

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 Publication_Date: Unpublished material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. CAPE CORAL / BURNT STORE ROAD DEEP WATER INJECTION WELL
 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
 CAPE CORAL / BURNT STORE ROAD DEEP WATER
 INJECTION WELL

Purpose:

To establish NAVD 88 and NVGD 29 elevations on the well and on the well reference benchmark.

Purpose

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:
 Calendar_Date: 20050126
 Time_of_Day: 17000000

Survey Date

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: -082°03' 21.38"
 East_Bounding_Coordinate: -082°03' 21.38"
 North_Bounding_Coordinate: +26°39' 05.87"
 South_Bounding_Coordinate: +26°39' 05.87"

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. CAPE CORAL / BURNT STORE ROAD DEEP WATER
 Place_Keyword: Sec. 18, Twp. 44 S., Rge 23 E.
 Place_Keyword: Lee County, Florida
 Place_Keyword_Thesaurus: Geographic Names Information System
 Place_Keyword: Florida
 Place_Keyword: Lee County

INJECTION WELL

Stratum:

Temporal:

Access_Constraints: None

Use_Constraints: None

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Elbia Ebanks

Contact_Organization: South Florida Water Management District

Contact_Organization_Primary:

Contact_Address:

Address_Type: mailing and physical address
 Address: 3301 Gun Club Road
 City: West Palm Beach
 State_or_Province: Florida

Elvie D. Ebanks

SFWMD

CAPECORAL.gen

Postal_Code: 33406-4680

Country: USA

Contact_Voice_Telephone: (561) 753 2400 ex 4717

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

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

The vertical data was collected using a Topcon DL 102 Level.

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

Logical_Consistency_Report:

Horizontal data was established using sub-meter GPS equipment. Vertical data was established using control points Z-240 and B-240.

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

Completeness_Report:

Project Results

Horizontal location taken at the benchmark.

Lat. +26° 39' 05.87"

Long. -082° 03' 21.38"

N 842544'

E 637896'

Site Benchmark.

INJ BM 04 is a standard U.S. Army Corps of Engineers brass disc, bearing INJ BM 04 2004 JAX DIST SFWMD, set in a 10" round concrete monument (poured in place, with a magnet placed nearby).

To reach from the junction of I-75 and Pine Island Road (S.R. 78); go west on Pine Island Road 15 miles to Burnt Store Road; turn right and go north to Ceitus Parkway (the first street on left); go west along Ceitus Parkway which turns into Old Burnt Store Road; go north along Old Burnt Store Road; wells are located in the median just before road turns into two lanes.

United States Department of the Interior Geologic Survey Quadrangle map -- MATLACHA (1987)

Benchmark INJ BM 04 - 4.97' NAVD 88; 6.16' NGVD 29

North bolt of north injection well - 7.47' NAVD 88; 8.66' NGVD 29

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal

Horizontal_Positional_Accuracy_Report:

The horizontal position of the benchmark INJ BM 04, was established using a differential, submeter, wide area augmentation system, GPS, using Coast Guard and FAA beacons for corrected positioning (Trimble Geoexplorer 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

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 "Z-240" with an NAVD 88 elevation, running through BM "INJ BM 04" and terminating on BM "B-240", 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

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network.

Quantitative_Vertical_Positional_Accuracy_Assessment:

Vertical_Positional_Accuracy_Value: +0.018 meter

Vertical_Positional_Accuracy_Explanation: NAVD 88 level run, 0.018

meter closure in 8110 meters, max. allowed 0.034 meter (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

Geoexplorer CE with Beacon on a Belt GPS.

The level line was performed using a Topcon DL 102 level.

Three wire methodology was used.

Process_Date: 20050126

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:

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:

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 Polyconic:
 ARC_Coordinate_System:
 Equiangular:
 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:
 Multiple_Dates/Times:
 Metadata_Reference_Information:
 Metadata_Date: 20050203
 Metadata_Contact:
 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: j.boggs@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:

Joseph S. Boggs
Consul-Tech
Surveying and
Mapping

S.F.W.M.D. Injection Well – Cape Coral-Burnt Store Road



Consul-Tech Surveying & Mapping, Inc.

Date of Survey: January 25, 2005

Looking: South

S.F.W.M.D. Injection Well Reference Point – Cape Coral- Burnt Store Road



- Consul-Tech Surveying & Mapping, Inc.
- Date of Survey: March 18, 2005
- Looking: West at Injection Well

S.F.W.M.D. Injection Well – Cape Coral-Burnt Store Road



Consul-Tech Surveying & Mapping, Inc.

Date of Survey: January 25, 2005

Looking: North

S.F.W.M.D. Injection Well – Cape Coral-Burnt Store Road



Consul-Tech Surveying & Mapping, Inc.

Date of Survey: January 25, 2005

Looking: West-Northwest

S.F.W.M.D. Injection Well – Cape Coral-Burnt Store Road



Consul-Tech Surveying & Mapping, Inc.

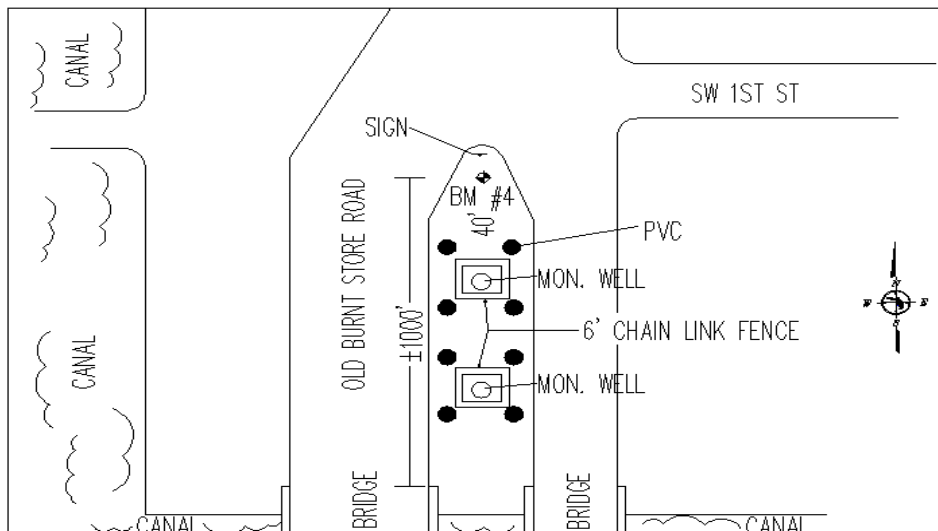
Date of Survey: January 25, 2005

Looking: At "INJ BM 04 2005"



| | | | | | |
|---|--|---|---|--|--|
| COUNTY LEE | | PROJECT DEEP WATER INJECTION WELL SITE | | DESIGNATION INJ BM 04 2004 | |
| SECTION 18 | | TOWNSHIP 44 SOUTH | | RANGE 23 EAST | |
| GEOGRAPHIC INDEX OF QUAD Florida | | | | | |
| Established by Consul-Tech Surveying and Mapping, inc. | | | NAME OF QUADRANGLE MATLACHA (1987) | | |
| SURVEYOR <u>Joseph S. Boggs</u> DATE <u>1/26/05</u> | | | FIELD BOOK <u>516-8</u> PAGE <u>8</u> | | |
| HORIZONTAL DATUM: 83/90 ZONE WEST | | | | | |
| 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 | | N=842544 | | E=637896 | |
| | | | | EL.=4.97 (NAVD 88) EL.=6.16 (NGVD 29) | |
| LATITUDE 26°39'05.87" N | | | LONGITUDE 082°03'21.38" W | | |
| DESCRIPTION | | | | | |
| To reach from the junction of I-75 and Pine Island Road (S.R. 78); go west on Pine Island Road 15 miles to Burnt Store Road; turn right and go north to Ceitus Parkway (the first street on left); go west along Ceitus Parkway which turns into Old Burnt Store Road; go north along Old Burnt Store Road; wells are located in the median just before road turns into two lanes. Benchmark is 40 feet north of the north most well. | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

SKETCH



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
AG1603 *****
AG1603 TIDAL BM      -  This is a Tidal Bench Mark.
AG1603 DESIGNATION -  B 240
AG1603 PID          -  AG1603
AG1603 STATE/COUNTY-  FL/LEE
AG1603 COUNTRY      -  US
AG1603 USGS QUAD    -  MATLACHA (1987)
AG1603
AG1603                      *CURRENT SURVEY CONTROL
AG1603
AG1603* NAD 83(1986) POSITION- 26 38 10.2      (N) 082 03 53.0      (W) HD_HELD2
AG1603* NAVD 88 ORTHO HEIGHT -      0.928 (meters)      3.04 (feet) ADJUSTED
AG1603
AG1603 GEOID HEIGHT      -      -23.764 (meters)      GEOID12B
AG1603 DYNAMIC HEIGHT    -      0.926 (meters)      3.04 (feet) COMP
AG1603 MODELED GRAVITY    -      979,090.0 (mgal)      NAVD 88
AG1603
AG1603 VERT ORDER        -  FIRST      CLASS I
AG1603
AG1603.The horizontal coordinates were established by autonomous hand held GPS
AG1603.observations and have an estimated accuracy of +/- 10 meters.
AG1603.
AG1603.The orthometric height was determined by differential leveling and
AG1603.adjusted by the NATIONAL GEODETIC SURVEY
AG1603.in June 1991.
AG1603
AG1603.Significant digits in the geoid height do not necessarily reflect accuracy.
AG1603.GEOID12B height accuracy estimate available here.
AG1603
AG1603.This Tidal Bench Mark is designated as VM 7354
AG1603.by the CENTER FOR OPERATIONAL OCEANOGRAPHIC PRODUCTS AND SERVICES.
AG1603
AG1603.The dynamic height is computed by dividing the NAVD 88
AG1603.geopotential number by the normal gravity value computed on the
AG1603.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AG1603.degrees latitude (g = 980.6199 gals.).
AG1603
AG1603.The modeled gravity was interpolated from observed gravity values.
AG1603
AG1603;
AG1603;          North      East      Units  Estimated Accuracy
AG1603;SPC FL W    -  255,095.      193,556.      MT  (+/- 10 meters HH2 GPS)
AG1603
AG1603_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLK9402146579(NAD 83)
AG1603
AG1603                      SUPERSEDED SURVEY CONTROL
AG1603
AG1603 NGVD 29 (??/??/92)      1.289 (m)      4.23 (f) SUPERSEDED 1 1
AG1603 NGVD 29 (09/01/92)      1.289 (m)      4.23 (f) ADJUSTED 1 1
AG1603

```

AG1603.Superseded values are not recommended for survey control.

AG1603

AG1603.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AG1603.[See file dsdata.txt](#) to determine how the superseded data were derived.

AG1603

AG1603_MARKER: DB = BENCH MARK DISK

AG1603_SETTING: 46 = COPPER-CLAD STEEL ROD W/O SLEEVE (10 FT.+)

AG1603_STAMPING: B 240 1965

AG1603_MARK LOGO: CGS

AG1603_PROJECTION: FLUSH

AG1603_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

AG1603_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AG1603_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AG1603+SATELLITE: SATELLITE OBSERVATIONS - November 14, 2008

AG1603

| AG1603 | HISTORY | - Date | Condition | Report By |
|--------|---------|------------|------------|-----------|
| AG1603 | HISTORY | - 1965 | MONUMENTED | CGS |
| AG1603 | HISTORY | - 1965 | GOOD | CGS |
| AG1603 | HISTORY | - 1984 | GOOD | USPSQD |
| AG1603 | HISTORY | - 1984 | GOOD | FLDNR |
| AG1603 | HISTORY | - 1989 | GOOD | USPSQD |
| AG1603 | HISTORY | - 20081114 | GOOD | FLDEP |

AG1603

AG1603 STATION DESCRIPTION

AG1603

AG1603'DESCRIBED BY COAST AND GEODETIC SURVEY 1965

AG1603'0.6 MI NE FROM MATLACHA.

AG1603'ABOUT 0.6 MILE NORTHEAST ALONG STATE HIGHWAY 78 FROM THE POST

AG1603'OFFICE AT MATLACHA, 0.35 MILE NORTHEAST OF THE WOODEN BRIDGE

AG1603'OVER MATLACHA PASS, ON THE OUTSIDE OF A CURVE WITH TANGENTS

AG1603'EXTENDING EAST AND SOUTHWEST, 40.0 FEET NORTHWEST OF THE CENTER

AG1603'LINE OF THE HIGHWAY, 1 1/2 FEET SOUTHWEST OF A POWER POLE

AG1603'SUPPORTING ONE TRANSFORMER, 111.7 FEET NORTHEAST OF THE EAST

AG1603'CORNER OF A ONE STORY WHITE FRAME BUILDING, 1.4 FEET NORTHEAST

AG1603'OF A METAL WITNESS POST, ABOUT LEVEL WITH THE HIGHWAY AND IS

AG1603'A DISK ON TOP OF A COPPER COATED STEEL ROD PROJECTING 0.2 FOOT

AG1603'AND PROTECTED BY A 4 INCH IRON PIPE PROJECTING 0.2 FOOT. THE

AG1603'ROD REFUSED AT A DEPTH OF 51.0 FEET.

AG1603

AG1603 STATION RECOVERY (1965)

AG1603

AG1603'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1965

AG1603'RECOVERED IN GOOD CONDITION.

AG1603

AG1603 STATION RECOVERY (1984)

AG1603

AG1603'RECOVERY NOTE BY US POWER SQUADRON 1984

AG1603'WITNESS POST REMAINS, SIGN IS GONE.

AG1603

AG1603 STATION RECOVERY (1984)

AG1603

AG1603'RECOVERY NOTE BY FL DEPT OF NAT RES 1984

AG1603'RECOVERED IN GOOD CONDITION EXCEPT THE MARK IS ALSO 64.1 FEET SOUTH

AG1603'OF THE SOUTH CORNER OF THE MATLACHA PROFESSIONAL BUILDING.

AG1603

AG1603 STATION RECOVERY (1989)

AG1603

AG1603'RECOVERY NOTE BY US POWER SQUADRON 1989 (CFR)

AG1603'RECOVERED IN GOOD CONDITION.

AG1603

AG1603 STATION RECOVERY (2008)

AG1603

AG1603'RECOVERY NOTE BY FL DEPT OF ENV PRO 2008 (JLM)

AG1603'RECOVERED IN GOOD CONDITION WITH THESE ADDITIONS, THE MARK IS 0.55 MI

AG1603'(0.9 KM) EAST OF THE MATLACHA POST OFFICE, LOCATED 65.0 FT (19.8 M)

AG1603'SOUTHEAST OF THE SOUTHWEST CORNER THE BUILDING AT 4120, 40.0 FT (12.2

AG1603'M) NORTHWEST OF THE CENTERLINE OF COUNTY ROAD 78, 25.0 FT (7.6 M)

AG1603'SOUTHWEST OF THE APPROXIMATE CENTERLINE OF THE SOUTHWEST DRIVEWAY TO

AG1603'4120, 6.0 FT (1.8 M) NORTHEAST OF A AVISO CABLE BOX NUMBER 5411 AND

AG1603'4.5 FT (1.4 M) SOUTHWEST OF A POWER POLE.

AG1603'

AG1603'NOTE A MAGNET WAS PLACED INSIDE OF THE PVC PIPE.

*** retrieval complete.

Elapsed Time = 00:00:01

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
AG1599 *****
AG1599 DESIGNATION -  Z 240
AG1599 PID          -  AG1599
AG1599 STATE/COUNTY-  FL/LEE
AG1599 COUNTRY      -  US
AG1599 USGS QUAD    -  MATLACHA (1987)
AG1599
AG1599                      *CURRENT SURVEY CONTROL
AG1599
AG1599*  NAD 83(1986) POSITION- 26 38 16.      (N) 082 02 56.      (W)  SCALED
AG1599*  NAVD 88 ORTHO HEIGHT -    0.924 (meters)      3.03 (feet) ADJUSTED
AG1599
AG1599  GEOID HEIGHT   -      -23.794 (meters)                GEOID12B
AG1599  DYNAMIC HEIGHT -           0.922 (meters)      3.02 (feet) COMP
AG1599  MODELED GRAVITY -    979,089.0 (mgal)                NAVD 88
AG1599
AG1599  VERT ORDER    -  FIRST      CLASS I
AG1599
AG1599.The horizontal coordinates were scaled from a topographic map and have
AG1599.an estimated accuracy of +/- 6 seconds.
AG1599.
AG1599.The orthometric height was determined by differential leveling and
AG1599.adjusted by the NATIONAL GEODETIC SURVEY
AG1599.in June 1991.
AG1599
AG1599.Significant digits in the geoid height do not necessarily reflect accuracy.
AG1599.GEOID12B height accuracy estimate available here.
AG1599
AG1599.The dynamic height is computed by dividing the NAVD 88
AG1599.geopotential number by the normal gravity value computed on the
AG1599.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AG1599.degrees latitude (g = 980.6199 gals.).
AG1599
AG1599.The modeled gravity was interpolated from observed gravity values.
AG1599
AG1599;
AG1599;          North      East      Units  Estimated Accuracy
AG1599;SPC FL W    -  255,270.    195,130.    MT    (+/- 180 meters Scaled)
AG1599
AG1599_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLK955467(NAD 83)
AG1599
AG1599                      SUPERSEDED SURVEY CONTROL
AG1599
AG1599  NGVD 29 (??/??/92)  1.285 (m)      4.22 (f) SUPERSEDED  1 1
AG1599  NGVD 29 (09/01/92)  1.285 (m)      4.22 (f) ADJUSTED  1 1
AG1599
AG1599.Superseded values are not recommended for survey control.
AG1599
AG1599.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AG1599.See file dsdata.txt to determine how the superseded data were derived.

```

AG1599

AG1599_MARKER: DB = BENCH MARK DISK

AG1599_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AG1599_STAMPING: Z 240 1965

AG1599_MARK LOGO: CGS

AG1599_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AG1599+STABILITY: SURFACE MOTION

AG1599

| AG1599 | HISTORY | - Date | Condition | Report By |
|--------|---------|------------|------------|-----------|
| AG1599 | HISTORY | - 1965 | MONUMENTED | CGS |
| AG1599 | HISTORY | - 1974 | GOOD | NGS |
| AG1599 | HISTORY | - 1984 | GOOD | USPSQD |
| AG1599 | HISTORY | - 1984 | GOOD | FLDNR |
| AG1599 | HISTORY | - 1989 | GOOD | USPSQD |
| AG1599 | HISTORY | - 20060508 | GOOD | HOLE |

AG1599

STATION DESCRIPTION

AG1599

AG1599'DESCRIBED BY COAST AND GEODETIC SURVEY 1965

AG1599'1.7 MI E FROM MATLACHA.

AG1599'ABOUT 1.7 MILES NORTHEAST AND EAST ALONG STATE HIGHWAY 78 FROM

AG1599'THE POST OFFICE AT MATLACHA, AT THE JUNCTION OF MATLACHA

AG1599'BOULEVARD LEADING NORTH, 269.5 FEET NORTH OF THE CENTER LINE

AG1599'OF STATE HIGHWAY 78, 25.4 FEET EAST OF THE CENTER LINE OF THE

AG1599'NORTHBOUND LANE OF THE BLVD. 2 FEET SOUTH OF A POWER POLE WITH

AG1599'2 GUY WIRES, 1.5 FEET NORTH OF A METAL WITNESS POST, ABOUT 1

AG1599'FOOT BELOW THE LEVEL OF THE BOULEVARD AND IS A DISK IN THE

AG1599'TOP OF A CONCRETE POST FLUSH WITH THE GROUND.

AG1599

STATION RECOVERY (1974)

AG1599

AG1599'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1974

AG1599'RECOVERED IN GOOD CONDITION.

AG1599

STATION RECOVERY (1984)

AG1599

AG1599'RECOVERY NOTE BY US POWER SQUADRON 1984

AG1599'WITNESS POST INTACT. ONLY 1 GUY WIRE ON POWER POLE.

AG1599

STATION RECOVERY (1984)

AG1599

AG1599'RECOVERY NOTE BY FL DEPT OF NAT RES 1984

AG1599'RECOVERED IN GOOD CONDITION.

AG1599

STATION RECOVERY (1989)

AG1599

AG1599'RECOVERY NOTE BY US POWER SQUADRON 1989 (CFR)

AG1599'RECOVERED IN GOOD CONDITION.

AG1599

STATION RECOVERY (2006)

AG1599

AG1599'RECOVERY NOTE BY HOLE MONTES AND ASSOCIATES INC 2006 (BRH)

AG1599'RECOVERED IN GOOD CONDITION.

*** retrieval complete.

Elapsed Time = 00:00:01

| sta | three wire + | mean | hi | three wire - | mean | elevation | distance | ADJ BY DIST | adjust elevation | description | std dev | stdev *2*100 | variance |
|-----|-------------------------|-------|--------|--------------------------|-------|-----------|----------|----------------|---------------------|-------------|------------|-----------------|----------|
| | 4.500 3.300 | 4.500 | 9.787 | | | | 240.0 | | | | 1.200 | 240.0 | 0.0000 |
| 16 | | | | 6.090 4.720 3.360 | 4.723 | 5.064 | 273.0 | 0.0012 | 5.0454 | | 1.365 | 273.0 | -0.0006 |
| | 7.000 5.810 4.630 | 5.813 | 10.877 | | | | 237.0 | | | | 1.185 | 237.0 | -0.0007 |
| 17 | | | | 2.580 1.320 0.070 | 1.323 | 9.554 | 251.0 | 0.0012 | 9.5343 | | 1.255 | 251.0 | -0.0007 |
| | 8.400 7.070 5.750 | 7.073 | 16.627 | | | | 265.0 | | | | 1.325 | 265.0 | -0.0006 |
| 18 | | | | 10.000 8.620 7.250 | 8.623 | 8.004 | 275.0 | 0.0013 | 7.9830 | | 1.375 | 275.0 | -0.0006 |
| | 3.320 2.090 0.870 | 2.093 | 10.097 | | | | 245.0 | | | | 1.225 | 245.0 | -0.0007 |
| 19 | | | | 6.510 5.200 3.900 | 5.203 | 4.894 | 261.0 | 0.0012 | 4.8718 | | 1.305 | 261.0 | -0.0006 |
| | 6.640 5.430 4.220 | 5.430 | 10.324 | | | | 242.0 | | | | 1.210 | 242.0 | 0.0000 |
| 20 | | | | 6.140 4.800 3.470 | 4.803 | 5.521 | 267.0 | 0.0012 | 5.4976 | | 1.335 | 267.0 | -0.0006 |
| | 5.010 4.130 3.250 | 4.130 | 9.651 | | | | 176.0 | | | | 0.880 | 176.0 | 0.0000 |
| BM | | | | 5.600 4.650 3.710 | 4.653 | 4.998 | 189.0 | 0.0009 | 4.9737 | BM INJ 04 | 0.945 | 189.0 | -0.0009 |
| | 6.210 4.890 3.570 | 4.890 | 9.888 | | | | 264.0 | | | | 1.320 | 264.0 | 0.0000 |
| 21 | | | | 6.050 4.800 3.550 | 4.800 | 5.088 | 250.0 | 0.0012 | 5.0625 | | 1.250 | 250.0 | 0.0000 |
| | 5.370 4.145 2.930 | 4.148 | 9.236 | | | | 244.0 | | | | 1.220 | 244.0 | -0.0007 |
| 22 | | | | 6.170 4.720 | 4.720 | 4.516 | 290.0 | 0.0013 | 4.4892 | | 1.450 | 290.0 | 0.0000 |

| sta | three wire + | mean | hi | three wire - | mean | elevation | distance | ADJ BY DIST | adjust elevation | description | std dev | stdev *2*100 | variance |
|-----|-------------------------|-------|--------|-------------------------|-------|-----------|----------|-------------|------------------|-------------|---------|--------------|----------|
| | 7.730 6.670 5.600 | 6.667 | 11.183 | 3.270 | | | 213.0 | | | | 1.065 | 213.0 | -0.0008 |
| 23 | | | | 2.390 1.340 0.290 | 1.340 | 9.843 | 210.0 | 0.0010 | 9.8152 | | 1.050 | 210.0 | 0.0000 |
| | 7.350 6.110 4.860 | 6.107 | 15.950 | | | | 249.0 | | | | 1.245 | 249.0 | -0.0007 |
| 24 | | | | 9.490 8.195 6.900 | 8.195 | 7.755 | 259.0 | 0.0012 | 7.7260 | | 1.295 | 259.0 | 0.0000 |
| | 3.550 2.320 1.090 | 2.320 | 10.075 | | | | 246.0 | | | | 1.230 | 246.0 | 0.0000 |
| 25 | | | | 6.700 5.400 4.090 | 5.397 | 4.678 | 261.0 | 0.0012 | 4.6478 | | 1.305 | 261.0 | -0.0006 |
| | 5.770 4.590 3.410 | 4.590 | 9.268 | | | | 236.0 | | | | 1.180 | 236.0 | 0.0000 |
| 26 | | | | 5.760 4.380 3.010 | 4.383 | 4.885 | 275.0 | 0.0012 | 4.8536 | | 1.375 | 275.0 | -0.0006 |
| | 5.610 4.400 3.190 | 4.400 | 9.285 | | | | 242.0 | | | | 1.210 | 242.0 | 0.0000 |
| 27 | | | | 5.900 4.550 3.200 | 4.550 | 4.735 | 270.0 | 0.0012 | 4.7024 | | 1.350 | 270.0 | 0.0000 |
| | 5.480 4.270 3.060 | 4.270 | 9.005 | | | | 242.0 | | | | 1.210 | 242.0 | 0.0000 |
| 28 | | | | 5.390 4.080 2.770 | 4.080 | 4.925 | 262.0 | 0.0012 | 4.8912 | | 1.310 | 262.0 | 0.0000 |
| | 5.470 4.260 3.050 | 4.260 | 9.185 | | | | 242.0 | | | | 1.210 | 242.0 | 0.0000 |
| 29 | | | | 5.650 4.330 3.010 | 4.330 | 4.855 | 264.0 | 0.0012 | 4.8200 | | 1.320 | 264.0 | 0.0000 |
| | 6.400 5.160 3.920 | 5.160 | 10.015 | | | | 248.0 | | | | 1.240 | 248.0 | 0.0000 |

| sta | three wire + | mean | three wire hi | - | mean | elevation | distance | ADJ BY DIST | adjust elevation | description | std dev | stdev *2*100 | variance |
|-----|-------------------------|-------|---------------|-------------------------|-------|-----------|----------|-------------|------------------|-------------|---------|--------------|----------|
| | 4.560 3.290 | 4.560 | 8.175 | | | | 254.0 | | | | 1.270 | 254.0 | 0.0000 |
| 38 | | | | 5.970 4.650 3.330 | 4.650 | 3.525 | 264.0 | 0.0012 | 3.4791 | | 1.320 | 264.0 | 0.0000 |
| | 5.450 4.190 2.930 | 4.190 | 7.715 | | | | 252.0 | | | | 1.260 | 252.0 | 0.0000 |
| 39 | | | | 5.340 4.020 2.710 | 4.023 | 3.692 | 263.0 | 0.0012 | 3.6449 | | 1.315 | 263.0 | -0.0006 |
| | 5.050 3.780 2.510 | 3.780 | 7.472 | | | | 254.0 | | | | 1.270 | 254.0 | 0.0000 |
| 40 | | | | 5.130 3.810 2.500 | 3.813 | 3.659 | 263.0 | 0.0012 | 3.6107 | | 1.315 | 263.0 | -0.0006 |
| | 4.690 3.420 2.150 | 3.420 | 7.079 | | | | 254.0 | | | | 1.270 | 254.0 | 0.0000 |
| 41 | | | | 4.650 3.400 2.150 | 3.400 | 3.679 | 250.0 | 0.0012 | 3.6295 | | 1.250 | 250.0 | 0.0000 |
| | 5.600 4.280 2.960 | 4.280 | 7.959 | | | | 264.0 | | | | 1.320 | 264.0 | 0.0000 |
| 42 | | | | 5.540 4.350 3.170 | 4.353 | 3.606 | 237.0 | 0.0012 | 3.5553 | | 1.185 | 237.0 | -0.0007 |
| | 5.670 4.420 3.180 | 4.423 | 8.029 | | | | 249.0 | | | | 1.245 | 249.0 | -0.0007 |
| 43 | | | | 5.530 4.290 3.040 | 4.287 | 3.742 | 249.0 | 0.0012 | 3.6901 | | 1.245 | 249.0 | -0.0007 |
| | 5.370 4.140 2.910 | 4.140 | 7.882 | | | | 246.0 | | | | 1.230 | 246.0 | 0.0000 |
| 44 | | | | 5.650 4.390 3.130 | 4.390 | 3.492 | 252.0 | 0.0012 | 3.4390 | | 1.260 | 252.0 | 0.0000 |
| | 5.690 4.430 3.170 | 4.430 | 7.922 | | | | 252.0 | | | | 1.260 | 252.0 | 0.0000 |
| 45 | | | | 5.470 4.220 | 4.223 | 3.699 | 249.0 | 0.0012 | 3.6448 | | 1.245 | 249.0 | -0.0007 |

| sta | three wire + | mean | hi | three wire - | mean | elevation | distance | ADJ BY DIST | adjust elevation | description | std dev | stdev *2*100 | variance |
|-----|-----------------|------|----|-----------------|-------|-----------|-------------------------------------|----------------|------------------------|------------------|------------|-----------------|----------|
| 53 | | | | 5.410 | 4.853 | 3.103 | 111.0 | 0.0005 | 3.0400 | B240 AG1603 3.04 | 0.555 | 111.0 | -0.0015 |
| | | | | 4.850 | | | | | | | | | |
| | | | | 4.300 | | | | | | | | | |
| | | | | | | | 26,621.0 | | | | | 26,621.0 | -0.03 |
| | | | | | | | 5.042 | | in feet | | | | in feet |
| | | | | | | | | | in miles | | | | |
| | | | | | | | | | allowable error | | | | |
| | | | | | | | | | field error | | | | |
| | | | | | | | | | UNDER MTS | | | | |
| | | | | | | | sq. rt. Of dist. In miles x 0.05' : | | | | | | |
| | | | | | | | 0.112 | | | | | | |
| | | | | | | | 0.063 | | | | | | |
| | | | | | | | 0.049 | | | | | | |



"BENCHMARK CITY OF CAPE CORAL
151-55-01"
ELEV. = 5.11'

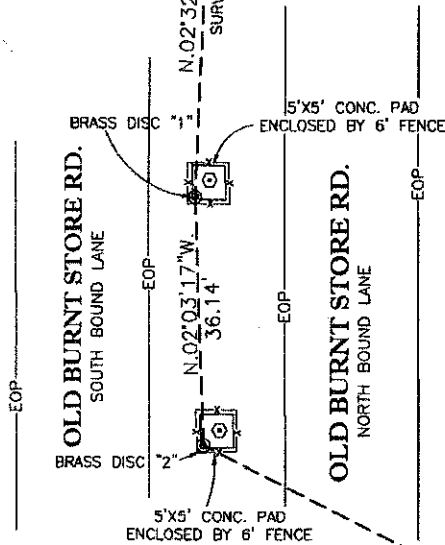
N.02°32'00"E. 1369.06'
SURVEY CONTROL LINE

BRASS DISC "1"
LATITUDE: N 26°39'05.419"
LONGITUDE: W 82°03'21.488"
NORTHING: 842498.53 (FT)
EASTING: 637886.24 (FT)
ELEV. = 6.03'

BRASS DISC "2"
LATITUDE: N 26°39'05.062"
LONGITUDE: W 82°03'21.474"
NORTHING: 842462.41 (FT)
EASTING: 637887.53 (FT)
ELEV. = 6.05'

LEGEND:

- M.W. = MONITOR WELL
- ELEV. = ELEVATION
- ⊙ = WELL
- FT. = FEET
- EOP = EDGE OF PAVEMENT
- CONC. = CONCRETE
- ⊕ = MANHOLE
- ⊗ = ELECTRIC SERVICE



THE COORDINATES SHOWN HEREON WERE BASED ON GPS REAL-TIME TIES TO "44-23-17-02" CONTROL STATION.

DESIGNATION - 44-23-17-02
LOCATION: SEC.17, TWP.44S, RGE.23E
STATE/COUNTY - FL/LEE
USGS QUAD - MATLACHA
NAD 83/90 GEOGRAPHIC COORDINATE - N 26°38'40.0642" W 082°02'24.95271"
NAD 83/90 STATE PLANE COORDINATE - FLORIDA WEST ZONE
NORTHING: 839936.514 (FT)
EASTING: 643014.732 (FT)

"GPS 44-23-17-02"

SURVEY PLAT

OF EXISTING WELLS
LOCATED IN
SECTION 18, TOWNSHIP 44 S., RANGE 23 E.
CITY OF CAPE CORAL,
LEE COUNTY, FLORIDA

NOTES:

THIS PLAT PREPARED AS A SPECIFIC PURPOSE SURVEY FOR THE PURPOSE OF LOCATING THE EXISTING WELLS SHOWN HEREON.

BEARINGS AND COORDINATES SHOWN HEREON ARE STATE PLANE FOR THE FLORIDA WEST ZONE NAD 83/1990 ADJUSTMENT AND BASED ON GPS REAL-TIME TIES TO CONTROL STATION "44-23-17-02".

ELEVATIONS SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29), FROM TIES TO BENCHMARK "151-55-01" ELEVATION = +5.11' AS PROVIDED BY CITY OF CAPE CORAL.

UNDERGROUND IMPROVEMENTS, UTILITIES AND/OR FOUNDATIONS WERE NOT LOCATED UNLESS OTHERWISE NOTED.

DATE OF LAST FIELD WORK: 04-29-2004.

PREPARED FOR:

ENVIRONMENTAL DRILLING SERVICE, INC.

SCOTT M. SHORE
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. LS# 5743

DATE SIGNED: 6-2-2004

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

| | | | |
|--|----------------------------|---|--------------------|
| TITLE: SPECIFIC PURPOSE SURVEY | | | |
| | | METRON SURVEYING & MAPPING, LLC LAND SURVEYORS-PLANNERS LB# 7071 www.metronfl.com | |
| 5245 RAMSEY WAY, SUITE #2 FORT MYERS, FLORIDA 33907 PHONE: (238) 275-8575 FAX: (238) 275-8457 | | www.metronfl.com | |
| FILE NAME: 6043SR1.DWG | FIELD BOOK/PAGE: 195/68 | PROJECT NO.:6043 | SHEET: 1 OF 1 |
| SURVEY DATE: 04-29-2004. | DRAWN BY: JSM | SCALE: 1" = 20' | CHECKED BY: SMS |
| | | (S-T-R) 18-44-23 | |