

Identification_Information:

Citation:

Citation_Information:

Originator: Robert J. Bills(comp.)
 Originator: U. S. Army Engineer District, Jacksonville (ed.)
 Publication_Date: Unpublished material
 Publication_Time: Unknown
 Title: S. F. W. M. D. Well HF-3
 Edition: 1
 Series_Information:
 Publication_Information:
 Publication_Place: Not published
 Publisher: None
 Online_Linkage: bbills@cte.cc
 Larger_Work_Citation:
 Citation_Information:
 Series_Information:
 Publication_Information:

Description:

Abstract:

South Florida Water Management District
 Well HF-3

Purpose

Purpose:

To establish NAVD 88 and NGVD 29 elevations on the well platform at the reference mark. Also establish a nearby site benchmark.

Supplemental_Information:

Gates may be locked.
 Bob Roth
 Barron Collier Company
 (239) 657-2337
 (239) 658-6060
 There is a lock on the well.
 See point of contact for key.

Time_Period_of_Content:

Time_Period_Information:

Survey Date

Single_Date/Time:
 Calendar_Date: 20030310
 Time_of_Day: 17000000
 Range_of_Dates/Times:
 Multiple_Dates/Times:

Currentness_Reference: Date and time of field work

Status:

Progress: Complete
 Maintenance_and_Update_Frequency: Unknown

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -081° 31' 46. 29"
 East_Bounding_Coordinate: -081° 31' 46. 29"
 North_Bounding_Coordinate: +26° 22' 50. 67"
 South_Bounding_Coordinate: +26° 22' 50. 67"

Keywords:

Theme:

Theme_Keyword_Thesaurus: None
 Theme_Keyword: Record Survey
 Theme_Keyword: Well Site

Place:

Place_Keyword_Thesaurus: None
 Place_Keyword: S. F. W. M. D. Well HF-3
 Place_Keyword: Sec. 21, Twp. 47 S., Rge 28 E.
 Place_Keyword: Collier County, Florida
 Place_Keyword_Thesaurus: Geographic Names Information System
 Place_Keyword: Florida
 Place_Keyword: Collier County

Stratum:

Temporal:

Access_Constraints: None

Use_Constraints: None

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:
 Contact_Person: Tim Howard

Tim Howard

SFWMD

HF-3. gen

Contact_Organization: South Florida Water Management District, Big

Cypress Basin

Contact_Organization_Primary:

Contact_Address:

Address_Type: mailing and physical address

Address: 6167 Janes Lane

City: Naples

State_or_Province: Florida

Postal_Code: 34109

Country: USA

Contact_Voice_Telephone: (239) 597 1505

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:

This survey was prepared using GPS and Leveling instruments. The horizontal locations of the well and benchmark was performed using GPS.

The vertical data was collected using a Wild NA2 Level.

Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 83/90. Elevations are based on NAVD 88 and NGVD 29.

Equipment Used

Logical_Consistency_Report:

Horizontal data was established using sub-meter GPS equipment. Vertical data was established using NGS control points Y 534 and X 534.

Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 83/90. Elevations are based on NAVD 88 and NGVD 29.

Completeness_Report:

Project Results

Horizontal location taken at approximate center of well.

Lat. +26° 22' 50.67"

Long. -081° 31' 46.29"

N 744433'

E 482807'

MP -- Existing reference mark on platform is a marked square with an NGVD 29 elevation of 27.564.

New leveled elevations.

26.48' (NAVD 88)

27.79' (NGVD 29) Based on NGS NGVD 29 adjustment of CERP vertical network.

HF3G -- "V" notch in 2" PVC marked 25.28

24.19' (NAVD 88)

25.50' (NGVD 29) Based on NGS NGVD 29 adjustment of CERP vertical network.

Staff gage at 25.00' mark

23.89' (NAVD 88)

25.20' (NGVD 29) Based on NGS NGVD 29 adjustment of CERP vertical network.

Site Benchmark.

"COLL-49" is a standard U.S. Army Corps of Engineers brass disc, bearing COLL-49 2003 JAX DIST SFWMD, set in a 12" round concrete monument (poured in place, with a magnet placed nearby).

Go south along CR-846 8.0 miles to the intersection with Oil Well grade. Go north along Oil Well grade 0.8 mile to an east-west dirt road. Go west 0.45 miles to COLL-49, set 27 feet north of the centerline of the road.

United States Department of the Interior Geologic Survey Quadrangle map -- CORKSCREW SE

horizontal location.

Lat. +26° 22' 52.12"

Long. -081° 31' 46.23"

N 744579'

E 482813'

elevations.

21.19' (NAVD 88)

HF-3. gen

22.50' (NGVD 29) Based on NGS NGVD 29 adjustment of CERP vertical network.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal

Horizontal_Positional_Accuracy_Report:

The horizontal position of the well HF-3 and benchmark COLL-49, was established using a differential, submeter, wide area augmentation system, GPS, using Coast Guard and FAA beacons for corrected positioning (Trimble Geoplotter CE with Beacon on a Belt) in accordance with the Florida Minimum Technical Standards (Chapter 61G17-6).

Quantitative_Horizontal_Positional_Accuracy_Assessment:

Horizontal_Positional_Accuracy_Value: 1 meter

Horizontal_Positional_Accuracy_Explanation: The intended positional accuracy for this survey is 1 meter.

Vertical_Positional_Accuracy:

Level Line

Vertical_Positional_Accuracy_Report:

A level line was run originating on BM Y 534 with an NAVD 88 elevation, running through COLL-49, COLL-46, COLL-45 and terminating on BM X 534 in accordance with Florida Minimum Technical Standards (Chapter 61G17-6). The level line was also readjusted using the values from the NGS NGVD 29 adjustment of the CERP vertical network.

Quantitative_Vertical_Positional_Accuracy_Assessment:

Vertical_Positional_Accuracy_Value: 0.020 m

Vertical_Positional_Accuracy_Explanation: NAVD 88 level run, 0.020 m closure in 13,976 m, max. allowed 0.045 m (MTS)

Quantitative_Vertical_Positional_Accuracy_Assessment:

Vertical_Positional_Accuracy_Value: 0.021 m

Vertical_Positional_Accuracy_Explanation: NGVD 29 level run, 0.021 m closure in 13,976 m, max. allowed 0.045 m (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 Trimble

Geoplotter CE with Beacon on a Belt GPS.

The level line was performed using a Wild NA2 level.

Three wire methodology was used.

Process_Date: 20030311

Process_Time: 17000000

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:

Equiangular:

General_Vertical_Near-sidereal_Perspective:

- HF-3. gen
 - 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:
 - Equi_rectangular:
 - Azimuthal_Equidistant:
 - Local_Planar:
 - Planar_Coordinate_Information:
 - Coordinate_Representation:
 - Distance_and_Bearing_Representation:
 - Local:
 - Geodetic_Model:
 - 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:
 - Multiples_Dates/Times:
 - Metadata_Reference_Information:
 - Metadata_Date: 20030325
 - Metadata_Contact:

HF-3. gen

Contact_Information:

Contact_Person_Primary:

Contact_Person: Joseph S. Boggs

Contact_Organization: Consul-Tech Surveying & Mapping

Contact_Organization_Primary:

Contact_Position: Project Surveyor

Contact_Address:

Address_Type: mailing and physical address

Address: 24831 Old 41 Road

City: Bonita Springs

State_or_Province: Florida

Postal_Code: 34135

Country: USA

Contact_Voice_Telephone: (239) 947-0266

Contact_Facsimile_Telephone: (239) 947-1323

Contact_Electronic_Mail_Address: jboggs@cte.cc

Hours_of_Service: 8:00 am to 5:00 pm EST

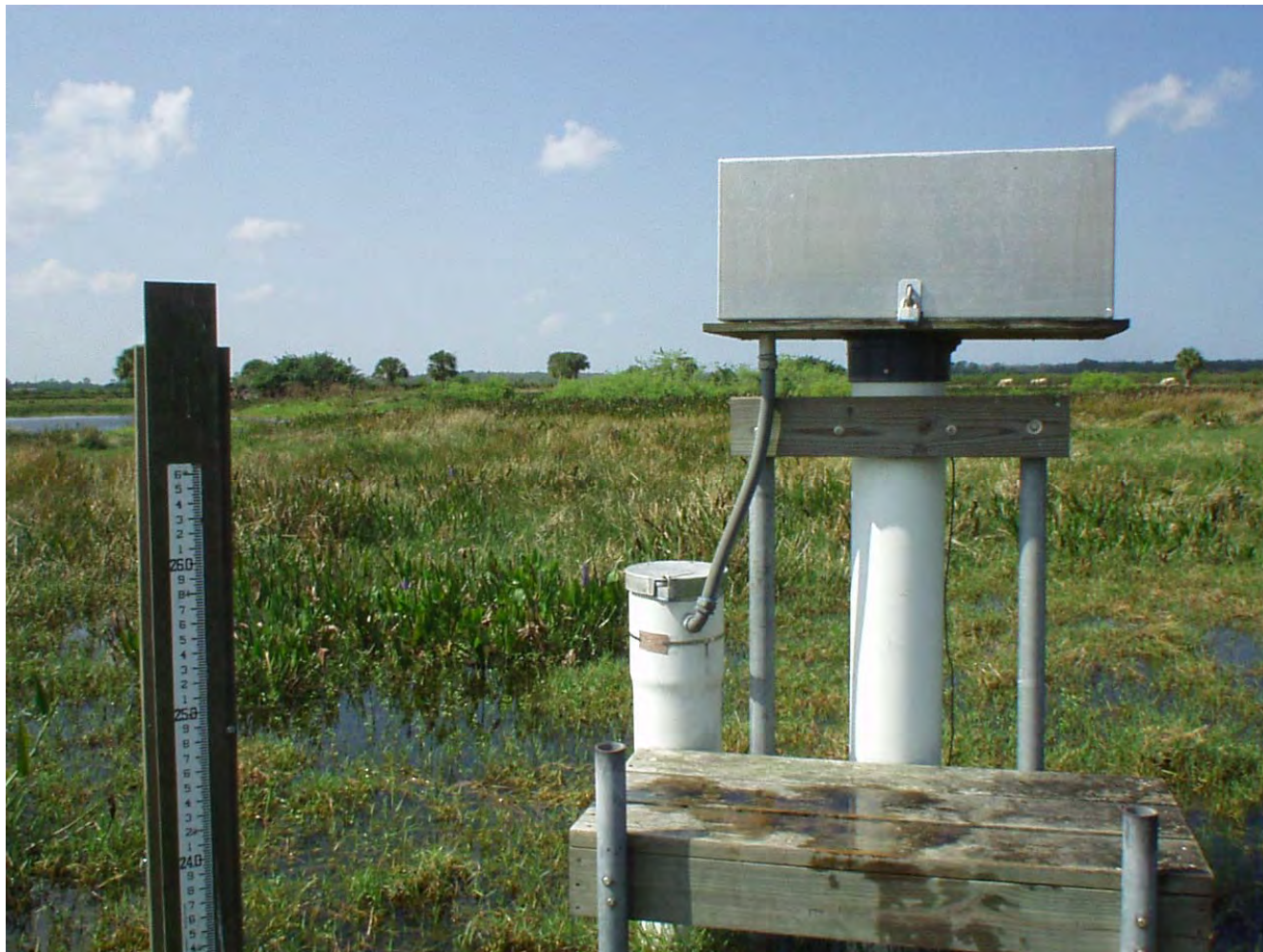
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: Local time

Metadata_Security_Information:

S.F.W.M.D. Well – HF-3



Consul-Tech Surveying & Mapping, Inc.

Date of Survey: March 11, 2003

Looking: Westerly

S.F.W.M.D. Well – HF-3

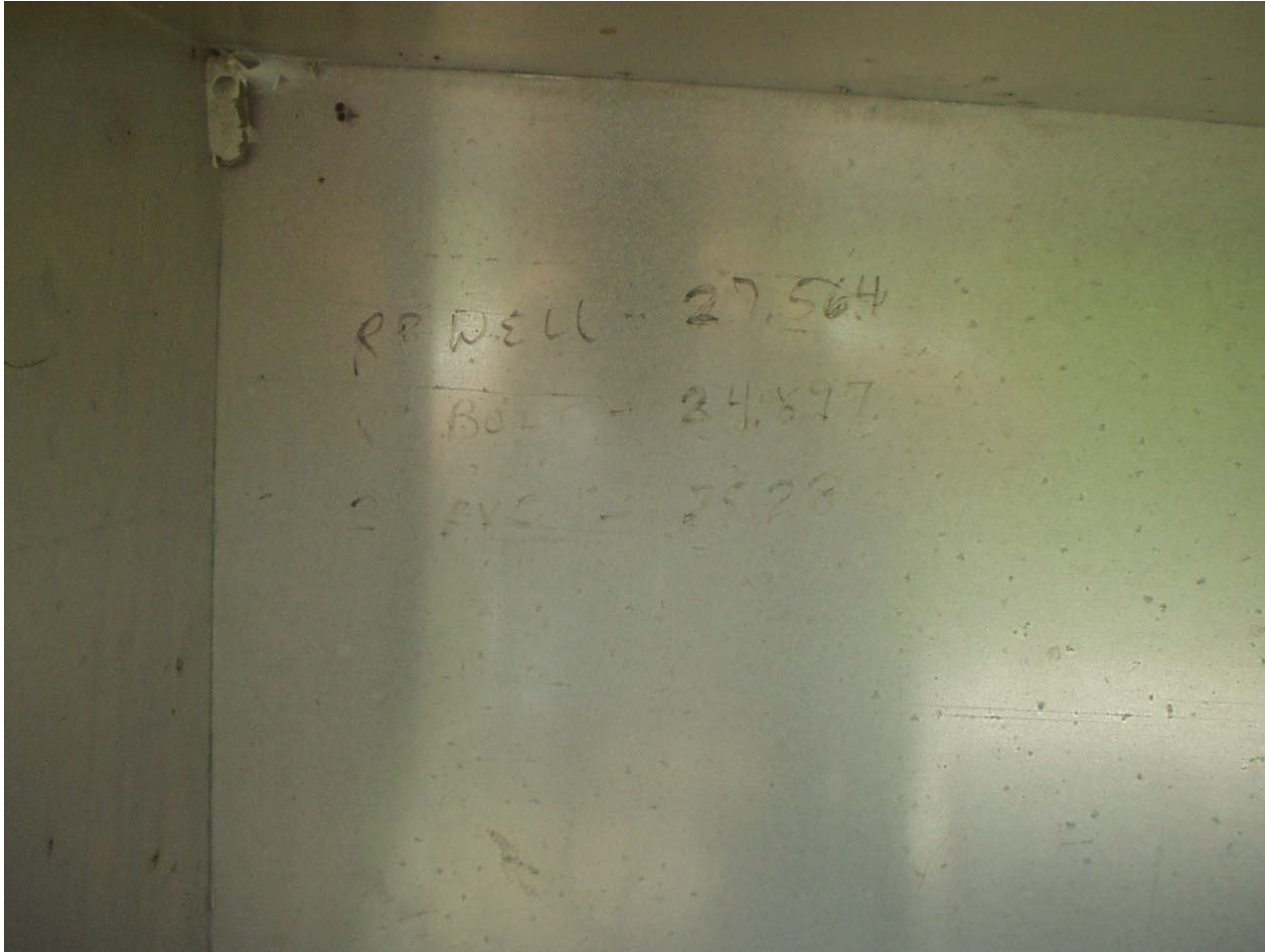


Consul-Tech Surveying & Mapping, Inc.

Date of Survey: March 11, 2003

Looking: Westerly

S.F.W.M.D. Well – HF-3



Consul-Tech Surveying & Mapping, Inc.

Date of Survey: March 11, 2003

Looking: Westerly

S.F.W.M.D. Well – HF-3



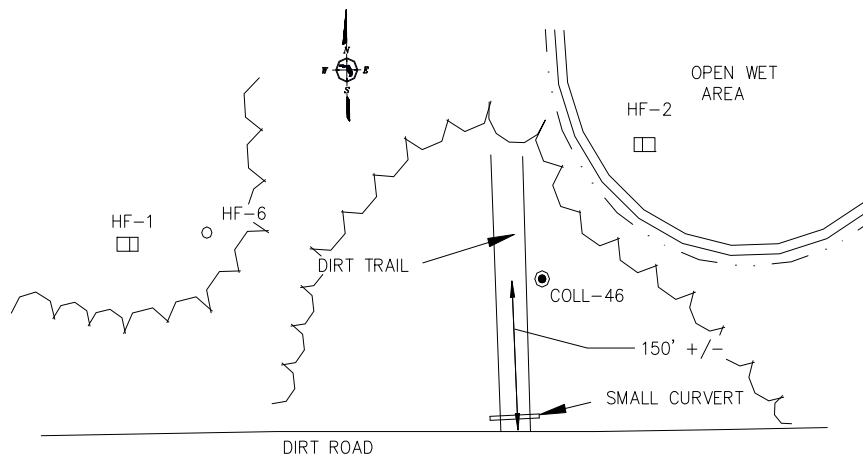
Consul-Tech Surveying & Mapping, Inc.

Date of Survey: March 11, 2003



COUNTY COLLIER		PROJECT WELL SITES		DESIGNATION COLL-46	
SECTION 09		TOWNSHIP 47 SOUTH		RANGE 28 EAST	
GEOGRAPHIC INDEX OF QUAD Florida					
Established by Consul-Tech Surveying and Mapping, inc.			NAME OF QUADRANGLE CORKSCREW		
SURVEYOR <u>Joseph S. Boggs</u> DATE <u>3 / 10 / 2003</u>			FIELD BOOK <u>516-5</u> PAGE <u>23</u>		
HORIZONTAL DATUM: 83/90 ZONE EAST					
VERTICAL DATUM: NAVD 88 & NGVD 29 (Based on NGS adjustment of CERP vertical network)					
CONTROL ACCURACY: HORIZONTAL SUB-METER VERTICAL 3 rd Order					
STATE PLANE COORDINATES Feet		X=483918	Y=749947	EL.=20.80' (NAVD 88) EL.=22.11' (NGVD 29)	
LATITUDE 26°23'45.33" N			LONGITUDE 081°31'34.33" W		
DESCRIPTION					
To Reach: From the intersection of SR-29 and CR-846: Go south along CR-846 8.0 miles to the intersection with Oil Well grade. Go north along Oil Well grade 0.8 mile to an east-west dirt road. Go east 0.5 miles to a 90 degree bend to the north. Go north 1.1 miles to an equipment barn. Go west along a dirt road 0.6 mile to a Jeep Trail running north. Go north along Jeep trail 150 feet to COLL-46, set 15 feet east of trail.					
COLL-46 is a 10" round concrete monument (formed in place with a magnet placed nearby) with a standard Army Corps of Engineers brass disk, bearing "COLL-46 2003 JAX. DIST. SFWMD"					

SKETCH

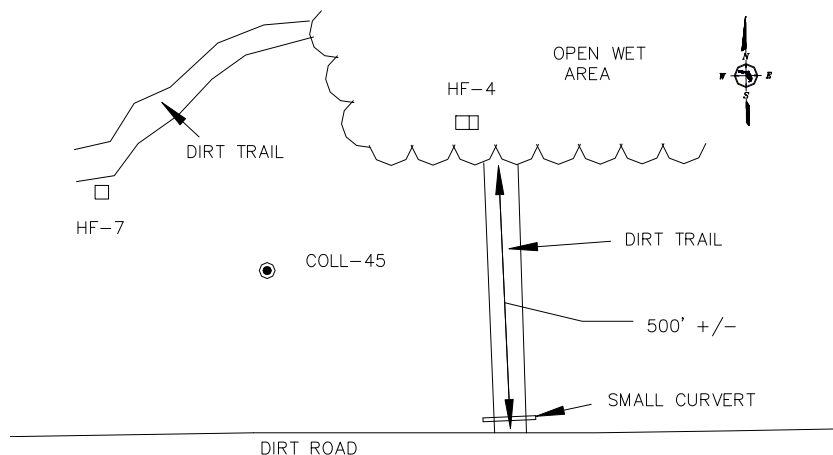






COUNTY COLLIER		PROJECT WELL SITES		DESIGNATION COLL-45	
SECTION 09		TOWNSHIP 47 SOUTH		RANGE 28 EAST	
GEOGRAPHIC INDEX OF QUAD Florida					
Established by Consul-Tech Surveying and Mapping, inc.			NAME OF QUADRANGLE CORKSCREW		
SURVEYOR <u>Joseph S. Boggs</u> DATE <u>3 / 10 / 2003</u>			FIELD BOOK <u>516-5</u> PAGE <u>24</u>		
HORIZONTAL DATUM: 83/90 ZONE EAST					
VERTICAL DATUM: NAVD 88 & NGVD 29 (Based on NGS adjustment of CERP vertical network)					
CONTROL ACCURACY: HORIZONTAL SUB-METER VERTICAL 3 rd Order					
STATE PLANE COORDINATES Feet		X=483871		Y=750388	
				EL.=20.49' (NAVD 88) EL.=21.80' (NGVD 29)	
LATITUDE 26°23'49.69" N			LONGITUDE 081°31'34.85" W		
DESCRIPTION					
To Reach: From the intersection of SR-29 and CR-846: Go south along CR-846 8.0 miles to the intersection with Oil Well grade. Go north along Oil Well grade 0.8 mile to an east-west dirt road. Go east 0.5 miles to a 90 degree bend to the north. Go north 1.1 miles to an equipment barn. Go west along a dirt road 0.6 mile to a Jeep Trail running north. Go north along Jeep trail 430 feet to a small clearing; Follow clearing southwest 100 feet, to COLL-45.					
COLL-45 is a 10" round concrete monument (formed in place with a magnet placed nearby) with a standard Army Corps of Engineers brass disk, bearing "COLL-45 2003 JAX. DIST. SFWMD"					

SKETCH

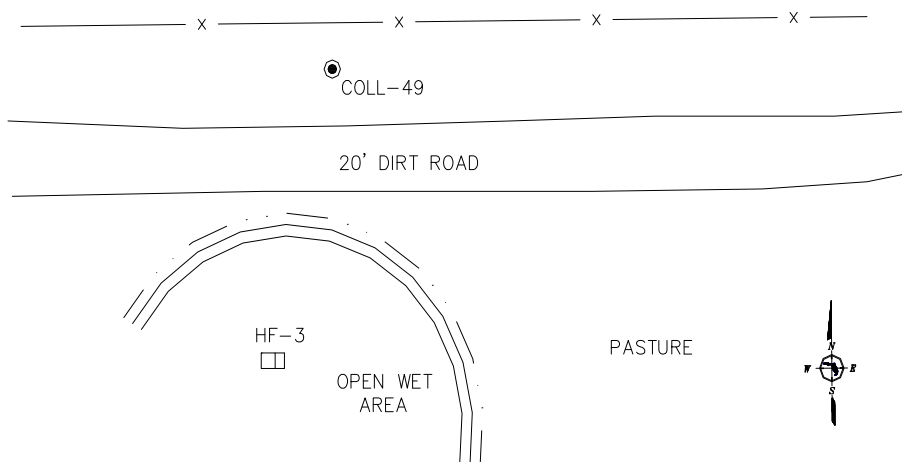






COUNTY COLLIER		PROJECT WELL SITES		DESIGNATION COLL-49	
SECTION <u>21</u>		TOWNSHIP <u>47 SOUTH</u>		RANGE <u>28 EAST</u>	
GEOGRAPHIC INDEX OF QUAD Florida					
Established by Consul-Tech Surveying and Mapping, inc.			NAME OF QUADRANGLE <u>CORKSCREW SE</u>		
SURVEYOR <u>Joseph S. Boggs</u> DATE <u>3 / 11 / 2003</u>			FIELD BOOK <u>516-5</u> PAGE <u>38</u>		
HORIZONTAL DATUM: 83/90 ZONE EAST					
VERTICAL DATUM: NAVD 88 & NGVD 29 (Based on NGS adjustment of CERP vertical network)					
CONTROL ACCURACY: HORIZONTAL SUB-METER VERTICAL 3 rd Order					
STATE PLANE COORDINATES Feet		X= 482813	Y= 744579	EL.= 21.19' (NAVD 88) EL.= 22.50' (NGVD 29)	
LATITUDE 26°22'52.12" N			LONGITUDE 081°31'46.23" N		
DESCRIPTION					
To Reach: From the intersection of SR-29 and CR-846: Go south along CR-846 8.0 miles to the intersection with Oil Well grade. Go north along Oil Well grade 0.8 mile to an east-west dirt road. Go west 0.45 miles to COLL-49, set 27 feet north of the centerline of the road.					
COLL-49 is a 12" round concrete monument (formed in place with a magnet Placed nearby) with a standard Army Corps of Engineers brass disk, bearing "COLL-49 2003 JAX. DIST. SFWMD"					
Notable Land marks:					

SKETCH





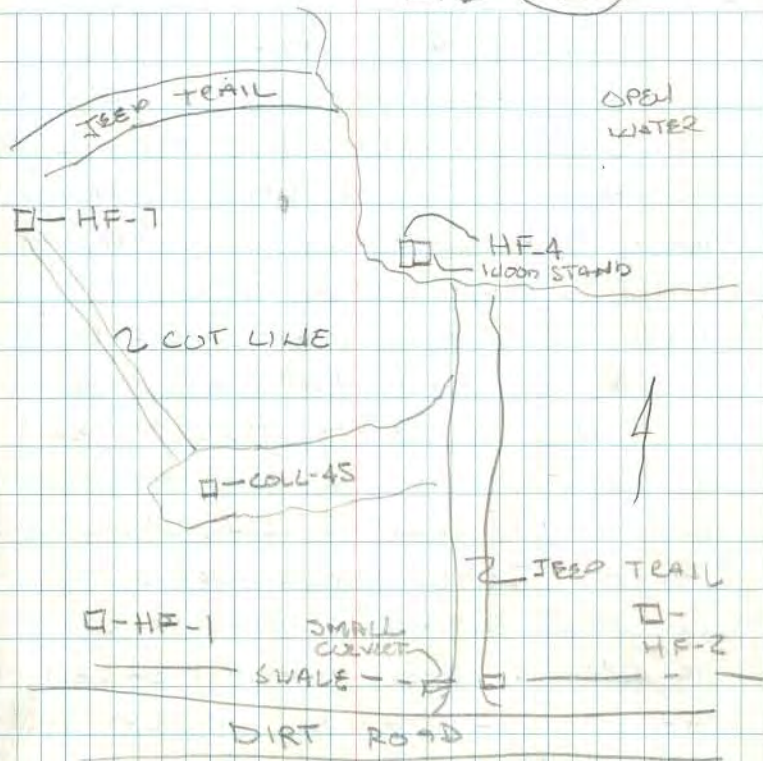
C. ROSE / R. BILLS 2/27/03

COLL-45 / HF4 + HF7

LOCATION: FROM THE INTX SR-29 AND CR-846 (IMMOKALEE RD) GO SOUTH ALONG CR-846 8.0 MI +/- TO OIL WELL GRADE AND GO NORTH ALONG OILWELL GRADE 0.8 MI TO AN EAST WEST DIRT ROAD. GO EAST 0.5 MI +/- AND TURN NORTH AND GO 1.1 MI +/- TO AN EQUIPMENT BARN GO WEST 0.6 MI +/- TO A JEEP TRAIL GOING NORTH. GO NORTH APPROX 500 FEET TO HF4 AT THE SOUTH EDGE OF A CLEARING. COLL-45 IS A STANDARD US ARMY CORP OF ENGINEER BRASS DISC, FROM HF4 GO SOUTH ALONG SAID JEEP TRAIL 70 FEET +/- TO A SMALL CLEARING GOING SOUTH-WEST, FOLLOW CLEARING APPROX. 100' TO MON. COLL-45 APPROX 0.5' ABOVE GROUND. FROM COLL-45 GO NORTH-NORTHWEST 160' +/- TO HF-7.

SPCS ARE NAD83 / FLA EAST / FEET
OBTAINED USING TRIMBLE GEO EXPLORER CE
SER# 42440 14618 WITH A BEACON ON A
BELT

516-20



HF-4 N 750504.9 (LF)
E 483961.8 (LF)
HF-7 N 750533.9 (LF)
E 483766.8 (LF)
COLL-45 N 750387.9 (LF)
E 483871.4 (LF)

MAGNET PLACED 6" EAST OF COLL-45
COMPLETED @ 2:00 PM

C. ROSE / B. BILLS

2/27/03

COLL-46 / HF-1 + HF-2

LOCATION: FROM THE INTX OF SR-29 AND CR-846, GO SOUTH ALONG CR 846 8.0 MILES +/- TO THE INTX WITH OIL WELL GRADE. GO NORTH ALONG OIL WELL GRADE APPROX 0.8 MI TO AN EAST-WEST DIRT ROAD, GO EAST 0.5 MI TO A 90° BEND NORTH, GO NORTH 1.1 MI TO AN EQUIPMENT BARN, GO WEST ALONG A DIRT ROAD APPROX 0.6 MI TO A JEEP TRAIL GOING NORTH. FOLLOW TRAIL NORTH APPROX 150' TO COLL-46 15' +/- TO EAST OF TRAIL. HF-1 IS APPROX. 230' NORTHWEST OF COLL-46. HF-2 IS APPROX 300' NORTHEAST OF COLL-46.

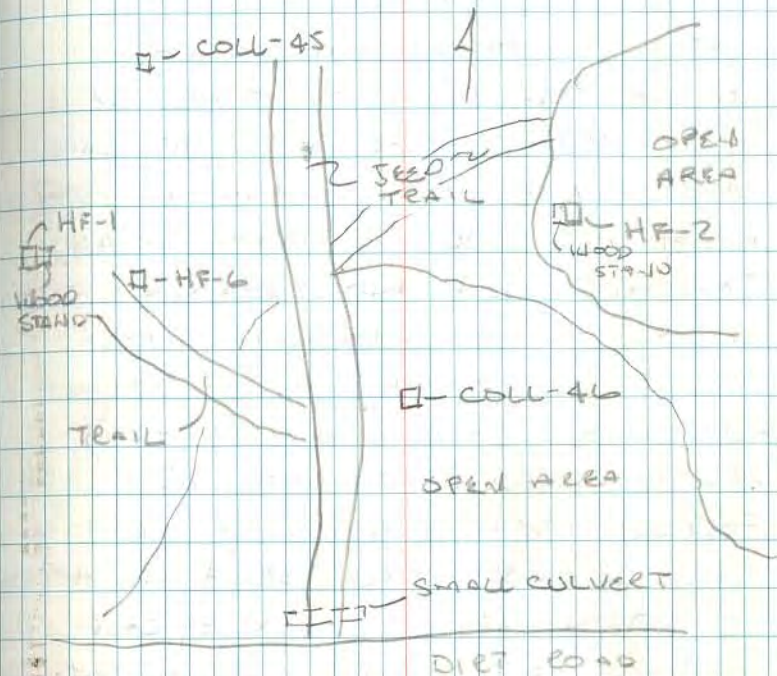
SPE'S ARE NAD 83 / FLAREAST / FEET
OBTAINED USING TRIMBLE GEOEXPLORE
CE SER# 4244B / 4618 WITH A BEACON ON A DIRT

HF-1 N 750097.1 (LF)
E 483717.6 (LF)

HF-2 N 750154.9 (LF)
E 484129.5 (LF)

COLL-46 N 749947.3 (LF)
E 483917.5 (LF)

516-21



MAGNET PLACED 6" EAST OF COLL-46
COMPLETED @ 12:50 PM

C. ROSE | D. DONAWSON

3/4/03

COLL-49 | HF-3

LOCATION: FROM THE INTX SR-29 AND
CR 846 GO SOUTH-SOUTHWEST 8.0 MILE+
ALONG CR-846 TO THE INTX WITH OIL
WELL GRADE (DIET). GO NORTH
ALONG OIL WELL GRADE 0.8 MILES
TO AN INTX WITH A EAST-WEST
FARM ROAD. GO WEST ALONG DIRT
ROAD 0.45 MILES +/- HF-3 IS
80+/- SOUTH OF SAID DIRT ROAD AND
HAS SMALL WOOD PLATFORM. COLL-49

IS 27' +/- NORTH OF SAID DIRT ROAD

SPCS N22 JAD 83 | FL EAST / FEET

OBTAINED USING TRIMBLE GEOEXPLORE CE
SER # 4244614618 WITH A BEACON ON
A BELT.

NOTE: COLL-49 IS A STANDARD US ARMY COLLECT
OF ENGINEERS BRASS DISC SET IN THE TOP
OF A 12" MON BEARING COLL-49 | 2003 |
TAX DIST // SF WMD.

COLL-49 N 744579.4 (F)

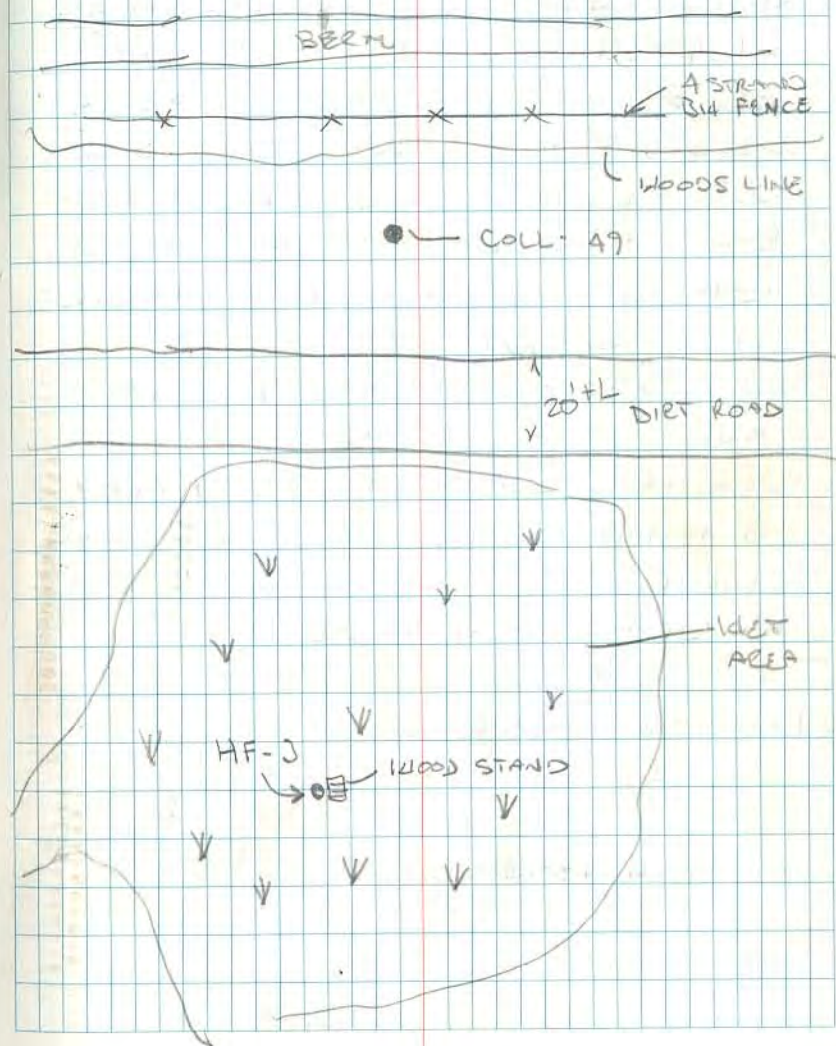
E 482812.9 (F)

HF-3 N 744432.7 (F)

E 482807.1 (F)

516-27

MONUMENT COMPLETED @ 11:00 AM
MAGNET PLACED 6" EAST OF MONUMENT



From the "ngvd29.txt" file provided by NGS for the CERP Geodetic Vertical Control Project.

Line/Part: L26227 SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark ID	SSN	PID	Designation	Geopotential	Elevation	Codes
1612	2723	AJ7583	X 534	7.5277	7.6813	
1613	2724	AJ7589	Y 534	6.8671	7.0072	

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.58
1 National Geodetic Survey, Retrieval Date = MARCH 8, 2008
AJ7589 *****
AJ7589 DESIGNATION - Y 534
AJ7589 PID - AJ7589
AJ7589 STATE/COUNTY- FL/COLLIER
AJ7589 USGS QUAD - CORKSCREW SE (1973)
AJ7589
AJ7589 *CURRENT SURVEY CONTROL
AJ7589
AJ7589 * NAD 83(2007)- 26 21 59.59194(N) 081 30 19.73611(W) ADJUSTED
AJ7589 * NAVD 88 - 6.608 (meters) 21.68 (feet) ADJUSTED
AJ7589
AJ7589 EPOCH DATE - 2002.00
AJ7589 X - 844,690.338 (meters) COMP
AJ7589 Y - -5,655,656.785 (meters) COMP
AJ7589 Z - 2,815,497.605 (meters) COMP
AJ7589 LAPLACE CORR- -0.87 (seconds) DEFLEC99
AJ7589 ELLIP HEIGHT- -17.644 (meters) (02/10/07) ADJUSTED
AJ7589 GEOID HEIGHT- -24.25 (meters) GEOID03
AJ7589 DYNAMIC HT - 6.597 (meters) 21.64 (feet) COMP
AJ7589
AJ7589 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AJ7589 Type PID Designation North East Ellip
AJ7589 -----
AJ7589 NETWORK AJ7589 Y 534 2.04 2.16 3.63
AJ7589 -----
AJ7589 MODELED GRAV- 979,050.6 (mgal) NAVD 88
AJ7589
AJ7589 VERT ORDER - FIRST CLASS II
AJ7589
AJ7589 .The horizontal coordinates were established by GPS observations
AJ7589 .and adjusted by the National Geodetic Survey in February 2007.
AJ7589
AJ7589 .The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AJ7589 .See National Readjustment for more information.
AJ7589 .The horizontal coordinates are valid at the epoch date displayed above.
AJ7589 .The epoch date for horizontal control is a decimal equivalence
AJ7589 .of Year/Month/Day.
AJ7589
AJ7589 .The orthometric height was determined by differential leveling
AJ7589 .and adjusted in February 2002.
AJ7589
AJ7589 .The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ7589
AJ7589 .The Laplace correction was computed from DEFLEC99 derived deflections.
AJ7589
AJ7589 .The ellipsoidal height was determined by GPS observations
AJ7589 .and is referenced to NAD 83.
AJ7589
AJ7589 .The geoid height was determined by GEOID03.
AJ7589
AJ7589 .The dynamic height is computed by dividing the NAVD 88
AJ7589 .geopotential number by the normal gravity value computed on the
AJ7589 .Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7589 .degrees latitude (g = 980.6199 gals.).
AJ7589
AJ7589 .The modeled gravity was interpolated from observed gravity values.
AJ7589
AJ7589;
AJ7589;SPC FL E - North East Units Scale Factor Converg.
AJ7589;SPC FL E - 225,322.027 149,552.930 MT 0.99997259 -0 13 28.2
AJ7589;SPC FL E - 739,244.02 490,658.24 sFT 0.99997259 -0 13 28.2
AJ7589;UTM 17 - 2,916,377.130 449,570.142 MT 0.99963140 -0 13 28.2
AJ7589
AJ7589!
AJ7589!SPC FL E - Elev Factor x Scale Factor = Combined Factor
AJ7589!SPC FL E - 1.00000277 x 0.99997259 = 0.99997536
AJ7589!UTM 17 - 1.00000277 x 0.99963140 = 0.99963417
AJ7589
AJ7589 SUPERSEDED SURVEY CONTROL

```

AJ7589
AJ7589 NAD 83(1999)- 26 21 59.59204(N) 081 30 19.73618(W) AD() 1
AJ7589 ELLIP H (12/12/02) -17.652 (m) GP() 4 2
AJ7589 NAVD 88 (12/12/02) 6.61 (m) 21.7 (f) LEVELING 3
AJ7589
AJ7589 .Superseded values are not recommended for survey control.
AJ7589 .NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AJ7589 .[See file dsdata.txt](#) to determine how the superseded data were derived.
AJ7589

AJ7589 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK4957016377(NAD 83)
AJ7589 MARKER: F = FLANGE-ENCASED ROD
AJ7589 SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ7589 STAMPING: Y 534 2001 CERP
AJ7589 MARK LOGO: NONE
AJ7589 PROJECTION: RECESSED 14 CENTIMETERS
AJ7589 MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
AJ7589 STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AJ7589 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ7589 +SATELLITE: SATELLITE OBSERVATIONS - March 25, 2006
AJ7589 ROD/PIPE-DEPTH: 5.20 meters
AJ7589 SLEEVE-DEPTH : 0.46 meters

HISTORY	- Date	Condition	Report By
AJ7589 HISTORY	- 20010825	MONUMENTED	LDBLS
AJ7589 HISTORY	- 20020311	GOOD	MAPTEC
AJ7589 HISTORY	- 20060325	GOOD	SUTESO

STATION DESCRIPTION

AJ7589 DESCRIBED BY LD BRADLEY LAND SURVEYORS 2001 (JCH)
AJ7589 THE MARK IS ABOUT 50.6 KM (31.42 MI) NORTHEAST OF NAPLES, ABOUT 14.2
AJ7589 KM (8.81
AJ7589 MI) SOUTHWEST OF IMMOKALEE, LOCATED IN SECTION 22, TOWNSHIP 47 SOUTH,
AJ7589 RANGE 28
AJ7589 EAST, COLLIER COUNTY, FLORIDA. OWNERSHIP - COLLIER COUNTY
AJ7589
AJ7589 TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 29 AND COUNTY
AJ7589 ROAD 846
AJ7589 IN IMMOKALEE , GO SOUTHWEST ALONG COUNTY ROAD 846 14.2 KM (8.81 MI) TO
AJ7589 THE
AJ7589 MARK ON THE LEFT.
AJ7589
AJ7589 THE MARK IS A STAINLESS STEEL ROD 32.00 M (105.0 FT) EAST OF A 36-INCH
AJ7589 REINFORCED CONCRETE PIPE, 7.80 M (25.6 FT) SOUTH OF THE CENTERLINE OF
AJ7589 COUNTY
AJ7589 ROAD 846, 7.56 M (24.8 FT) NORTHWEST OF A WOOD POWER POLE AND 0.91 M
AJ7589 (3.0 FT)
AJ7589 NORTH OF A CARSONITE WITNESS POST. THE DATUM POINT IS SET 14 CM (0.47
AJ7589 FT)
AJ7589 BELOW THE LEVEL OF THE GROUND, ABOUT 0.46 M (1.5 FT) BELOW THE LEVEL
AJ7589 OF THE
AJ7589 HIGHWAY, BEING THE TOP OF A STAINLESS STEEL ROD DRIVEN 5.20 M (17.06
AJ7589 FT) TO
AJ7589 REFUSAL AND ENCASED IN A 5-INCH PVC PIPE WITH AN ACCESS COVER.
AJ7589
AJ7589 NOTE - A MAGNET WAS PLACED INSIDE THE SLEEVE, BELOW THE ACCESS COVER.
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STATION RECOVERY (2002)

AJ7589 RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
AJ7589 THE MARK IS ABOUT 50.6 KM (31.42 MI) NORTHEAST OF NAPLES, ABOUT 14.2
AJ7589 KM (8.81
AJ7589 MI) SOUTHWEST OF IMMOKALEE, LOCATED IN SECTION 22, TOWNSHIP 47 SOUTH,
AJ7589 RANGE 28
AJ7589 EAST, COLLIER COUNTY, FLORIDA. OWNERSHIP - COLLIER COUNTY
AJ7589
AJ7589 TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 29 AND COUNTY

From the "ngvd29.txt" file provided by NGS for the CERP Geodetic Vertical Control Project.
 Line/Part: L26227 SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark ID	SSN	PID	Designation	Geopotential	Elevation	Codes
1612	2723	AJ7583	X 534	7.5277	7.6813	
1613	2724	AJ7589	Y 534	6.8671	7.0072	

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

DATABASE = ,PROGRAM = datasheet, VERSION = 7.58
 1 National Geodetic Survey, Retrieval Date = MARCH 8, 2008
 AJ7583 *****
 AJ7583 DESIGNATION - X 534
 AJ7583 PID - AJ7583
 AJ7583 STATE/COUNTY- FL/COLLIER
 AJ7583 USGS QUAD - CORKSCREW SE (1973)
 AJ7583
 AJ7583 *CURRENT SURVEY CONTROL
 AJ7583
 AJ7583 * NAD 83(2007)- 26 22 00.02544(N) 081 31 18.68525(W) ADJUSTED
 AJ7583 * NAVD 88 - 7.282 (meters) 23.89 (feet) ADJUSTED
 AJ7583
 AJ7583 EPOCH DATE - 2002.00
 AJ7583 X - 843,073.172 (meters) COMP
 AJ7583 Y - -5,655,892.714 (meters) COMP
 AJ7583 Z - 2,815,509.866 (meters) COMP
 AJ7583 LAPLACE CORR- -0.94 (seconds) DEFLEC99
 AJ7583 ELLIP HEIGHT- -16.952 (meters) (02/10/07) ADJUSTED
 AJ7583 GEOID HEIGHT- -24.24 (meters) GEOID03
 AJ7583 DYNAMIC HT - 7.270 (meters) 23.85 (feet) COMP
 AJ7583
 AJ7583 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
 AJ7583 Type PID Designation North East Ellip
 AJ7583 -----
 AJ7583 NETWORK AJ7583 X 534 2.00 2.06 3.53
 AJ7583 -----
 AJ7583 MODELED GRAV- 979,050.3 (mgal) NAVD 88
 AJ7583
 AJ7583 VERT ORDER - FIRST CLASS II
 AJ7583
 AJ7583 The horizontal coordinates were established by GPS observations
 AJ7583 and adjusted by the National Geodetic Survey in February 2007.
 AJ7583
 AJ7583 The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 AJ7583 See [National Readjustment](#) for more information.
 AJ7583 The horizontal coordinates are valid at the epoch date displayed above.
 AJ7583 The epoch date for horizontal control is a decimal equivalence
 AJ7583 of Year/Month/Day.
 AJ7583
 AJ7583 The orthometric height was determined by differential leveling
 AJ7583 and adjusted in February 2002.
 AJ7583
 AJ7583 The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ7583
 AJ7583 The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ7583
 AJ7583 The ellipsoidal height was determined by GPS observations
 AJ7583 and is referenced to NAD 83.
 AJ7583
 AJ7583 The geoid height was determined by GEOID03.
 AJ7583
 AJ7583 The dynamic height is computed by dividing the NAVD 88
 AJ7583 geopotential number by the normal gravity value computed on the
 AJ7583 Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AJ7583 degrees latitude (g = 980.6199 gals.).
 AJ7583
 AJ7583 The modeled gravity was interpolated from observed gravity values.
 AJ7583
 AJ7583
 AJ7583; North East Units Scale Factor Converg.
 AJ7583;SPC FL E - 225,341.875 147,918.757 MT 0.99997465 -0 13 54.4
 AJ7583;SPC FL E - 739,309.13 485,296.79 sFT 0.99997465 -0 13 54.4
 AJ7583;UTM 17 - 2,916,396.971 447,936.527 MT 0.99963347 -0 13 54.4
 AJ7583
 AJ7583!
 AJ7583! SPC FL E - Elev Factor x Scale Factor = Combined Factor
 AJ7583! SPC FL E - 1.00000266 x 0.99997465 = 0.99997731
 AJ7583! UTM 17 - 1.00000266 x 0.99963347 = 0.99963613
 AJ7583
 AJ7583 SUPERSEDED SURVEY CONTROL

AJ7583
AJ7583 NAD 83(1999)- 26 22 00.02550(N) 081 31 18.68537(W) AD() 1
AJ7583 ELLIP H (12/12/02) -16.965 (m) GP() 4 2
AJ7583 NAVD 88 (12/12/02) 7.28 (m) 23.9 (f) LEVELING 3
AJ7583

AJ7583.Superseded values are not recommended for survey control.
AJ7583.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AJ7583. See file dsdata.txt to determine how the superseded data were derived.

AJ7583
AJ7583_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK4793716397(NAD 83)
AJ7583_MARKER: F = FLANGE-ENCASED ROD
AJ7583_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ7583_STAMPING: X 534 2001 CERP
AJ7583_MARK LOGO: NONE
AJ7583_PROJECTION: RECESSED 15 CENTIMETERS
AJ7583_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
AJ7583_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AJ7583_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ7583+SATELLITE: SATELLITE OBSERVATIONS - March 25, 2006
AJ7583_ROD/PIPE-DEPTH: 9.72 meters
AJ7583_SLEEVE-DEPTH : 0.46 meters

Table with columns: HISTORY, Date, Condition, Report By. Includes entries for dates 20010825, 20020311, and 20060325.

AJ7583 STATION DESCRIPTION

AJ7583 DESCRIBED BY LD BRADLEY LAND SURVEYORS 2001 (JCH)
AJ7583 THE MARK IS ABOUT 48.9 KM (30.40 MI) NORTHEAST OF NAPLES, ABOUT 15.8
AJ7583 KM (9.83
AJ7583 MI) SOUTHWEST OF IMMOKALEE, IN SECTION 21, TOWNSHIP 47 SOUTH, RANGE 28
AJ7583 EAST,
AJ7583 COLLIER COUNTY, FLORIDA. OWNERSHIP - COLLIER COUNTY
AJ7583
AJ7583 TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 29 AND COUNTY
AJ7583 ROAD 846
AJ7583 IN IMMOKALEE, GO SOUTHWEST ALONG COUNTY ROAD 846 15.8 KM (9.83 MI) TO
AJ7583 THE
AJ7583 INTERSECTION WITH OIL WELL GRADE ROAD AND THE MARK ON THE RIGHT.
AJ7583
AJ7583 THE MARK IS A STAINLESS STEEL ROD IN THE NORTHWEST QUADRANT OF THE
AJ7583 INTERSECTION, 8.26 M (27.1 FT) NORTH OF THE CENTERLINE OF COUNTY ROAD
AJ7583 846,
AJ7583 3.87 M (12.7 FT) SOUTH OF THE SOUTHEAST CORNER A CONCRETE ENDWALL,
AJ7583 3.51 M
AJ7583 (11.5 FT) SOUTH OF A CARSONITE WITNESS POST AND 0.91 M (3.0 FT) EAST
AJ7583 OF 48-
AJ7583 INCH REINFORCED CONCRETE PIPE CULVERT. THE DATUM POINT IS SET 15 CM
AJ7583 (0.50 FT)
AJ7583 BELOW THE LEVEL OF THE GROUND, ABOUT 0.46 M (1.5 FT) BELOW THE LEVEL
AJ7583 OF THE
AJ7583 HIGHWAY, BEING THE TOP OF A STAINLESS STEEL ROD DRIVEN 9.72 M (31.88
AJ7583 FT) TO
AJ7583 REFUSAL AND ENCASED IN A 5-INCH PVC PIPE WITH AN ACCESS COVER.
AJ7583
AJ7583 NOTE - A MAGNET WAS PLACED INSIDE THE SLEEVE, BELOW THE ACCESS COVER.

AJ7583 STATION RECOVERY (2002)

AJ7583
AJ7583 RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
AJ7583 THE MARK IS ABOUT 48.9 KM (30.40 MI) NORTHEAST OF NAPLES, ABOUT 15.8
AJ7583 KM (9.83
AJ7583 MI) SOUTHWEST OF IMMOKALEE, IN SECTION 21, TOWNSHIP 47 SOUTH, RANGE 28
AJ7583 EAST,
AJ7583 COLLIER COUNTY, FLORIDA. OWNERSHIP - COLLIER COUNTY

AJ7583'
AJ7583' TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 29 AND COUNTY
AJ7583' ROAD 846
AJ7583' IN IMMOKALEE, GO SOUTHWEST ALONG COUNTY ROAD 846 15.8 KM (9.83 MI) TO
AJ7583' THE
AJ7583' INTERSECTION WITH OIL WELL GRADE ROAD AND THE MARK ON THE RIGHT.
AJ7583'
AJ7583' THE MARK IS A STAINLESS STEEL ROD IN THE NORTHWEST QUADRANT OF THE
AJ7583' INTERSECTION, 8.26 M (27.1 FT) NORTH OF THE CENTERLINE OF COUNTY ROAD
AJ7583' 846,
AJ7583' 3.87 M (12.7 FT) SOUTH OF THE SOUTHEAST CORNER A CONCRETE ENDWALL,
AJ7583' 3.51 M
AJ7583' (11.5 FT) SOUTH OF A CARSONITE WITNESS POST AND 0.91 M (3.0 FT) EAST
AJ7583' OF 48-
AJ7583' INCH REINFORCED CONCRETE PIPE CULVERT. THE DATUM POINT IS SET 15 CM
AJ7583' (0.50 FT)
AJ7583' BELOW THE LEVEL OF THE GROUND, ABOUT 0.46 M (1.5 FT) BELOW THE LEVEL
AJ7583' OF THE
AJ7583' HIGHWAY, BEING THE TOP OF A STAINLESS STEEL ROD DRIVEN 9.72 M (31.88
AJ7583' FT) TO
AJ7583' REFUSAL AND ENCASED IN A 5-INCH PVC PIPE WITH AN ACCESS COVER.
AJ7583'
AJ7583' NOTE - A MAGNET WAS PLACED INSIDE THE SLEEVE, BELOW THE ACCESS COVER.
AJ7583'
AJ7583' RECOVERED AS DESCRIBED 2002 MAPTECH INC (CP)
AJ7583'
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AJ7583'
AJ7583' STATION RECOVERY (2006)
AJ7583'
AJ7583' RECOVERY NOTE BY SURVTECH SOLUTIONS 2006 (BS)
AJ7583' RECOVERED AS DESCRIBED

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

Level Adjustment: 03-13-2003 10:37:11

From file: 30201-10-88.LIN

Project: Project: SFWMD LEE-COLLIER WELLS

Entered by: M. HOLT 03-12-2003 11:28:02

BM	SUM DIST	UNADJ ELEV	CORRECTION	ADJ EL(FT)
ADJ EL(M)				

Y 534	0.000	21.680		21.680
6.608				

TP 1	441.000	22.983	0.001	22.984
7.005				

TP 2	862.000	23.536	0.001	23.537
7.174				

TP 3	1306.000	23.366	0.002	23.368
7.123				

TP 4	1745.000	24.233	0.003	24.236
7.387				

TP 5	2188.000	24.310	0.003	24.313
7.411				

TP 6	2619.000	24.707	0.004	24.711
7.532				

TP 7	3035.000	24.457	0.004	24.461
7.456				

TP 8	3471.000	24.757	0.005	24.762
7.547				

TP 9	3908.000	24.930	0.006	24.936
7.600				

TP 10	4343.000	24.913	0.006	24.919
7.595				

TP 11	4775.000	24.803	0.007	24.810
7.562				

TP 12	5176.000	23.520	0.007	23.527
7.171				

TP 13	5539.000	22.987	0.008	22.995
7.009				

TP 14 7.033	5968.000	23.064	0.009	23.073
. 7.002	6398.000	22.964	0.009	22.973
TP 16 7.052	6839.000	23.127	0.010	23.137
TP 17 7.165	7271.000	23.497	0.010	23.507
TP 18 7.097	7710.000	23.274	0.011	23.285
TP 19 6.732	8144.000	22.074	0.012	22.086
TP 20 6.711	8574.000	22.004	0.012	22.016
TP 21 6.749	9016.000	22.130	0.013	22.143
TP 22 6.968	9430.000	22.846	0.014	22.860
TP 23 6.893	9847.000	22.599	0.014	22.613
TP 24 6.969	10263.000	22.849	0.015	22.864
TP 25 6.792	10697.000	22.269	0.015	22.284
TP 26 6.756	10999.000	22.149	0.016	22.165
TP 27 6.751	11433.000	22.133	0.016	22.149
TP 28 6.805	11870.000	22.310	0.017	22.327
TP 29 6.761	12309.000	22.163	0.018	22.181
TP 30 6.822	12745.000	22.363	0.018	22.381
TP 31 7.200	12879.000	23.603	0.019	23.622

COLL-49 6.459	13077.000	21.173	0.019	21.192
TP 32 6.854	13476.000	22.466	0.019	22.485
TP 33 6.780	13921.000	22.223	0.020	22.243
TP 34 6.670	14365.000	21.863	0.021	21.884
TP 35 6.767	14795.000	22.179	0.021	22.200
TP 36 6.862	15240.000	22.492	0.022	22.514
TP 37 6.661	15686.000	21.832	0.023	21.855
TP 38 6.634	16136.000	21.742	0.023	21.765
TP 39 6.604	16568.000	21.642	0.024	21.666
TP 40 6.609	17007.000	21.659	0.024	21.683
TP 41 6.528	17446.000	21.392	0.025	21.417
TP 42 6.516	17876.000	21.352	0.026	21.378
TP 43 6.812	17978.000	22.322	0.026	22.348
TP 44 6.598	18406.000	21.622	0.026	21.648
TP 45 6.643	18835.000	21.769	0.027	21.796
TP 46 6.650	19273.000	21.789	0.028	21.817
TP 47 6.720	19699.000	22.019	0.028	22.047
TP 48 6.623	20143.000	21.699	0.029	21.728

TP 49 6.551	20568.000	21.462	0.030	21.492
TP 50 6.703	20988.000	21.962	0.030	21.992
TP 51 6.757	21429.000	22.139	0.031	22.170
TP 52 6.782	21857.000	22.219	0.031	22.250
TP 53 6.813	22283.000	22.319	0.032	22.351
TP 54 6.693	22722.000	21.926	0.033	21.959
TP 55 6.563	23149.000	21.499	0.033	21.532
GPS A060 6.335	23425.000	20.749	0.034	20.783
TP 56 6.627	23811.000	21.709	0.034	21.743
TP 57 6.739	24230.000	22.076	0.035	22.111
TP 58 6.589	24653.000	21.583	0.035	21.618
TP 59 6.573	25090.000	21.530	0.036	21.566
TP 60 6.605	25541.000	21.633	0.037	21.670
TP 61 6.766	25956.000	22.160	0.037	22.197
TP 62 6.389	26409.000	20.923	0.038	20.961
TP 63 6.528	26852.000	21.380	0.039	21.419
CC-8 6.395	27179.000	20.943	0.039	20.982
COLL-46 6.340	27338.000	20.760	0.039	20.799

TP 64 6.151	27784.000	20.140	0.040	20.180
COLL-45 6.246	27869.000	20.453	0.040	20.493
TP 65 6.164	28039.000	20.183	0.040	20.223
TP 66 6.341	28401.000	20.763	0.041	20.804
TP 67 6.609	28831.000	21.643	0.041	21.684
TP 68 6.528	29290.000	21.376	0.042	21.418
TP 69 6.799	29741.000	22.263	0.043	22.306
TP 70 6.589	30183.000	21.573	0.043	21.616
TP 71 6.568	30633.000	21.503	0.044	21.547
TP 72 6.624	31079.000	21.687	0.045	21.732
TP 73 6.730	31525.000	22.033	0.045	22.078
TP 74 6.684	31977.000	21.883	0.046	21.929
TP 75 6.861	32419.000	22.463	0.047	22.510
TP 76 6.650	32860.000	21.770	0.047	21.817
TP 77 6.803	33294.000	22.270	0.048	22.318
TP 78 6.801	33732.000	22.266	0.049	22.315
TP 79 6.767	34195.000	22.153	0.049	22.202
TP 80 6.709	34648.000	21.960	0.050	22.010

TP 81 6.616	35093.000	21.657	0.051	21.708
TP 82 6.664	35541.000	21.811	0.051	21.862
TP 83 6.699	36004.000	21.928	0.052	21.980
TP 84 6.667	36445.000	21.821	0.052	21.873
CC-6 6.399	36539.000	20.941	0.053	20.994
TP 85 6.683	36979.000	21.871	0.053	21.924
TP 86 6.734	37430.000	22.038	0.054	22.092
TP 87 6.813	37670.000	22.298	0.054	22.352
TP 88 6.534	38097.000	21.381	0.055	21.436
TP 89 6.469	38539.000	21.167	0.055	21.222
TP 90 6.569	38967.000	21.497	0.056	21.553
TP 91 6.674	39416.000	21.840	0.057	21.897
TP 92 6.744	39880.000	22.070	0.057	22.127
TP 93 7.078	40333.000	23.163	0.058	23.221
TP 94 6.814	40788.000	22.296	0.059	22.355
TP 95 6.847	41246.000	22.406	0.059	22.465
TP 96 6.744	41708.000	22.066	0.060	22.126
TP 97 6.692	42160.000	21.896	0.061	21.957

TP 98 6.761	42642.000	22.120	0.061	22.181
TP 99 6.782	43082.000	22.190	0.062	22.252
TP 100 7.194	43524.000	23.540	0.063	23.603
TP 101 7.123	43943.000	23.307	0.063	23.370
TP 102 7.170	44408.000	23.460	0.064	23.524
TP 103 7.111	44857.000	23.267	0.065	23.332
TP 104 7.119	45292.000	23.290	0.065	23.355
TP 105 7.097	45743.000	23.217	0.066	23.283

X 534 7.282	45858.000	23.824	0.066	23.890
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Closure : 0.066
 Max Allowed: 0.147 (MTS)
 Max Allowed: 0.074 (Second Order, Class II)

Distance : 45858
 Turns : 112
 Error per Turn : 0.00059

Project:
 Entered by: 03-13-2003 10:10:03

BM ADJ EL(M)	SUM DIST	UNADJ ELEV	CORRECTION	ADJ EL(FT)
-----	-----	-----	-----	-----
TP 31 7.200	0.000	23.622		23.622
HF 5 7.561	421.000	24.805	0.001	24.806
TP 6.699	819.000	21.975	0.002	21.977
HF 3 8.070	1003.000	26.475	0.002	26.477

HF 3G 1189.000 24.185 0.002 24.187
7.372

COLL-49 1439.000 21.189 0.003 21.192
6.459

Closure : 0.003
Max Allowed: 0.026 (MTS)
Max Allowed: 0.013 (Second Order, Class II)

Distance : 1439
Turns : 5
Error per Turn : 0.00060

BM ADJ EL(M)	SUM DIST	UNADJ ELEV	CORRECTION	ADJ EL(FT)	--
----- ----- COLL-46 6.340	0.000	20.799		20.799	
HF 6G 7.004	176.000	22.979	-0.000	22.979	
HF 1G 6.352	255.000	20.842	-0.001	20.841	
HF 1 7.286	332.000	23.905	-0.001	23.904	
TP 1 6.409	545.000	21.028	-0.001	21.027	
TP 2 6.474	654.000	21.241	-0.002	21.239	
HF 2G 6.940	758.000	22.771	-0.002	22.769	
HF 2 7.751	864.000	25.431	-0.002	25.429	
TP 3 6.449	970.000	21.161	-0.002	21.159	
TP 4 6.193	1150.000	20.321	-0.003	20.318	
HF 4G 6.812	1406.000	22.351	-0.003	22.348	
HF 4 7.600	1655.000	24.938	-0.004	24.934	

HF 7	1966.000	23.575	-0.005	23.570
7.184				

COLL-45	2147.000	20.498	-0.005	20.493
6.246				

Closure : -0.005
Max Allowed: 0.032 (MTS)
Max Allowed: 0.016 (Second Order, Class II)

Distance : 2147
Turns : 13
Error per Turn : -0.00038

Level Adjustment: 03-19-2003 10:12:36

From file: 30201--2.LIN

Project: Project: SFWMD LEE-COLLIER WELLS

Entered by: M. HOLT 03-12-2003 11:28:02

BM ADJ EL(M)	SUM DIST	UNADJ ELEV	CORRECTION	ADJ EL(FT)
Y 534 7.007	0.000	22.989		22.989
TP 1 7.404	441.000	24.292	0.001	24.293
TP 2 7.573	862.000	24.845	0.001	24.846
TP 3 7.522	1306.000	24.675	0.002	24.677
TP 4 7.786	1745.000	25.542	0.003	25.545
TP 5 7.810	2188.000	25.619	0.003	25.622
TP 6 7.931	2619.000	26.016	0.004	26.020
TP 7 7.855	3035.000	25.766	0.005	25.771
TP 8 7.947	3471.000	26.066	0.005	26.071
TP 9 7.999	3908.000	26.239	0.006	26.245
TP 10 7.994	4343.000	26.222	0.006	26.228
TP 11 7.961	4775.000	26.112	0.007	26.119
TP 12 7.570	5176.000	24.829	0.008	24.837
TP 13 7.408	5539.000	24.296	0.008	24.304

TP 14 7.432	5968.000	24.373	0.009	24.382
. 7.401	6398.000	24.273	0.009	24.282
TP 16 7.451	6839.000	24.436	0.010	24.446
TP 17 7.564	7271.000	24.806	0.011	24.817
TP 18 7.496	7710.000	24.583	0.011	24.594
TP 19 7.131	8144.000	23.383	0.012	23.395
TP 20 7.110	8574.000	23.313	0.013	23.326
TP 21 7.148	9016.000	23.439	0.013	23.452
TP 22 7.367	9430.000	24.155	0.014	24.169
TP 23 7.292	9847.000	23.908	0.015	23.923
TP 24 7.368	10263.000	24.158	0.015	24.173
TP 25 7.191	10697.000	23.578	0.016	23.594
TP 26 7.155	10999.000	23.458	0.016	23.474
TP 27 7.150	11433.000	23.442	0.017	23.459
TP 28 7.204	11870.000	23.619	0.018	23.637
TP 29 7.160	12309.000	23.472	0.018	23.490
TP 30 7.221	12745.000	23.672	0.019	23.691
TP 31 7.599	12879.000	24.912	0.019	24.931

COLL-49 6.858	13077.000	22.482	0.019	22.501
TP 32 7.253	13476.000	23.775	0.020	23.795
TP 33 7.179	13921.000	23.532	0.021	23.553
TP 34 7.069	14365.000	23.172	0.021	23.193
TP 35 7.166	14795.000	23.488	0.022	23.510
TP 36 7.261	15240.000	23.801	0.023	23.824
TP 37 7.060	15686.000	23.141	0.023	23.164
TP 38 7.033	16136.000	23.051	0.024	23.075
TP 39 7.003	16568.000	22.951	0.025	22.976
TP 40 7.008	17007.000	22.968	0.025	22.993
TP 41 6.927	17446.000	22.701	0.026	22.727
TP 42 6.915	17876.000	22.661	0.027	22.688
TP 43 7.211	17978.000	23.631	0.027	23.658
TP 44 6.998	18406.000	22.931	0.027	22.958
TP 45 7.043	18835.000	23.078	0.028	23.106
TP 46 7.049	19273.000	23.098	0.029	23.127
TP 47 7.119	19699.000	23.328	0.029	23.357
TP 48 7.022	20143.000	23.008	0.030	23.038

TP 49 6.950	20568.000	22.771	0.030	22.801
TP 50 7.103	20988.000	23.271	0.031	23.302
TP 51 7.157	21429.000	23.448	0.032	23.480
TP 52 7.181	21857.000	23.528	0.032	23.560
TP 53 7.212	22283.000	23.628	0.033	23.661
TP 54 7.092	22722.000	23.235	0.034	23.269
TP 55 6.962	23149.000	22.808	0.034	22.842
GPS A060 6.734	23425.000	22.058	0.035	22.093
TP 56 7.027	23811.000	23.018	0.035	23.053
TP 57 7.139	24230.000	23.385	0.036	23.421
TP 58 6.989	24653.000	22.892	0.037	22.929
TP 59 6.973	25090.000	22.839	0.037	22.876
TP 60 7.004	25541.000	22.942	0.038	22.980
TP 61 7.165	25956.000	23.469	0.038	23.507
TP 62 6.788	26409.000	22.232	0.039	22.271
TP 63 6.928	26852.000	22.689	0.040	22.729

CC-8 6.795	27179.000	22.252	0.040	22.292
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COLL-46 6.739	27338.000	22.069	0.041	22.110
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TP 64 6.550	27784.000	21.449	0.041	21.490
COLL-45 6.646	27869.000	21.762	0.041	21.803
TP 65 6.563	28039.000	21.492	0.042	21.534
TP 66 6.740	28401.000	22.072	0.042	22.114
TP 67 7.009	28831.000	22.952	0.043	22.995
TP 68 6.928	29290.000	22.685	0.043	22.728
TP 69 7.198	29741.000	23.572	0.044	23.616
TP 70 6.988	30183.000	22.882	0.045	22.927
TP 71 6.967	30633.000	22.812	0.045	22.857
TP 72 7.023	31079.000	22.996	0.046	23.042
TP 73 7.129	31525.000	23.342	0.047	23.389
TP 74 7.083	31977.000	23.192	0.047	23.239
TP 75 7.260	32419.000	23.772	0.048	23.820
TP 76 7.049	32860.000	23.079	0.049	23.128
TP 77 7.202	33294.000	23.579	0.049	23.628
TP 78 7.201	33732.000	23.575	0.050	23.625
TP 79 7.167	34195.000	23.462	0.051	23.513
TP 80 7.108	34648.000	23.269	0.051	23.320

TP 81 7.016	35093.000	22.966	0.052	23.018
TP 82 7.063	35541.000	23.120	0.053	23.173
TP 83 7.099	36004.000	23.237	0.053	23.290
TP 84 7.067	36445.000	23.130	0.054	23.184
CC-6 6.798	36539.000	22.250	0.054	22.304
TP 85 7.082	36979.000	23.180	0.055	23.235
TP 86 7.133	37430.000	23.347	0.056	23.403
TP 87 7.212	37670.000	23.607	0.056	23.663
TP 88 6.933	38097.000	22.690	0.056	22.746
TP 89 6.868	38539.000	22.476	0.057	22.533
TP 90 6.969	38967.000	22.806	0.058	22.864
TP 91 7.074	39416.000	23.149	0.058	23.207
TP 92 7.144	39880.000	23.379	0.059	23.438
TP 93 7.477	40333.000	24.472	0.060	24.532
TP 94 7.213	40788.000	23.605	0.060	23.665
TP 95 7.247	41246.000	23.715	0.061	23.776
TP 96 7.144	41708.000	23.375	0.062	23.437
TP 97 7.092	42160.000	23.205	0.063	23.268

TP 98 7.160	42642.000	23.429	0.063	23.492
TP 99 7.182	43082.000	23.499	0.064	23.563
TP 100 7.594	43524.000	24.849	0.065	24.914
TP 101 7.523	43943.000	24.616	0.065	24.681
TP 102 7.570	44408.000	24.769	0.066	24.835
TP 103 7.511	44857.000	24.576	0.067	24.643
TP 104 7.518	45292.000	24.599	0.067	24.666
TP 105 7.496	45743.000	24.526	0.068	24.594
X 534 7.681	45858.000	25.133	0.068	25.201

Closure : 0.068
 Max Allowed: 0.147 (MTS)
 Max Allowed: 0.074 (Second Order, Class II)

Distance : 45858
 Turns : 112
 Error per Turn : 0.00061

Project:
 Entered by: 03-13-2003 10:10:03

BM ADJ EL(M)	SUM DIST	UNADJ ELEV	CORRECTION	ADJ EL(FT)	---
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TP 31 7.599	0.000	24.931		24.931	
HF 5 7.960	421.000	26.114	0.001	26.115	
TP 7.098	819.000	23.284	0.002	23.286	
HF 3 8.469	1003.000	27.784	0.002	27.786	

HF 3G 1189.000 25.494 0.002 25.496
7.771

COLL-49 1439.000 22.498 0.003 22.501
6.858

Closure : 0.003
Max Allowed: 0.026 (MTS)
Max Allowed: 0.013 (Second Order, Class II)

Distance : 1439
Turns : 5
Error per Turn : 0.00060

BM ADJ EL(M)	SUM DIST	UNADJ ELEV	CORRECTION	ADJ EL(FT)	--
----- ----- COLL-46 6.739	0.000	22.110		22.110	
HF 6G 7.403	176.000	24.290	-0.000	24.290	
HF 1G 6.752	255.000	22.153	-0.001	22.152	
HF 1 7.686	332.000	25.216	-0.001	25.215	
TP 1 6.808	545.000	22.339	-0.002	22.337	
TP 2 6.873	654.000	22.552	-0.002	22.550	
HF 2G 7.340	758.000	24.082	-0.002	24.080	
HF 2 8.150	864.000	26.742	-0.002	26.740	
TP 3 6.849	970.000	22.472	-0.003	22.469	
TP 4 6.592	1150.000	21.632	-0.003	21.629	
HF 4G 7.211	1406.000	23.662	-0.004	23.658	
HF 4 7.999	1655.000	26.249	-0.005	26.244	

HF 7	1966.000	24.886	-0.005	24.881
7.584				

COLL-45	2147.000	21.809	-0.006	21.803
6.646				

Closure : -0.006
Max Allowed: 0.032 (MTS)
Max Allowed: 0.016 (Second Order, Class II)

Distance : 2147
Turns : 13
Error per Turn : -0.00046