     - 1960     MONUMENTED       CGS
AF6163  HISTORY     - 20050121 GOOD             INDIV
AF6163
AF6163                          STATION DESCRIPTION
AF6163
AF6163'DESCRIBED BY COAST AND GEODETIC SURVEY 1960
AF6163'1.6 MI W FROM KENANSVILLE.
AF6163'1.6 MILES WEST ALONG STATE ROAD 523 FROM THE JUNCTION OF U.S.
AF6163'HIGHWAY 441 AT KENANSVILLE, ABOUT 1.05 MILES WEST OF A LARGE
AF6163'TWO-STORY SCHOOL BUILDING SOUTH OF THE ROAD, AT THE JUNCTION OF
AF6163'STATE ROAD 523 A LEADING SOUTH AND PAST THE LAKEVIEW BAPTIST
AF6163'CHURCH, 66 1/2 FEET SOUTHWEST OF THE CENTER OF JUNCTION, 52 FEET
AF6163'SOUTH OF THE CENTER LINE OF ROAD 523, 42 FEET WEST OF THE CENTER
AF6163'LINE OF ROAD 523 A, 9 FEET WEST-SOUTHWEST OF A
AF6163'HIGHWAY-RIGHT-OF-WAY POST, 2 FEET EAST OF A STEEL WITNESS POST,
AF6163'ABOUT LEVEL WITH THE ROAD, AND SET IN TOP OF A CONCRETE POST
AF6163'PROJECTING 3 INCHES.
AF6163
AF6163                          STATION RECOVERY (2005)
AF6163
AF6163'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2005
AF6163'RECOVERED AS DESCRIBED. RECOVERY NOTE BY COONER AND ASSOCIATES, INC.

*** retrieval complete.
Elapsed Time = 00:00:01
```

020801.03 SFWMD

Lake Lotella (Well Elevation)

Card 1, Run 10

+	HI	−	EL	Adj EL	PT#
4.783			88.64' NAVD 88		131
	93.423'				
2.051		1.670	91.753'	91.75'	201
	93.804'				
		5.163	88.641'	88.64'	131
			(88.64' POSTED)		

LINE LENGTH = 78.3'

ALLOWABLE MISCLOSURE = $0.03\sqrt{78.3/5280}$

= +/- 0.004'

ACTUAL MISCLOSURE = +0.001'

3/30/05 FB86 PG 63

Edgerton

Collins

Description

Set 2" Aluminum Disk In ~1/2" Powered Concrete Monument

"SO. FLA. WATER MANAGMENT DIST BM TELL 5"

Elevated Well At Mark On Top of Pipe

Check In To Start Point

020801.03 SFWMD

LAKE LOTELLA

A- WELL

N: 118345.344'

E: 515126.774'

B - SET 2" ALUMINUM DISK IN 12" DIAMETER, POURED CONCRETE MONUMENT "SO. FLA WATER MANGEMENT DIST., BM TELL 5"

N: 1184339.546'

E: 515126.151'

FL STATE PLANE, EAST ZONE

1/26/05 FB 86 PG 79

ETGETON

COLLINS

020801.03 SFWMD

LOTELLA

GPS LOCATIONS

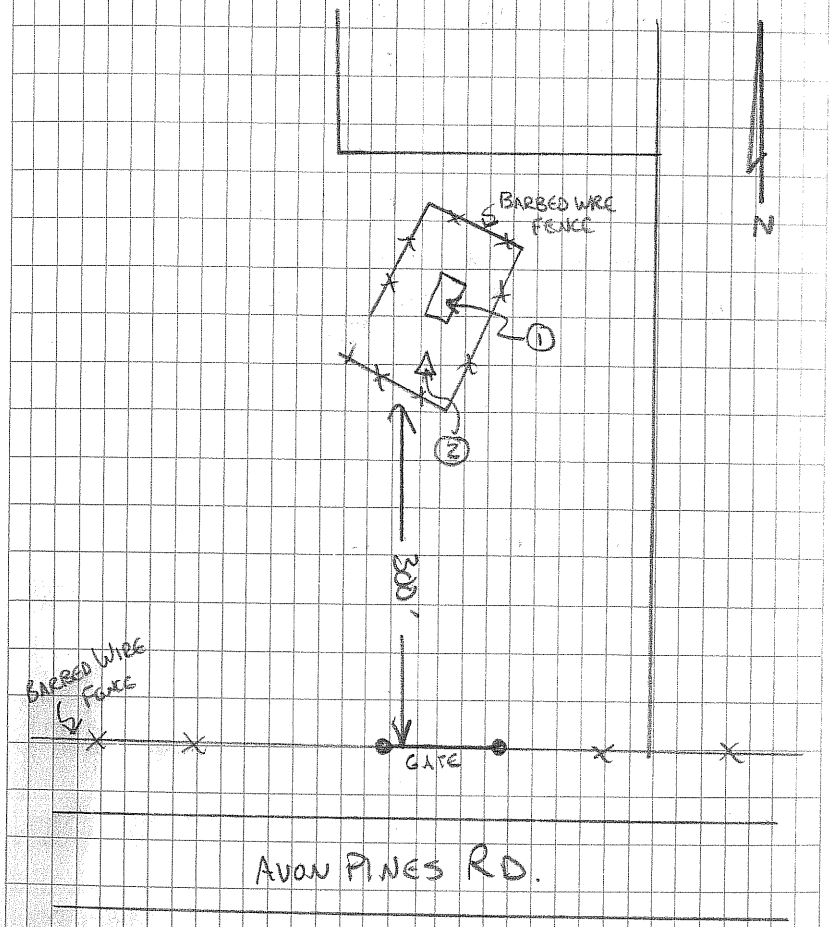
① WELL - N: 1184339.546'
E: 515126.151'

② SET 2" ALUMINUM DISK IN 12" DIAMETER POURED CONCRETE MONUMENT "SO. FLA WATER MANAGEMENT DIST BM TELL 5"
N: 1184339.546'
E: 515126.151'

FL STATE PLANE, EAST ZONE

3/30/05 FB93 PG 2

ETGETON
COLLINS



LAKE LOTELLA

A. JOHNSTON M. ANDRE
4-18-05

BS	HI	FS	EL	NOTE
			~~5.610~~	BM
				100
5.610	99.730		94.120	~~BM~~
4.361	99.093	4.998	94.732	1
5.048	99.548	4.592	94.500	2
5.079	99.030	5.597	93.951	3
4.958	99.595	4.393	94.637	4
4.651	98.895	5.350	94.245	5
5.523	99.702	4.716	94.179	6
6.151	101.582	4.272	95.430	7
5.522	104.076	3.028	98.554	8
4.946	105.043	3.979	100.097	9
4.499	104.624	4.919	100.125	TP 10
5.625	104.398	5.851	98.773	11 - BM
4.510	104.616	4.292	100.106	TP 12
3.401	105.932	2.084	102.531	13
3.661	102.480	7.113	98.819	14
4.726	99.688	7.519	94.961	15
6.840	103.718	2.809	96.878	16
6.123	106.085	3.756	99.962	17
9.007	113.145	1.947	104.138	18
10.208	122.221	1.132	112.013	19

~~S-112~~

S-115

~~S-112~~ FD. BRASS DISK IN HEADWALL (NAVD 88)

R-112

LAKE LOTELLA

RUN (CONT.)

A. JOHNSON
M. ANDRE
4/18/05

	122.221			
5.346	126.303	1.265	120.957	TP 20
1.621	120.985	6.939	119.364	21
3.201	115.906	8.281	112.705	22
1.050	113.381	3.574	112.331	23
0.739	102.113	12.007	101.374	24
4.706	97.949	8.370	93.244	25
6.036	95.031	8.954	88.995	26
9.637	103.582	1.086	93.946	27
1.211	102.202	2.592	100.991	28
2.568	93.290	11.479	90.722	29
5.333	94.509	4.115	89.175	30
7.938	96.553	5.894	88.615	~~131~~ 131
4.353	93.613	7.292	89.260	32
11.594	103.840	1.368	92.246	33
1.221	98.155	6.906	96.934	34
7.493	95.786	9.862	88.293	35
5.303	98.991	2.098	93.688	36
11.457	109.128	1.320	97.671	37
9.582	117.700	0.811	108.317	38
7.033	117.743	6.990	110.710	39
9.614	125.697	1.660	116.083	40

BM: TELL 5 SO. FLA WMD ADJUSTED ELEV. = 88.64'
(4/20/05)

BEES!!

LAKE LOTELLA

A. JOHNSON
M. AMORE
4/20/05

	125.697			
3.460	124.899	4.258	121.439	41
2.400	116.664	10.656	114.242	42
1.339	108.379	9.602	107.040	43
3.6666	104.810	7.235	101.144	44
6.099	105.131	5.777	99.032	45
7.442	110.876	1.697	103.434	46
4.033	113.727	3.182	107.694	47
3.834	115.726	1.835	111.892	48
4.187	115.060	4.853	110.873	49
2.737	111.571	6.226	108.834	50
1.849	106.056	7.364	104.208	51
4.117	104.418	5.756	100.301	52
		5.434	98.784	53 153

BM. R-115 (98.83) POSTED NAVD 88

(98.83' ADJUSTED)

26,245'

LINE LENGTH = 26245.7'

ALLOWABLE MISCLOSURE = $0.03\sqrt{26245/5280}$
= +/- 0.067'

ACTUAL MISCLOSURE = -0.047'

```
410401+?......1
110402+00000100 83..11+00094120
110403+00000100 32..01+00299570 331101+00005610
110404+00000001 32..01+00304140 332101+00004998
110405+00000001 573..1-00004570 574..1+00603720 83..01+00094731
110406+00000001 32..01+00311710 331101+00004361
110407+00000002 32..01+00320990 332101+00004592
110408+00000002 573..1-00013850 574..1+01236410 83..01+00094500
110409+00000002 32..01+00311060 331101+00005048
110410+00000003 32..01+00323800 332101+00005597
110411+00000003 573..1-00026590 574..1+01871270 83..01+00093951
110412+00000003 32..01+00306030 331101+00005079
110413+00000004 32..01+00291490 332101+00004393
110414+00000004 573..1-00012040 574..1+02468790 83..01+00094637
110415+00000004 32..01+00313780 331101+00004958
110416+00000005 32..01+00318760 332101+00005350
110417+00000005 573..1-00017030 574..1+03101330 83..01+00094245
110418+00000005 32..01+00307790 331101+00004651
110419+00000006 32..01+00298830 332101+00004716
110420+00000006 573..1-00008070 574..1+03707950 83..01+00094179
110421+00000006 32..01+00315190 331101+00005523
110422+00000007 32..01+00298800 332101+00004272
110423+00000007 573..1+00008330 574..1+04321940 83..01+00095430
110424+00000007 32..01+00305680 331101+00006151
110425+00000008 32..01+00318870 332101+00003028
110426+00000008 573..1-00004860 574..1+04946500 83..01+00098554
110427+00000008 32..01+00309020 331101+00005522
110428+00000009 32..01+00316130 332101+00003979
110429+00000009 573..1-00011970 574..1+05571650 83..01+00100097
110430+00000009 32..01+00247350 331101+00004946
110431+00000010 32..01+00206520 332101+00004919
110432+00000010 573..1+00028860 574..1+06025520 83..01+00100125
110433+00000010 32..01+00075600 331101+00004499
110434+00000011 32..01+00071590 332101+00005851
110435+00000011 573..1+00032870 574..1+06172710 83..01+00098773
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110438+00000012 573..1+00097110 574..1+06773160 83..01+00100106
110439+00000012 32..01+00190450 331101+00004510
110440+00000013 32..01+00333290 332101+00002084
110441+00000013 573..1-00045720 574..1+07296900 83..01+00102531
110442+00000013 32..01+00247420 331101+00003401
110443+00000014 32..01+00240920 332101+00007113
110444+00000014 573..1-00039220 574..1+07785240 83..01+00098819
110445+00000014 32..01+00293760 331101+00003661
110446+00000015 32..01+00316720 332101+00007519
110447+00000015 573..1-00062180 574..1+08395730 83..01+00094961
110448+00000015 32..01+00313850 331101+00004726
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110455+00000018 32..01+00339220 332101+00001947
110456+00000018 573..1-00060660 574..1+10127030 83..01+00104138
110457+00000018 32..01+00246430 331101+00009007
110458+00000019 32..01+00182180 332101+00001132
110459+00000019 573..1+00003590 574..1+10555640 83..01+00112013
110460+00000019 32..01+00249420 331101+00010208
110461+00000020 32..01+00245660 332101+00001265
110462+00000020 573..1+00007360 574..1+11050720 83..01+00120957
110463+00000020 32..01+00278150 331101+00005346
110464+00000021 32..01+00311590 332101+00006939
110465+00000021 573..1-00026080 574..1+11640460 83..01+00119364
110466+00000021 32..01+00153370 331101+00001621
110467+00000022 32..01+00160720 332101+00008281
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110468+00000022 573..1-00033430 574..1+11954550 83..01+00112705
110469+00000022 32..01+00294930 331101+00003201
110470+00000023 32..01+00327480 332101+00003574
110471+00000023 573..1-00065980 574..1+12576960 83..01+00112331
110472+00000023 32..01+00108730 331101+00001050
110473+00000024 32..01+00132170 332101+00012007
110474+00000024 573..1-00089420 574..1+12817870 83..01+00101374
110475+00000024 32..01+00104390 331101+00000739
110476+00000025 32..01+00264560 332101+00008870
110477+00000025 573..1-00249590 574..1+13186830 83..01+00093244
110478+00000025 32..01+00306470 331101+00004706
110479+00000026 32..01+00273310 332101+00008954
110480+00000026 573..1-00216440 574..1+13766610 83..01+00088995
110481+00000026 32..01+00321880 331101+00006036
110482+00000027 32..01+00136210 332101+00001086
110483+00000027 573..1-00030770 574..1+14224690 83..01+00093946
110484+00000027 32..01+00156780 331101+00009637
110485+00000028 32..01+00267540 332101+00002592
110486+00000028 573..1-00141530 574..1+14649010 83..01+00100991
110487+00000028 32..01+00128970 331101+00001211
110488+00000029 32..01+00165420 332101+00011479
110489+00000029 573..1-00177990 574..1+14943390 83..01+00090722
110490+00000029 32..01+00298030 331101+00002568
110491+00000030 32..01+00286870 332101+00004115
110492+00000030 573..1-00166830 574..1+15528290 83..01+00089175
110493+00000030 32..01+00050690 331101+00005333
110494+00000131 32..01+00037910 332101+00005894
110495+00000131 573..1-00154060 574..1+15616900 83..01+00088615
110496+00000131 32..01+00175800 331101+00007938
110497+00000032 32..01+00226190 332101+00007292
110498+00000032 573..1-00204450 574..1+16018890 83..01+00089260
110499+00000032 32..01+00300050 331101+00004353
110500+00000033 32..01+00179290 332101+00001368
110501+00000033 573..1-00083690 574..1+16498230 83..01+00092246
110502+00000033 32..01+00282550 331101+00011594
110503+00000034 32..01+00287990 332101+00006906
110504+00000034 573..1-00089130 574..1+17068770 83..01+00096934
110505+00000034 32..01+00146050 331101+00001221
110506+00000035 32..01+00142070 332101+00009862
110507+00000035 573..1-00085140 574..1+17356890 83..01+00088293
110508+00000035 32..01+00321720 331101+00007493
110509+00000036 32..01+00291910 332101+00002098
110510+00000036 573..1-00055330 574..1+17970520 83..01+00093688
110511+00000036 32..01+00286180 331101+00005303
110512+00000037 32..01+00231680 332101+00001320
110513+00000037 573..1-00000840 574..1+18488370 83..01+00097671
110514+00000037 32..01+00133820 331101+00011457
110515+00000038 32..01+00066700 332101+00000811
110516+00000038 573..1+00066280 574..1+18688890 83..01+00108317
110517+00000038 32..01+00224820 331101+00009382
110518+00000039 32..01+00298470 332101+00006990
110519+00000039 573..1-00007360 574..1+19212190 83..01+00110710
110520+00000039 32..01+00215930 331101+00007033
110521+00000040 32..01+00189490 332101+00001660
110522+00000040 573..1+00019080 574..1+19617610 83..01+00116083
110523+00000040 32..01+00276700 331101+00009614
110524+00000041 32..01+00286050 332101+00004258
110525+00000041 573..1+00009730 574..1+20180350 83..01+00121439
110526+00000041 32..01+00260340 331101+00003460
110527+00000042 32..01+00240100 332101+00010656
110528+00000042 573..1+00029970 574..1+20680790 83..01+00114242
110529+00000042 32..01+00176180 331101+00002400
110530+00000043 32..01+00194960 332101+00009602
110531+00000043 573..1+00011190 574..1+21051940 83..01+00107040
110532+00000043 32..01+00255930 331101+00001339
110533+00000044 32..01+00295110 332101+00007235
110534+00000044 573..1-00027990 574..1+21602980 83..01+00101144
```

```
110535+00000044 32..01+00284990 331101+00003666
110536+00000045 32..01+00288320 332101+00005777
110537+00000045 573..1-00031320 574..1+22176280 83..01+00099032
110538+00000045 32..01+00296760 331101+00006099
110539+00000046 32..01+00226020 332101+00001697
110540+00000046 573..1+00039420 574..1+22699060 83..01+00103434
110541+00000046 32..01+00287200 331101+00007442
110542+00000047 32..01+00318220 332101+00003182
110543+00000047 573..1+00008390 574..1+23304490 83..01+00107694
110544+00000047 32..01+00308280 331101+00006033
110545+00000048 32..01+00299550 332101+00001835
110546+00000048 573..1+00017130 574..1+23912310 83..01+00111892
110547+00000048 32..01+00296270 331101+00003834
110548+00000049 32..01+00267010 332101+00004853
110549+00000049 573..1+00046380 574..1+24475590 83..01+00110873
110550+00000049 32..01+00300400 331101+00004187
110551+00000050 32..01+00232060 332101+00006226
110552+00000050 573..1+00114710 574..1+25008050 83..01+00108834
110553+00000050 32..01+00307160 331101+00002737
110554+00000051 32..01+00259300 332101+00007364
110555+00000051 573..1+00162570 574..1+25574520 83..01+00104208
110556+00000051 32..01+00287290 331101+00001849
110557+00000052 32..01+00251130 332101+00005756
110558+00000052 573..1+00198730 574..1+26112930 83..01+00100301
110559+00000052 32..01+00066010 331101+00004117
110560+00000153 32..01+00066790 332101+00005634
110561+00000153 573..1+00197960 574..1+26245730 83..01+00098784
```

STAR*DNA Version 4.0.2

Input Field File : J:\2002\a020801.03\levelpak\LOTELLA\Lotella Raw.RAW
Output Data File : J:\2002\a020801.03\STARNET\Lotella Raw.dat
Date Processed : 04-24-2005 14:26:31

Line	Point	Type	E	D	Sum E	Sum D	Desc
3	100	B	5.6100	299.5700	0.0000	0.0000	
4		F	4.9980	304.1400	0.6120	603.7100	
6		B	4.3610	311.7100			
7		F	4.5920	320.9900	0.3810	1236.4100	
9		B	5.0480	311.0600			
10		F	5.5970	323.8000	-0.1680	1871.2700	
12		B	5.0790	306.0300			
13		F	4.3930	291.4900	0.5180	2468.7900	
15		B	4.9580	313.7800			
16		F	5.3500	318.7600	0.1260	3101.3300	
18		B	4.6510	307.7900			
19		F	4.7160	298.8300	0.0610	3707.9500	
21		B	5.5230	315.1900			
22		F	4.2720	298.8000	1.3120	4321.9400	
24		B	6.1510	305.6800			
25		F	3.0280	318.8700	4.4350	4946.4900	
27		B	5.5220	309.0200			
28		F	3.9790	316.1300	5.9780	5571.6400	
30		B	4.9460	247.3500			
31		F	4.9190	206.5200	6.0050	6025.5100	
33		B	4.4990	75.6000			
34		F	5.8510	71.5900	4.6530	6172.7000	
36		B	5.6250	332.3400			
37		F	4.2920	268.1100	5.9860	6773.1500	
39		B	4.5100	190.4500			
40		F	2.0840	333.2900	8.4120	7296.8900	
42		B	3.4010	247.4200			
43		F	7.1130	240.9200	4.7000	7785.2300	
45		B	3.6610	293.7600			
46		F	7.5190	316.7200	0.8420	8395.7100	
48		B	4.7260	313.8500			
49		F	2.8090	248.9400	2.7590	8958.5000	
51		B	6.8400	251.4500			
52		F	3.7560	276.7300	5.8430	9486.6800	
54		B	6.1230	301.1100			
55		F	1.9470	339.2200	10.0190	10127.0100	
57		B	9.0070	246.4300			
58		F	1.1320	182.1800	17.8940	10555.6200	
60		B	10.2080	249.4200			
61		F	1.2650	245.6600	26.8370	11050.7000	
63		B	5.3460	278.1500			
64		F	6.9390	311.5900	25.2440	11640.4400	
66		B	1.6210	153.3700			
67		F	8.2810	160.7200	18.5840	11954.5300	
69		B	3.2010	294.9300			
70		F	3.5740	327.4800	18.2110	12576.9400	
72		B	1.0500	108.7300			
73		F	12.0070	132.1700	7.2540	12817.8400	
75		B	0.7390	104.3900			
76		F	8.8700	264.5600	-0.8770	13186.7900	
78		B	4.7060	306.4700			
79		F	8.9540	273.3100	-5.1250	13766.5700	
81		B	6.0360	321.8800			
82		F	1.0860	136.2100	-0.1750	14224.6600	
84		B	9.6370	156.7800			
85		F	2.5920	267.5400	6.8700	14648.9800	
87		B	1.2110	128.9700			
88		F	11.4790	165.4200	-3.3980	14943.3700	

90		B	2.5680	298.0300		
91		F	4.1150	286.8700	-4.9450	15528.2700
93		B	5.3330	50.6900		
94	131	F	5.8940	37.9100	-5.5060	15616.8700

Line	Point	Type	E	D	Sum E	Sum D	Desc
96	131	B	7.9380	175.8000	0.0000	0.0000	
97		F	7.2920	226.1900	0.6460	401.9900	
99		B	4.3530	300.0500			
100		F	1.3680	179.2900	3.6310	881.3300	
102		B	11.5940	282.5500			
103		F	6.9060	287.9900	8.3190	1451.8700	
105		B	1.2210	146.0500			
106		F	9.8620	142.0700	-0.3220	1739.9900	
108		B	7.4930	321.7200			
109		F	2.0980	291.9100	5.0730	2353.6200	
111		B	5.3030	286.1800			
112		F	1.3200	231.6800	9.0560	2871.4800	
114		B	11.4570	133.8200			
115		F	0.8110	66.7000	19.7020	3072.0000	
117		B	9.3820	224.8200			
118		F	6.9900	298.4700	22.0940	3595.2900	
120		B	7.0330	215.9300			
121		F	1.6600	189.4900	27.4670	4000.7100	
123		B	9.6140	276.7000			
124		F	4.2580	286.0500	32.8230	4563.4600	
126		B	3.4600	260.3400			
127		F	10.6560	240.1000	25.6270	5063.9000	
129		B	2.4000	176.1800			
130		F	9.6020	194.9600	18.4250	5435.0400	
132		B	1.3390	255.9300			
133		F	7.2350	295.1100	12.5290	5986.0800	
135		B	3.6660	284.9900			
136		F	5.7770	288.3200	10.4180	6559.3900	
138		B	6.0990	296.7600			
139		F	1.6970	226.0200	14.8200	7082.1700	
141		B	7.4420	287.2000			
142		F	3.1820	318.2200	19.0800	7687.5900	
144		B	6.0330	308.2800			
145		F	1.8350	299.5500	23.2780	8295.4200	
147		B	3.8340	296.2700			
148		F	4.8530	267.0100	22.2590	8858.7000	
150		B	4.1870	300.4000			
151		F	6.2260	232.0600	20.2200	9391.1600	
153		B	2.7370	307.1600			
154		F	7.3640	259.3000	15.5930	9957.6200	
156		B	1.8490	287.2900			
157		F	5.7560	251.1300	11.6860	10496.0400	
159		B	4.1170	66.0100			
160	153	F	5.6340	66.7900	10.1690	10628.8400	

Process completed with 0 errors and 0 warnings.

STAR*NET-LEV Version 6.0.25

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Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	LOTELLA
Project Folder	J:\2002\A020801.03\STARNET
Data File List	Lotella Raw.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\A020801.03\STARNET\LOTELLA RAW.DAT]
# STAR*DNA Version 4.0.2
# Copyright 2003 Starplus Software, Inc.

# Input Field File : J:\2002\a020801.03\levelpak\LOTELLA\Lotella Raw.RAW
# Date Processed   : 04-24-2005 14:26:31

.Units  FeetUS
.Sep    -
.3D

# NAVD88 BM ELEVATIONS
E   100    94.12    !
E   153    98.83    !

#  Elevation Difference Records
#  Stations                              Diff     Dist  Descriptor
L  100-131                            -5.50600 15617
L  131-153                            10.16900 10629
```

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetUS) = 2

Fixed Stations	Elev	Description
100	94.1200	
153	98.8300	

Number of Differential Level Observations (FeetUS) = 2

From	To	Elev Diff	StdErr	Length
100	131	-5.5060	0.0172	15617
131	153	10.1690	0.0142	10629

Adjustment Statistical Summary

Number of Stations = 3

Number of Observations = 2
Number of Unknowns = 1
Number of Redundant Obs = 1

Observation	Count	Sum Squares of StdRes	Error Factor
Level Data	2	4.444	2.108
Total	2	4.444	2.108

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
100	94.1200	0.000000	0.000000	
153	98.8300	0.000000	0.000000	
131	88.6420	0.010945	0.021451	

Adjusted Observations and Residuals

Adjusted Differential Level Observations (FeetUS)

From	To	Elev Diff	Residual	StdErr	StdRes
100	131	-5.4780	0.0280	0.0172	1.6
131	153	10.1880	0.0190	0.0142	1.3

Elapsed Time = 00:00:00

```
410073+?......1
110074+00000131 83..11+00088640
110075+00000131 32..01+00018720 331107+00047827 52..07+0003+002
110076+00000201 32..01+00020490 332107+00016696 52..07+0003+004
110077+00000201 573..1-00001770 574..1+00039200 83..01+00091753
110078+00000201 32..01+00020450 331107+00020505 52..07+0003+001
110079+00000131 32..01+00018680 332107+00051627 52..07+0003+001
110080+00000131 573..1+00000000 574..1+00078340 83..01+00088641
```

STAR*DNA Version 4.0.2

Input Field File : J:\2002\a020801.03\levelpak\LOTELLA\LOTELLA-WELL.RAW
Output Data File : J:\2002\a020801.03\STARNET\LOTELLA-WELL.dat
Date Processed : 04-24-2005 14:45:40

Line	Point	Type	E	D	Sum E	Sum D	Desc
3	131	B	4.7827	18.7200	0.0000	0.0000	
4	201	F	1.6696	20.4900	3.1131	39.2100	

Line	Point	Type	E	D	Sum E	Sum D	Desc
6	201	B	2.0505	20.4500	0.0000	0.0000	
7	131	F	5.1627	18.6800	-3.1122	39.1300	

Process completed with 0 errors and 0 warnings.

STAR*NET-LEV Version 6.0.25

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Run Date: Sun Apr 24 2005 14:47:09

Summary of Files Used and Option Settings

Project Folder and Data Files

Project Name	LOTELLA
Project Folder	J:\2002\A020801.03\STARNET
Data File List	LOTELLA-WELL.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\A020801.03\STARNET\LOTELLA-WELL.DAT]
# STAR*DNA Version 4.0.2
# Copyright 2003 Starplus Software, Inc.

# Input Field File : J:\2002\a020801.03\levelpak\LOTELLA\LOTELLA-WELL.RAW
# Date Processed   : 04-24-2005 14:45:40

.Units  FeetUS
.Sep    -
.3D

# ADJUSTED NAVD 88 ELEV.
E   131   88.64   !

#  Elevation Difference Records
#  Stations                              Diff     Dist  Descriptor
L  131-201                            3.11310       39
L  201-131                           -3.11220       39
```

Summary of Unadjusted Input Observations

Number of Entered Stations (FeetUS) = 1

Fixed Stations	Elev	Description
131	88.6400	

Number of Differential Level Observations (FeetUS) = 2

From	To	Elev Diff	StdErr	Length
131	201	3.1131	0.0009	39
201	131	-3.1122	0.0009	39

Adjustment Statistical Summary

Number of Stations = 2

Number of Observations = 2
Number of Unknowns = 1
Number of Redundant Obs = 1

Observation	Count	Sum Squares of StdRes	Error Factor
Level Data	2	0.548	0.740
Total	2	0.548	0.740

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
131	88.6400	0.000000	0.000000	
201	91.7527	0.000608	0.001191	

Adjusted Observations and Residuals

Adjusted Differential Level Observations (FeetUS)

From	To	Elev Diff	Residual	StdErr	StdRes
131	201	3.1127	-0.0004	0.0009	0.5
201	131	-3.1127	-0.0005	0.0009	0.5

Elapsed Time = 00:00:00