
Surveyor's Report

Specific Purpose Survey Well Site MF 52

SFWMD Work Order Number: 4500015866

Contractors Project No. 07050.06

Report Date: 04/14/08

Submittal: Final

Prepared for:

**South Florida Water Management
District**



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Licensed Business (L.B.) 6860

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OVERVIEW OF THE PROJECT

PURPOSE

This survey request consists of the establishment of elevations to third order National Geodetic Survey (NGS) Standards at well site POF 23, Polk County, Florida:

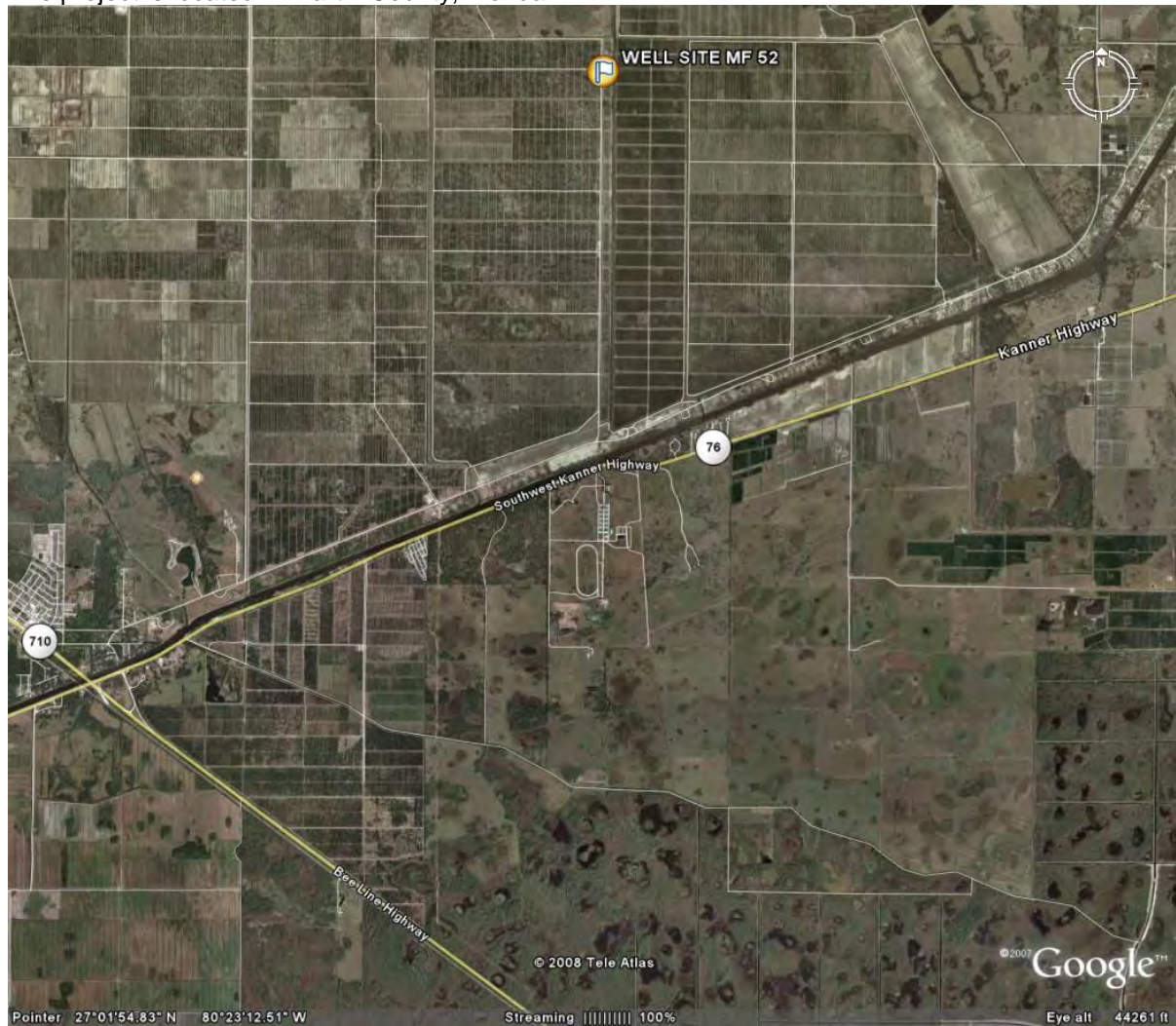
The objective of this Work Order is to:

1. Establish new elevations NGVD 1929 and NAVD 1988 on the well(s).
2. Set a site benchmark within 500' of the well.

The services listed in this report were performed under the direction of a Professional Surveyor and Mapper (PSM) registered in the State of Florida in accordance with Chapter 472 of the Florida Statutes.

LOCATION OF PROJECT

The project is located in Martin County, Florida.



ITEMS DELIVERED TO THE DISTRICT

The following items were delivered to the District with this report.

A CD containing the following:

- The survey report in Microsoft Word format.
- Digital photos.
- Scanned copies of field notes.
- Any other digital files associated with the survey.
- Completed District benchmark description sheet for all set marks.
- Completed Excel benchmark spread sheet
- Completed Excel well activation sheet
- CorpsMet 95 Meta Data Report.

VERTICAL DATUM FOR THE PROJECT

The vertical datum for the project is the North American Vertical Datum of 1988. For correlation with older data sets, the elevations of the benchmarks are also shown in the National Geodetic Vertical Datum (NGVD) of 1929. The NGVD 29 elevation of the site benchmark was established using Corpscon version 6.0.1. The value at benchmark M-522 was derived using data provided by the South Florida Water Management District in a file named "NGVD29.txt". The linear unit for all elevations is U.S. survey feet unless otherwise stated.

LEVELING METHODS

CONFIGURATION OF LEVEL RUN

Third-Order leveling procedures were used to establish the elevation(s) on the well measuring point(s) and the site benchmark.

Benchmark MF 52 2007 (the site benchmark) was used as the primary vertical control for establishing the elevations on the measuring points. A level loop was run starting at NGS benchmark M-522, through third order benchmark M 1244, through site benchmark MF 52 2007, and back to Benchmark M-522.

The SFWMD maximum allowable misclosure for this type of run is 0.03' multiplied by the square root of the length of the level line in miles.

EQUIPMENT USED

All leveling during the project was performed with a Leica NA1 conventional level and a three-section, fiberglass level rod.

GPS METHODS

INTRODUCTION

A GPS horizontal value for the site benchmark was required as part of this contract. The site benchmark was occupied for a minimum of fifteen minutes for rapid static processing to obtain sub-meter accuracy.

The following instrumentation was used for the GPS observation:



- (1) Trimble 5700 receiver/antenna

DATA PROCESSING



Data Acquisition

Data was downloaded from the receiver using Trimble Geomatics Office, version 1.62 (TGO). The DAT file was then sent to the National Geodetic Survey program OPUS RS (On-line Positioning User Service rapid static) for processing. Each data file submitted to OPUS RS is processed with respect to 3 CORS sites. The sites selected may not be the nearest to the static session but are selected by distance, number of observations, site stability, etc. The results of the three baselines are then added together and averaged to obtain the unknown station(s) (site benchmark MF 52 2007) values. Those values for the site benchmark (latitude and longitude) are shown in the corresponding vertical control section below.



VERTICAL CONTROL

M-522		Elevation:	NAVD 1988	24.865'	NGVD 1929	26.232'
PID - AJ8247		Latitude	27° 02' 11.05808"			From NGVD 1929.txt file
State/County FL/Martin		Longitude	- 80° 23' 21.06516"			
USGS QUAD Indiantown (1983)						
Vertical Order	First	<p>The monument is located 4.05 miles (6.52 km) east of Indiantown, Fl. and 9.85 miles (15.85 km) west of the I-95 and State Road 76 interchange southwest of Stuart, Fl., Section 36, Township 39 South, Range 39 East. Ownership is Florida Department of Transportation. To reach monument from the junction of the State Road 710 ramp and State Road 76 in Indiantown, go east 4.05 miles (6.52 km) along State Road 76 to the monument location on the south (right) side of the road in the right of way. The monument location is 0.2 miles (0.32 km) west of the entrance to Bayson Park thoroughbred training center. The monument is 120.0 feet (35.58 m) south of the centerline of the road, 4.0 feet (1.22 m) north of a wooden fence, 142.5 feet (43.43 m) east of power pole no. 279, 101.7 feet (31.00 m) east of the eastern most of two palm trees in the fence line and 73.6 feet (22.43 m) south of telephone pedestal sl1a11. Access to the datum point (top of a stainless steel rod) is had through a 5 inch logo cap.</p> <p>Note a magnet was placed inside the pvc pipe.</p>				
Class	II					
Horizontal Order	First					
						
						

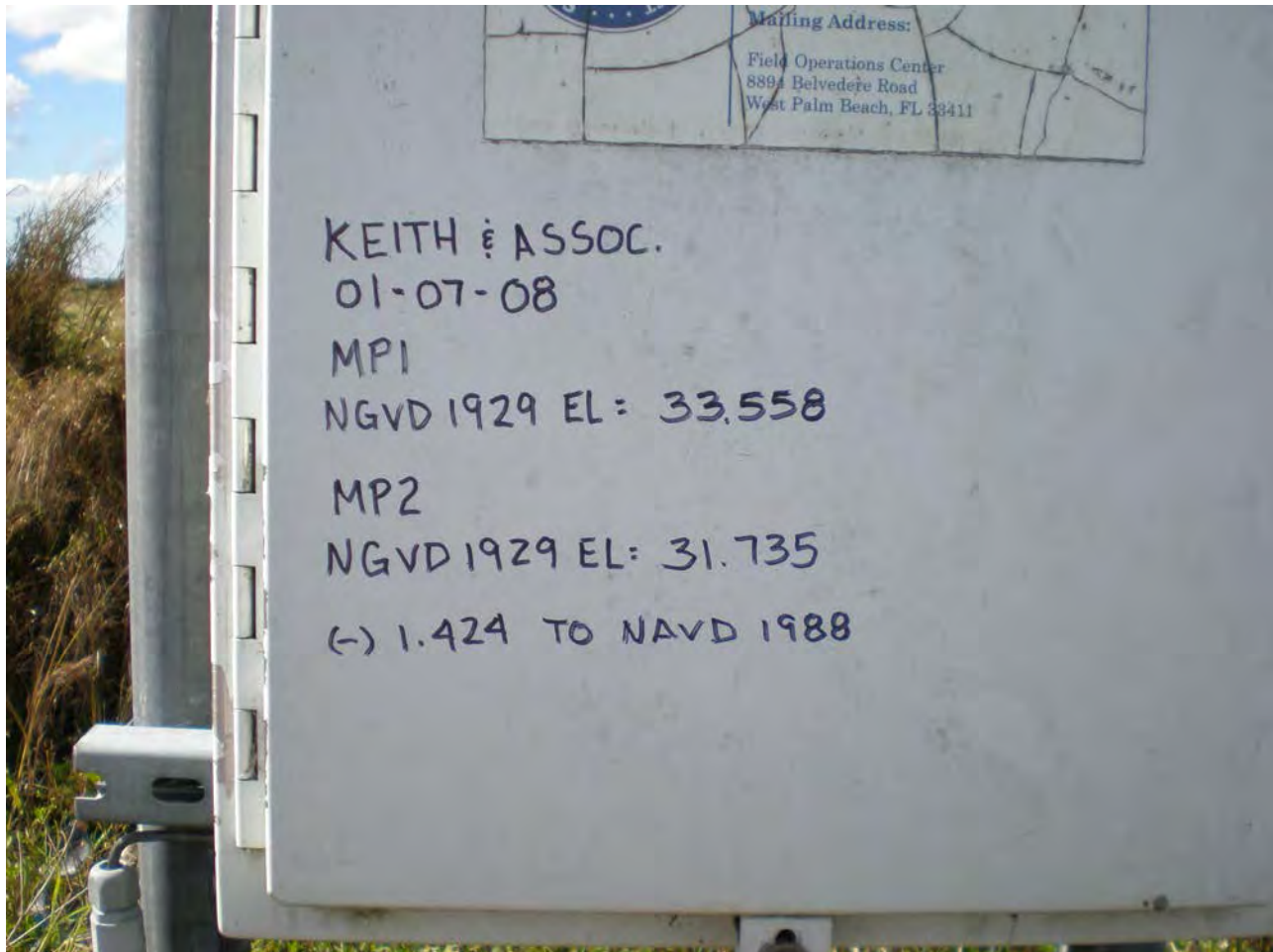
VERTICAL CONTROL

M 1244 2006	Elevation:	NAVD 1988	33.65'	NGVD 1929	NONE
	Latitude	27° 02' 10.9"	From SFWMD benchm ark data base		
State/County FL/Martin	Longitude	- 80° 23' 56.2"			
USGS QUAD Indiantown (1983)					
Vertical Order	Third	To reach the benchmark from the intersection of Warfield Blvd. (SR-710) and Citrus Blvd. (SR-726), travel east on Citrus Blvd. (SR-726) 4 miles, the benchmark is a brass SFWMD disk set approximately 0.3 miles east of a drainage canal bridge, 27 feet south of the south edge of pavement of Citrus Blvd. (SR-726) and 33 feet westerly of an aerial target on the centerline of citrus blvd. And 33.0 feet easterly of a green irrigation valve box for well "M-1244". Benchmark is situated approximately 4 miles east of State Road 710 (Warfield Blvd.), north of the St. Lucie canal along the south side of Citrus Blvd. (SR-726) Martin County, Florida. Note: origin of NAVD 88 elevation for bm "M1244" is closed bench level circuit through NGS benchmarks aj8247 (M522) and aj8246 (L522).			
					
					

VERTICAL CONTROL

SITE BENCHMARK MF 52 2007		Elevation:	NAVD 1988	29.915'	NGVD 1929	31.339'
	Latitude		27° 05' 06.5"	From level run described above		Value derived from CORPSCON Version 6.0.1
State/County FL/Martin	Longitude		-80° 23' 08.2"			
USGS QUAD Indiantown (1983)						
Vertical Order 3 Horizontal Order 3	To reach monument from the junction of the State Road 710 (S.W. Warfield Blvd./Beeline Highway) ramp and State Road 76 (Kanner Highway) in Indiantown, go northwest along S.R. 710 approx. 0.9 miles to the intersection of State Road 726 (S.W. Citrus Blvd.) on the right, turn right and proceed east (on the north side of the St. Lucie Canal) along S.R. 726 approx. 4.9 miles to an intersection with a rock road on the left, turn left and proceed north along the rock road approx. 0.15 miles to a locked gate and an intersection of two rock roads, bear right and continue north along the east of the two rock roads (on the east side of a drainage canal) approx. 2.9 miles to well MF 52 and the mark on the left. The mark is a 3-1/2" SFWMD brass disk set in poured concrete, 5.4' southeast of the electric panel, 5.1' northeast of the well and approx. 10' west of the centerline of the rock road.					
						
						

WELL SITE MF 52



1/07/08

Well MF 52 Upper and Lower Measure Point Information

Keith and Associates, Inc.

SITE PHOTOS



Upper and Lower Measuring Points



UTILITY BOX
NO. 101-08
MOUNTAIN S. - 2420
BY
MOUNTAIN S. - 2420
11-1-08







PROJECT RESULTS

Well MF 52

Reference marks: **Found mark on upper part of well labeled MP1.**
Found mark on lower part of well labeled MP2.

New Information at the site:

Wrote the following information on the side of the electric box adjacent to Well MF 52.

Mark El. **33.558'** (Upper Measure Point)

Mark El. **31.735'** (Lower Measure Point)

NGVD 29

Initials: **K&A**

Date: **1/06/08**

Offset **1.424'**

Previous Information at the site:

Reference Mark Elevation(s)

El. **None**

Date: **None**

Initials: **None**

Reference Mark locations

Same As noted above

DTW (Distance to water inside well)

Unable to obtain well sealed.

Reference mark:

El. **N/A'** (NGVD 29)

Measurement to water: **N/A'**

Date: **N/A**

Time: **N/A.**

Ground Elevation next to Well

31.0' (NGVD 1929 grass).

Comments

Elevations shown hereon are NGVD 1929 datum unless noted otherwise.

Party Chief: D. Ferels Field Book: 287 Pages 2-16

Bench Mark: "MF 52 2007" El. 29.915', Vertical Datum: NAVD1988
El. 31.339', Vertical Datum: NGVD1929

Offset: 1.424' SFWMD VALUE (subtract this value to convert to NAVD 1988)

Offset: 1.424' NGS VALUE (subtract this value to convert to NAVD 1988)

The offset values referred to as "SFWMD VALUE" and "NGS VALUE" were derived by subtracting the NAVD 1988 value from the NGVD 1929 value at site benchmark MF 52 2007. The NGVD 1929 value for benchmark MF 52 2007 was derived using Corpscon version 6.0.1.

NAVD 88 - North American Vertical Datum of 1988

NGVD29 -National Geodetic Vertical Datum of 1929

NAD 83 -99 (Horizontal Datum) North American Datum

NGS - National Geodetic Survey

SFWMD - South Florida Water Management District

PVC - Polyvinyl Chloride

L.B. - Licensed Business

RTK – Real Time Kinematic

K&A – Keith and Associates

PSM – Professional Surveyor & Mapper

USGS – United States Geological Survey

QUAD – Quadrangle Map

PID - Permanent Identifier

SURVEYOR'S CERTIFICATION

I hereby certify that this Specific Purpose Survey meets applicable portions of the Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61-G17, Florida Administrative Code. This report is prepared for the sole and specific use of the South Florida Water Management District and is not assignable.

Keith and Associates, Inc.

L.B. number 6860

By:



Date of Survey
January 7, 2008

Michael M. Mossey, PSM
Professional Surveyor and Mapper
State of Florida
Certificate No. 5660

Well Site MF 52.gen

Identification_Information:

Citation:

Citation_Information:

Originator: Michael M. Mossey, P. S. M. (ed.)
Publication_Date: 20080414
Publication_Time: Unknown
Title: MF 52
Edition: 1
Series_Information:
Publication_Information:
Publication_Place: Not Published
Publisher: None
Online_Linkage: mmossey@keith-associates.com
Larger_Work_Citation:
Citation_Information:
Series_Information:
Publication_Information:

Description:

Abstract: Well site MF 52

Purpose:

To establish reference elevations in NAVD 1988 and NGVD 1929 datum at the site on the existing well. Set a site benchmark.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:
Range_of_Dates/Times:
Beginning_Date: 20071226
Ending_Date: 20080107

Multiple_Dates/Times:

Currentness_Reference: Publication Date

Status:

Progress: Complete
Maintenance_and_Update_Frequency: Unknown

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: 80°23'08.2"
East_Bounding_Coordinate: 80°23'08.2"
North_Bounding_Coordinate: 27°05'06.5"
South_Bounding_Coordinate: 27°05'06.5"

Keywords:

Theme:

Theme_Keyword_Thesaurus: Specific Purpose Survey
Theme_Keyword: Well Site

Place:

Place_Keyword_Thesaurus: Martin County, Florida
Place_Keyword: Well Site MF 52
Place_Keyword: Sections 13 Township 39 S - Range 39 E

Stratum:

Temporal:

Access_Constraints: Need key to gain access through locked gate.

Use_Constraints: None

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Steve Krupa
Contact_Organization: South Florida Water Management

District

Contact_Organization_Primary:

Contact_Position: Senior Supervisor

Contact_Address:

Address_Type: mailing and physical address
Address:

Well Site MF 52.gen
3301 Gun Club Road
MS 4330

City: West Palm Beach
State_or_Province: Florida
Postal_Code: 33409
Country: USA

Contact_Voice_Telephone: Office (561) 682-6923
Contact_Electronic_Mail_Address: skrupa@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:

Horizontal locations were obtained using a Trimble 5700 receiver and 15-minute static session. The vertical data was collected using a Leica NA2 Level. Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 1983/90. Elevations are based on NGVD 1929 with an offset supplied to convert to NAVD 1988.

Logical_Consistency_Report:

Vertical data at the site was established using site Benchmark "MF 52 2007", a SFWMD 3-1/2" brass disk in poured concrete next to well MF 52.

Completeness_Report:

Well MF 52

33.558' MP 1 (NGVD1929) Marker Mark on upper portion of well.

31.735' MP 2 (NGVD1929) Marker Mark on lower portion of well.

Offset written at well (-) 1.424' to NAVD 1988.

Site Benchmark MF 52 2007

NAVD 1988 elevation 29.915' (field derived)

NGVD 1929 elevation 31.339' (Corpscon 6.0.1 derived)

Benchmark M-522

NAVD 1988 elevation 24.865' (Data sheet

NGVD 1929 elevation 26.232' (NGVD 29.txt file)

Benchmark M-1244

NAVD 1988 elevation 33.65' (SFWMD Data sheet)

NGVD 1929 elevation (None)

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The horizontal locations of the benchmark was

obtained

using sub-meter GPS methods, a Trimble 5700 receiver and 15-minute static session.

Quantitative_Horizontal_Positional_Accuracy_Assessment:

Horizontal_Positional_Accuracy_Value: Lat.

27°05'06.5" Long. -80°23'08.2"

Horizontal_Positional_Accuracy_Explanation: Value

derived using Trimble 5700 receiver/cellu GPS

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report:

NGS benchmarks Z-460 and KR 1559 were used to establish elevations on the site benchmark.

Quantitative_Vertical_Positional_Accuracy_Assessment:

Vertical_Positional_Accuracy_Value: 0.006

Vertical_Positional_Accuracy_Explanation: Better

than 0.03ft. x sq. root of miles of the Level Loop.

Well Site MF 52.gen
Quantitative_Vertical_Positional_Accuracy_Assessment:
Vertical_Positional_Accuracy_Value: 0.006
Vertical_Positional_Accuracy_Explanation: Better
than 0.03ft. x the sq. root of miles of the level loop.
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:
Differential leveling was performed using a Leica
NA2
at NGS
conventional level. A level loop was run starting
benchmark M-522, through SFWMD benchmark M-1244,
through site benchmark MF 52 2007 and back to
Benchmark M-522.

Process_Date: 20070107
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Organization_Primary:
Contact_Address:

Spatial_Data_Organization_Information:
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 27°05'06.5"
Longitude_Resolution: -80°23'08.2"
Geographic_Coordinate_Units: Degrees, minutes, and
decimal seconds

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_Organization: Keith and Associates
Contact_Person: Michael Mossey
Contact_Position: Project Surveyor
Contact_Address:
Address_Type: mailing and physical address

Well Site MF 52.gen
 Address: 301 East Atlantic Boulevard
 City: Pompano Beach
 State_or_Province: Florida
 Postal_Code: 33060-6643
 Country: Broward
 Contact_Voice_Telephone: 954 788-3400
 Contact_Facsimile_Telephone: 954 788-3500
 Contact_Electronic_Mail_Address:
 mmossey@keith-associates.com
 Hours_of_Service: 8:00-5:00 est.
 Distribution_Liability: None
 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: 20080414
 Metadata_Review_Date: 20050721
 Metadata_Contact:
 Contact_Information:
 Contact_Person_Primary:
 Contact_Person: Michael M. Mossey, P. S. M.
 Contact_Organization: Keith and Associates
 Contact_Organization_Primary:
 Contact_Position: Project Surveyor
 Contact_Address:
 Address_Type: mailing and physical address
 Address: 301 East Atlantic Boulevard
 City: Pompano Beach
 State_or_Province: FL
 Postal_Code: 33060-6643
 Country: USA
 Contact_Voice_Telephone: 954 788-3400
 Contact_Facsimile_Telephone: 954 788-3500
 Contact_Electronic_Mail_Address:
 mmossey@keith-associates.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: 19940608
 Metadata_Security_Information:

DATE	SFWMD			NAVD 1988
PERELS	MF 52			ELEV
GREES	F	HI	-	
ROSARIO				
BM	6.719			24.865
	5.461			
(250)	4.219			
	5.468	30.333		
TP1	5.984		4.348	
	4.788		3.098	
(238)	3.599	(250)	1.847	
	4.790	32.025	3.098	27.238 ADJ. 6
TP2	4.649		5.362	
	4.127		4.164	
(105)	3.601	(240)	2.962	
	4.126	31.988	4.163	27.862 ✓
TP3	16.069		6.736	
	15.779		6.202	
(457)	11.499	(107)	5.667	
	13.782	39.568	6.202	25.786 ✓
TP4	4.898		6.162	
	3.649		4.908	
(250)	2.399	(250)	3.662	
	3.649	38.306	4.911	34.457 ✓
TP5	4.838		6.653	
	3.589		5.405	
(250)	2.339	(250)	4.151	
	3.589	36.492	5.403	32.903 ADJ. 2
TP6	5.463		5.240	
	4.209		3.988	
(250)	2.961	(250)	2.739	
	4.211	36.714	3.989	32.503 ADJ. 2

END STEEL ROD LOCATED IN THE TREE W/LID
M.522

SET NL IN NORTH EP SR 76

" " " "

SET I.R. ON TOP OF BANK

SET 60d NL

SET NL IN ASPH DRIVE EAST SIDE CITRUS BLVD

SET NL IN SOUTH EP CITRUS BLVD

12-26-01		S.F. W.M.D.		NAVD 1988	
FERRELS		MP 52		ELEV	
GRES					
ROSARIO					
	+	HI	-		
TP7	5.908		5.868		
	4.662		4.622		
(250)	3.414	(250)	3.370		
	4.661	36.755	4.620	32.09	3 ADJ.
TP8	5.839		5.845		
	4.602		4.591		
(248)	3.362	(251)	3.335		
	4.601	36.766	4.590	32.165	4 ADJ.
TP9	6.003		5.928		
	4.751		4.688		
(250)	3.502	(248)	3.449		
	4.752	36.830	4.688	32.078	6 ADJ.
TP10	6.060		6.014		
	4.802		4.762		
(251)	3.590	(250)	3.508		
	4.804	36.873	4.761	32.069	4 ADJ.
TP11	6.462		5.204		
	5.208		3.948		
(251)	3.954	(251)	2.690		
	5.208	38.134	3.947	32.926	4 ADJ.
TP12	6.629		5.519		
	5.382		4.263		
(250)	4.130	(251)	3.009		
	5.380	39.250	4.264	33.870	69 ADJ.
TP13	4.481		6.218		
	4.110		4.962		
(74)	3.741	(251)	3.708		
	4.111	38.398	4.963	34.287	6 ADJ.

SET NL IN SOUTH EP CITRUS BLVD

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" " " "

" " " "

12-26-07
FERRELS
GRACES
RODRIGO

S.F.W.M.D.
MF 52

NAVD 1988

	+	HT	-	ELEV
TP14	5.198		5.125	
	4.832		4.754	
(73)	4.468	(73)	4.390	
	4.833	38.476	4.755	33.648 2 ADJ.
TP15	6.348		4.559	
	5.099		4.188	
(249)	3.846	(74)	3.815	
	5.098	39.387	4.187	34.2897 ADJ.
TP16	5.588		6.764	
	4.333		5.512	
(251)	3.080	(249)	4.266	
	4.334	38.207	5.514	33.873 1 ADJ.
TP17	5.342		6.530	
	4.087		5.279	
(251)	2.829	(251)	4.024	
	4.086	37.015	5.278	32.928 7 ADJ.
TP18	6.109		6.200	
	4.859		4.945	
(250)	3.608	(251)	3.689	
	4.859	36.926	4.948	32.067 5 ADJ.
TP19	6.067		6.103	
	4.828		4.852	
(248)	3.589	(250)	3.601	
	4.828	36.902	4.852	32.074 2 ADJ.
TP20	5.847		5.978	
	4.599		4.740	
(250)	3.347	(248)	3.499	
	4.598	36.761	4.739	32.165 1 ADJ.

FIND SEWMD BRASS DIECAST IN POURED CONCRETE MON.
STAMPED M 1244 2006
NAVD 1988 ELEV. = 33.65

SEE NL IN SOUTH EP CITRUS BLVD.

" " " "

" " " "

" " " "

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" " " "

" " " "

12-26-07		S. F. W. M. D.		
FERELS		MF 52		
GREGS				NAVD 1988
ROBARIO				ELEV
	+	HI	-	
TP 21	6.127		5.911	
	4.879		4.662	
(250)	3.627	(250)	3.413	
	4.878	36.977	4.662	32.099 6 ADJ.
TP 22	5.688		5.722	
	4.440		4.467	
(250)	3.188	(250)	3.218	
	4.439	36.947	4.469	32.508 6 ADJ.
TP 23	6.124		5.288	
	4.878		4.042	
(249)	3.629	(250)	2.789	
	4.877	37.784	4.040	32.907 4 ADJ.
TP 24	4.948		10.174	
	3.695		8.925	
(250)	2.447	(249)	7.682	
	3.697	32.554	8.927	28.857 4 ADJ.
TP 25	3.629		5.143	
	2.394		3.890	
(248)	1.154	(250)	2.644	
	2.392	31.054	3.892	28.661 59 ADJ.
TP 26	4.889		4.228	
	3.648		2.989	
(249)	2.400	(248)	1.750	
	3.646	31.711	2.989	28.065 2 ADJ.
TP 27	4.552		5.164	
	3.307		3.924	
(249)	2.059	(248)	2.677	
	3.306	31.095	3.922	27.788 6 ADJ.

SET NL IN SOUTH EP CITRUS BLVD

SET 60d NL

" "

" "

" "

12-27-07		S F W M D		NAVD 1988	
FERELS		MF 52		ELEV	
RODARIO					
PINNOCK					
	+	HI	-		
TP28	5.608		6.378		
	4.363		5.128		
(250)	3.109	(249)	3.888		
	4.360	30.324	5.131	25.964 1 ADJ.	
TP29	6.574		7.459		
	5.320		6.213		
(250)	4.074	(249)	4.969		
	5.323	29.433	6.214	24.110 07 ADJ.	
TP30	7.305		6.328		
	6.052		5.086		
(251)	4.804	(249)	3.842		
	6.054	30.402	5.085	24.348 A ADJ.	
TP31	5.986		5.506		
	4.728		4.253		
(252)	3.469	(251)	3.004		
	4.728	30.876	4.254	26.148 A ADJ.	
TP32	6.344		5.484		
	5.088		4.217		
(250)	3.842	(252)	2.955		
	5.091	31.748	4.219	26.657 A ADJ.	
TP33	5.400		6.969		
	4.162		5.724		
(247)	2.930	(250)	4.470		
	4.164	30.191	5.721	26.027 3 ADJ.	
TP34	6.081		6.499		
	4.840		5.260		
(249)	3.591	(248)	4.023		
	4.837	29.767	5.261	24.930 26 ADJ.	

SET 60d NL

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SET 5/6 I.R.

SET 60d NL

1-2-08
FERRELS
ROSARIO
PINNACK

S.F.W.M.D.
MF 52

NAVD 1988
ELEV

	+	HI	-	
TP35	6.835		5.211	
	5.589		3.960	
(250)	4.340		(250) 2.711	
	5.581	31.393	3.961	25.806 2 ADJ.
TP36	6.180		5.589	
	4.925		4.332	
(251)	3.670		(252) 3.070	
	4.925	31.988	4.330	27.068 59 ADJ.
TP37	6.059		6.159	
	4.810		4.909	
(249)	3.570		(251) 3.650	
	4.813	31.895	4.906	27.082 77 ADJ.
TP38	6.999		6.680	
	5.750		5.429	
(249)	4.511		(251) 4.170	
	5.753	32.222	5.426	26.469 A ADJ.
TP39	6.110		6.205	
	4.869		4.959	
(249)	3.620		(250) 3.710	
	4.866	32.130	4.958	27.264 59 ADJ.
TP40	6.111		6.011	
	4.860		4.771	
(250)	3.611		(247) 3.540	
	4.861	32.217	4.774	27.354 ADJ.
TP41	10.001		6.559	
	8.750		5.309	
(250)	7.501		(251) 4.051	
	8.751	35.662	5.306	26.944 66 ADJ.

SET 60 d NL

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1-2-08

FERELS

ROSARIO

PINDOCK

S. P. W. M. D.

MF 52

NAVD 1988

ELEV

TP42

5.925

6.394

4.680

5.149

(250) 3.430

(248) 3.910

4.678

35.189

5.151

30.54
06 ADJ

TP 43

5.771

9.042

4.520

7.791

(251) 3.260

(250) 6.542

4.511

31.914

7.792

27.397
3 ADJ

TP44

7.321

6.568

6.079

5.320

(248) 4.840

(250) 4.069

6.080

32.675

5.319

26.598
0 ADJ

TP45

5.661

6.248

4.409

5.000

(251) 3.151

(250) 3.749

4.407

32.083

4.999

27.676
1 ADJ

TP46

7.041

5.601

5.798

4.340

(249) 4.549

(252) 3.081

5.796

33.538

4.341

27.742
37 ADJ

TP47

7.360

6.502

6.109

5.249

(250) 4.861

(250) 4.061

6.110

34.397

5.251

28.287
2 ADJ

TP48

5.441

6.562

4.190

5.321

(251) 2.930

(248) 4.079

4.187

33.263

5.321

29.076
ADJ

SET LOD NL

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1-2-08		S.F.W.M.D.			
FERELS		MF 52			
ROSARIO				NAVD 1988	
PINNOCK				ELEV	
	+	HI	-		
TP49	7.088		6.251		
	5.838		4.991		
(251)	4.581		(252) 3.730		
	5.836	34.108	4.991	28.272	67 ADJ.
TP50	5.851		6.459		
	4.610		5.210		
(248)	3.370		(250) 3.960		
	4.610	33.508	5.210	28.898	3 ADJ.
TP51	6.271		7.309		
	5.031		6.060		
(249)	3.781		(249) 4.821		
	5.028	32.473	6.063	27.445	39 ADJ.
TP52	6.789		6.649		
	5.549		5.400		
(249)	4.301		(250) 4.149		
	5.546	32.620	5.399	27.074	63 ADJ.
TP53	5.990		5.502		
	4.740		4.249		
(251)	3.481		(250) 3.000		
	4.737	33.107	4.250	28.370	63 ADJ.
TP54	6.581		4.439		
	5.341		3.188		
(249)	4.091		(250) 1.938		
	5.338	35.251	3.188	29.919	2 ADJ.
TP55	6.278		5.799		
	5.115		4.549		
(232)	3.956		(250) 3.301		
	5.116	35.823	4.550	30.707	ADJ.

SET 60 d NL

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1-2-08		S. F. W. M. D.			
FERELS		MF 52			
ROSARIO				NAVD 1988	
PIWAXEK				ELEV	
	+	41	-		ADJ. ELEV
TP56	6.861		7.069		
	5.699		5.401		
(233)	4.533		(234) 4.733		
	5.698	35.620	5.901	29.922	29.915 ✓
TP57	5.610		6.078		
	4.361		4.914		
(250)	3.110		(233) 3.750		
	4.360	35.060	4.914	30.706	699 ADJ.
TP58	5.228		6.710		
	3.979		5.461		
(250)	2.720		(250) 4.209		
	3.978	33.584	5.460	29.606	599 ADJ.
TP59	5.726		6.462		
	4.471		5.211		
(250)	3.222		(250) 3.960		
	4.471	32.844	5.211	28.873	366 ADJ.
TP60	6.994		7.011		
	5.742		5.772		
(250)	4.490		(248) 4.533		
	5.742	32.814	5.772	27.072	65 ADJ.
TP61	7.210		6.540		
	5.959		5.291		
(250)	4.708		(250) 4.042		
	5.959	33.482	5.291	27.525	16 ADJ.
TP62	6.698		5.792		
	5.450		4.552		
(250)	4.202		(248) 3.312		
	5.450	34.380	4.552	28.930	23 ADJ.

SET SF WMD BRASS DISC IN POURED CONC. MON
 STARTED MF 52 2007
 3.0 MILES NORTH OF CITRUS BLVD.

DIST = 26,910'

1-3-08
FERELS
GREEN

SFWMD
MF 52

NAVD 1988
ELEV

	+	HI	-	
TP63	5.911		7.325	
	4.652		6.075	
(252)	3.393		(250) 4.825	
	4.652	32.957	6.075	28.305 298 ADJ.
TP64	6.374		5.092	
	5.125		3.831	
(249)	3.876		(252) 2.573	
	5.125	31.250	3.832	29.125 13 ADJ.
TP65	6.281		7.160	
	5.031		5.912	
(250)	3.781		(250) 4.664	
	5.031	33.369	5.912	28.338 1 ADJ.
TP66	5.549		6.819	
	4.299		5.571	
(250)	3.048		(250) 4.320	
	4.299	32.098	5.570	27.799 2 ADJ.
TP67	6.414		5.613	
	5.159		4.362	
(251)	3.901		(250) 3.111	
	5.158	32.894	4.362	27.776 20 ADJ.
TP68	6.540		7.475	
	5.285		6.234	
(251)	4.030		(249) 4.993	
	5.285	31.945	6.234	26.660 52 ADJ.
TP69	8.910		5.740	
	7.655		4.480	
(251)	6.400		(252) 3.220	
	7.655	35.120	4.480	27.465 57 ADJ.

1-3-08
FERRELS
GREENS

S F W M D
MF 52

NAVD 1988
ELEV

	+	HI	-	
TP70	6.399		5.801	
	5.149		4.552	
(250)	3.899		(250) 3.303	
	5.149	35.717	4.552	30.568 0 ADJ.
TP71	6.719		9.997	
	5.469		8.748	
(250)	4.219		(250) 7.499	
	5.469	32.438	8.748	26.969 1 ADJ.
TP72	6.258		6.270	
	5.017		5.019	
(248)	3.776		(250) 3.768	
	5.017	32.436	5.019	27.419 1 ADJ.
TP73	6.453		6.358	
	5.204		5.110	
(249)	3.955		(250) 3.862	
	5.204	32.530	5.110	27.326 17 ADJ.
TP74	6.831		7.243	
	5.582		6.002	
(250)	4.331		(248) 4.762	
	5.581	32.109	6.002	26.528 19 ADJ.
TP75	6.426		6.210	
	5.172		4.961	
(251)	3.918		(250) 3.712	
	5.172	32.320	4.961	27.148 39 ADJ.
TP76	5.976		6.449	
	4.720		5.197	
(252)	3.458		(250) 3.945	
	4.718	31.841	5.197	27.125 14 ADJ.

T-3-08
FERELS
GREGG

SFWMD
MF 52

NAVD 1988
ELEV

	+	NI	-	
TP77	5.462		7.219	
	4.214		5.978	
(249)	2.966		(249) 4.729	
	4.214	30.080	5.975	25.366 57 ADJ.
TP78	6.609		6.335	
	5.364		5.089	
(248)	4.129		(250) 3.843	
	5.367	30.358	5.089	24.991 81 ADJ.
TP79	6.901		5.561	
	5.645		4.522	
(251)	4.393		(248) 3.083	
	5.646	31.682	4.322	26.086 27 ADJ.
TP80	5.507		6.261	
	4.243		5.020	
(253)	2.979		(249) 3.769	
	4.243	30.908	5.017	26.665 56 ADJ.
TP81	5.602		6.010	
	4.353		4.753	
(250)	3.103		(251) 3.498	
	4.353	30.507	4.754	26.194 45 ADJ.
TP82	6.435		7.405	
	5.183		6.153	
(251)	3.931		(251) 4.901	
	6.183	29.537	6.153	24.354 44 ADJ.
TP83	7.503		6.679	
	6.260		5.425	
(248)	5.015		(251) 4.173	
	6.259	30.370	5.426	24.111 02 ADJ.

1-7-08

FERELS
ROSEARIO
PINDOCK

S.F.W.M.D.
MF 52

NAVD 1988
ELEV

TP84

+
6.649
5.405
(249) 4.161
5.405

HI
-
(250) 3.161
4.410
31.365

-
5.659
4.410
3.161
4.410

25.960
50 ADJ

TP85

5.408
4.169
(248) 2.927
4.168

31.881

4.900
3.653
(250) 2.403
3.652

27.715
03 ADJ

TP86

4.299
3.259
(248) 2.019
3.259

31.301

5.085
3.842
(250) 2.589
3.839

28.042
32 ADJ

TP87

4.828
3.843
(248) 2.350
3.590

32.293

3.839
2.597
(248) 1.359
2.598

28.705
693 ADJ

TP88

10.183
8.934
(249) 7.688
8.935

37.823

4.665
3.406
(253) 2.144
3.405

28.888
78 ADJ

TP89

6.732
5.449
(257) 4.163
5.448

40.128

4.393
3.143
(250) 1.893
3.143

34.680
70 ADJ

TP90

6.800
6.263
(107) 5.726
6.263

32.069

16.559
14.325
(448) 12.081
14.322

25.806
796 ADJ

07050.06

287-14

3555

1-7-08
PEREY
ROSARIO
DUNNICK

S.F.W.M.D.
MFSZ

	+	HI	-	NAVD 1988 ELEV
TP91	5.498		4.712	
	4.299		4.190	
(240)	3.097		(104) 3.665	
	4.298	32.178	4.189	27.895 A ADJ
TP92	5.667		6.119	
	4.423		4.925	
(230)	3.171		(239) 3.727	
	4.420	31.674	4.924	27.254 A3 ADJ
BM M522"			8.058	
			6.797	
			(252) 5.539	
			6.798	24.874

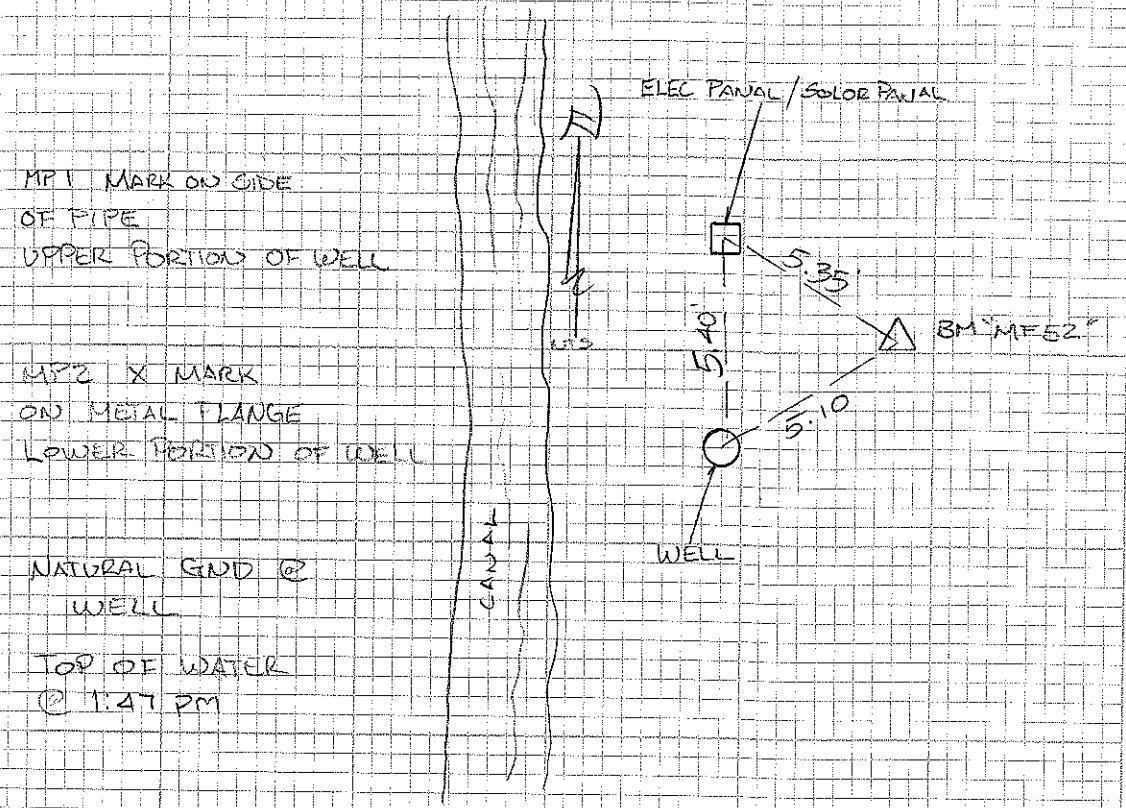
07050.06

287-15

NAVD 1988 = 24.865
TOTAL DIST = 45,266
ERROR = +0.011
BM EL. = 24.805'
ALLOWABLE ERROR 0.085'

1-7-08		D. F. W. M. D.			
FERRELS		MF 52			
ROSARIO					
PINDOCK				NAVD 1988	NAVD 1929
	+	HT	-	ELEV	ELEV
BM	4.089	35.428		29.915	31.339
MF52					
TP 1			1.870	32.134	33.558
	2.248	35.800			
TP 2			4.071	30.311	31.735
	3.932	35.607			
			4.59	29.623	31.011
			14.11	20.133	21.557
BM			4.329	29.914	31.338
MF52					

OFFSET = 11.424





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY <u>Martin</u>		PROJECT <u>Well Site MF 52</u>		DESIGNATION <u>MF 52 2007</u>	
SECTION <u>13</u>		TOWNSHIP <u>39 S</u>		RANGE <u>39 E</u>	
GEOGRAPHIC INDEX OF QUAD					
Recovered by <u>Keith and Associates</u>			NAME OF QUADRANGLE <u>Indiantown</u>		
SURVEYOR <u>D. Ferels</u> DATE <u>1/07/2008</u>			FIELD BOOK <u>287</u> PAGES <u>2-15</u>		
HORIZONTAL DATUM: 1983		ZONE E			
VERTICAL DATUM:		NGVD 1929 and NAVD 1988			
CONTROL ACCURACY: HORIZONTAL 3		VERTICAL 3			
STATE PLANE COORDINATES	X <u>856078.0</u>	Y <u>1000606.6</u>	NGVD 1929 EL. <u>31.339'</u> NAVD 1988 EL. <u>29.915'</u>		
LATITUDE 27° 05' 06.5"			LONGITUDE -80° 23' 08.2"		
DESCRIPTION					
To Reach:					
To reach monument from the junction of the State Road 710 (S.W. Warfield Blvd./Beeline Highway) ramp and State Road 76 (Kanner Highway) in Indiantown, go northwest along S.R. 710 approx. 0.9 miles to the intersection of State Road 726 (S.W. Citrus Blvd.) on the right, turn right and proceed east (on the north side of the St. Lucie Canal) along S.R. 726 approx. 4.9 miles to an intersection with a rock road on the left, turn left and proceed north along the rock road approx. 0.15 miles to a locked gate and an intersection of two rock roads, bear right and continue north along the east of the two rock roads (on the east side of a drainage canal) approx. 2.9 miles to well MF 52 and the mark on the left. The mark is a 3-1/2" SFWMD brass disk set in poured Concrete, 5.4' southeast of the electric panel, 5.1' northeast of the well and approx. 10' west of the centerline of the rock road.					
Notable Land marks: See attached photos.					



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01



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

Line/Part: L26243 SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark ID	SSN	PID	Designation	Geopotential	Elevation	Codes
1759	2919	AJ8247	M 522	7.8358	7.995	

The NGS Data Sheet

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.48

1 National Geodetic Survey, Retrieval Date = JUNE 27, 2007

AJ8247 *****

AJ8247 DESIGNATION - M 522

AJ8247 PID - AJ8247

AJ8247 STATE/COUNTY- FL/MARTIN

AJ8247 USGS QUAD - INDIANTOWN (1983)

AJ8247

AJ8247 *CURRENT SURVEY CONTROL

AJ8247

AJ8247* NAD 83(1999)- 27 02 11.05808(N) 080 23 21.06516(W) ADJUSTED

AJ8247* NAVD 88 - 7.579 (meters) 24.87 (feet) ADJUSTED

AJ8247

AJ8247 X - 949,144.516 (meters) COMP

AJ8247 Y - -5,605,244.594 (meters) COMP

AJ8247 Z - 2,881,800.397 (meters) COMP

AJ8247 LAPLACE CORR- -1.73 (seconds) DEFLEC99

AJ8247 ELLIP HEIGHT- -19.255 (meters) (12/12/02) GPS OBS

AJ8247 GEOID HEIGHT- -26.84 (meters) GEOID03

AJ8247 DYNAMIC HT - 7.568 (meters) 24.83 (feet) COMP

AJ8247 MODELED GRAV- 979,097.1 (mgal) NAVD 88

AJ8247

AJ8247 HORZ ORDER - FIRST

AJ8247 VERT ORDER - FIRST CLASS II

AJ8247 ELLP ORDER - THIRD CLASS I

AJ8247

AJ8247.The horizontal coordinates were established by GPS observations

AJ8247.and adjusted by the National Geodetic Survey in December 2002.

AJ8247

AJ8247.The orthometric height was determined by differential leveling

AJ8247.and adjusted by the NATIONAL GEODETIC SURVEY in April 2002.

AJ8247

AJ8247.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AJ8247

AJ8247.The Laplace correction was computed from DEFLEC99 derived deflections.

AJ8247

AJ8247.The ellipsoidal height was determined by GPS observations

AJ8247.and is referenced to NAD 83.

AJ8247

AJ8247.The geoid height was determined by GEOID03.

AJ8247

AJ8247.The dynamic height is computed by dividing the NAVD 88

AJ8247.geopotential number by the normal gravity value computed on the

AJ8247.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AJ8247.degrees latitude (g = 980.6199 gals.).

AJ8247

AJ8247.The modeled gravity was interpolated from observed gravity values.

AJ8247

AJ8247;

	North	East	Units	Scale	Factor	Converg.
AJ8247;SPC FL E	- 299,584.474	260,603.977	MT	0.99998650	+0 16 39.6	
AJ8247;SPC FL E	- 982,886.73	854,998.21	sFT	0.99998650	+0 16 39.6	
AJ8247;UTM 17	- 2,990,614.238	560,583.299	MT	0.99964531	+0 16 39.6	

AJ8247

AJ8247! - Elev Factor x Scale Factor = Combined Factor

AJ8247!SPC FL E - 1.00000302 x 0.99998650 = 0.99998952

AJ8247!UTM 17 - 1.00000302 x 0.99964531 = 0.99964833

AJ8247

AJ8247 SUPERSEDED SURVEY CONTROL
 AJ8247
 AJ8247 NAVD 88 (12/12/02) 7.58 (m) 24.9 (f) LEVELING 3
 AJ8247
 AJ8247.Superseded values are not recommended for survey control.
 AJ8247.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AJ8247.See file dsdata.txt to determine how the superseded data were derived.
 AJ8247
 AJ8247_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK6058390614(NAD 83)
 AJ8247_MARKER: F = FLANGE-ENCASED ROD
 AJ8247_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 AJ8247_STAMPING: M 522 2001 CERP
 AJ8247_MARK LOGO: NONE
 AJ8247_PROJECTION: RECESSED 8 CENTIMETERS
 AJ8247_MAGNETIC: O = OTHER; SEE DESCRIPTION
 AJ8247_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 AJ8247_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AJ8247+SATELLITE: SATELLITE OBSERVATIONS - April 24, 2002
 AJ8247_ROD/PIPE-DEPTH: 24.4 meters
 AJ8247

AJ8247	HISTORY	- Date	Condition	Report By
AJ8247	HISTORY	- 20010903	MONUMENTED	FOST
AJ8247	HISTORY	- 20020424	GOOD	MAPTEC

 AJ8247
 AJ8247 STATION DESCRIPTION
 AJ8247
 AJ8247'DESCRIBED BY CHARLEY FOSTER AND ASSOCIATES 2001 (JB)
 AJ8247'THE MONUMENT IS LOCATED 4.05 MILES (6.52 KM) EAST OF INDIANTOWN, FL.
 AJ8247'AND 9.85 MILES (15.85 KM) WEST OF
 AJ8247'THE I-95 AND STATE ROAD 76 INTERCHANGE SOUTHWEST OF STUART, FL.,
 AJ8247'SECTION 36, TOWNSHIP 39 SOUTH,
 AJ8247'RANGE 39 EAST.
 AJ8247'
 AJ8247'OWNERSHIP IS FLORIDA DEPARTMENT OF TRANSPORTATION.
 AJ8247'
 AJ8247'TO REACH MONUMENT FROM THE JUNCTION OF THE STATE ROAD 710 RAMP AND
 AJ8247'STATE ROAD 76 IN
 AJ8247'INDIANTOWN, GO EAST 4.05 MILES (6.52 KM) ALONG STATE ROAD 76 TO THE
 AJ8247'MONUMENT LOCATION ON THE
 AJ8247'SOUTH (RIGHT) SIDE OF THE ROAD IN THE RIGHT OF WAY. THE MONUMENT
 AJ8247'LOCATION IS 0.2 MILES (0.32 KM)
 AJ8247'WEST OF THE ENTRANCE TO PAYSON PARK THOROBRED TRAINING CENTER.
 AJ8247'
 AJ8247'THE MONUMENT IS 120.0 FEET (35.58 M) SOUTH OF THE CENTERLINE OF THE
 AJ8247'ROAD, 4.0 FEET (1.22 M) NORTH OF A
 AJ8247'WOODEN FENCE, 142.5 FEET (43.43 M) EAST OF POWER POLE NO. 279, 101.7
 AJ8247'FEET (31.00 M) EAST OF THE EASTERN
 AJ8247'MOST OF TWO PALM TREES IN THE FENCELINE AND 73.6 FEET (22.43 M) SOUTH
 AJ8247'OF TELEPHONE PEDESTAL
 AJ8247'SL1A11. ACCESS TO THE DATUM POINT (TOP OF A STAINLESS STEEL ROD) IS
 AJ8247'HAD THROUGH A 5 INCH LOGO CAP.
 AJ8247'NOTE A MAGNET WAS PLACED INSIDE THE PVC PIPE.
 AJ8247'
 AJ8247
 AJ8247 STATION RECOVERY (2002)
 AJ8247
 AJ8247'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
 AJ8247'THE MONUMENT IS LOCATED 4.05 MILES (6.52 KM) EAST OF INDIANTOWN, FL.
 AJ8247'AND 9.85 MILES (15.85 KM)
 AJ8247'WEST OF

AJ8247'THE I-95 AND STATE ROAD 76 INTERCHANGE SOUTHWEST OF STUART, FL.,
AJ8247'SECTION 36, TOWNSHIP 39
AJ8247'SOUTH,
AJ8247'RANGE 39 EAST.
AJ8247'
AJ8247'OWNERSHIP IS FLORIDA DEPARTMENT OF TRANSPORTATION.
AJ8247'
AJ8247'TO REACH MONUMENT FROM THE JUNCTION OF THE STATE ROAD 710 RAMP AND
AJ8247'STATE ROAD 76 IN
AJ8247'INDIANTOWN, GO EAST 4.05 MILES (6.52 KM) ALONG STATE ROAD 76 TO THE
AJ8247'MONUMENT LOCATION ON
AJ8247'THE
AJ8247'SOUTH (RIGHT) SIDE OF THE ROAD IN THE RIGHT OF WAY. THE MONUMENT
AJ8247'LOCATION IS 0.2 MILES (0.32
AJ8247'KM)
AJ8247'WEST OF THE ENTRANCE TO PAYSON PARK THOROBRED TRAINING CENTER.
AJ8247'
AJ8247'THE MONUMENT IS 120.0 FEET (35.58 M) SOUTH OF THE CENTERLINE OF THE
AJ8247'ROAD, 4.0 FEET (1.22 M)
AJ8247'NORTH OF A
AJ8247'WOODEN FENCE, 142.5 FEET (43.43 M) EAST OF POWER POLE NO. 279, 101.7
AJ8247'FEET (31.00 M) EAST OF THE
AJ8247'EASTERN
AJ8247'MOST OF TWO PALM TREES IN THE FENCELINE AND 73.6 FEET (22.43 M) SOUTH
AJ8247'OF TELEPHONE
AJ8247'PEDESTAL
AJ8247'SL1A11. ACCESS TO THE DATUM POINT (TOP OF A STAINLESS STEEL ROD) IS
AJ8247'HAD THROUGH A 5 INCH
AJ8247'LOGO CAP.
AJ8247'NOTE A MAGNET WAS PLACED INSIDE THE PVC PIPE.
AJ8247'
AJ8247'STATION RECOVERY (2002)
AJ8247'RECOVERY NOTE BY MAPTECH, INCORPORATED 2002 (CDP)
AJ8247'RECOVERED AS DESCRIBED.
AJ8247'
AJ8247'

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

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC	
NGS BM	6.719													
M-522	5.467	5.468		30.333				24.865						
	4.219	0.0013												
	16.405		250.000											
	5.984				4.348									
TP1	4.788	4.790		32.025	3.098	3.098	27.236			500.10	0.000120918	0.000120918	27.236	
	3.599	0.0023			1.847	-0.0003			0.00					
	14.371				9.293				0.00					
			238.500				250.100							
	4.649				5.362									
TP2	4.127	4.126		31.988	4.164	4.163	27.862			478.50	0.000115695	0.000236613	27.862	
	3.601	-0.0013			2.962	-0.0013			0.00					
	12.377				12.488				0.00					
			104.800				240.000							
	16.069				6.736									
TP3	13.779	13.782		39.568	6.202	6.202	25.786			211.70	0.000051186	0.000287800	25.786	
	11.499	0.0033			5.667	-0.0003			0.00					
	41.347				18.605				0.00					
			457.000				106.900							
	4.898				6.162									
TP4	3.649	3.649		38.306	4.908	4.911	34.657			707.00	0.000170944	0.000458743	34.657	
	2.399	-0.0003			3.662	0.0027			0.00					
	10.946				14.732				0.00					
			249.900				250.000							
	4.838				6.653									
TP5	3.589	3.589		36.492	5.405	5.403	32.903			500.10	0.000120918	0.000579661	32.902	
	2.339	-0.0003			4.151	-0.0020			0.00					
	10.766				16.209				0.00					
			249.900				250.200							

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	5.463				5.240										
TP6	4.209	4.211		36.714	3.988	3.989	32.503			500.00	0.000120894	0.000700555	32.502	9.907	
	2.961	0.0020			2.739	0.0010			0.00						
	12.633				11.967				0.00						
			250.200				250.100								
	5.908				5.868										
TP7	4.662	4.661		36.755	4.622	4.620	32.094			500.00	0.000120894	0.000821449	32.093	9.782	
	3.414	-0.0007			3.370	-0.0020			0.00						
	13.984				13.860				0.00						
			249.400				249.800								
	5.839				5.845										
TP8	4.602	4.601		36.766	4.591	4.590	32.165			500.40	0.000120990	0.000942439	32.164	9.804	
	3.362	-0.0010			3.335	-0.0007			0.00						
	13.803				13.771				0.00						
			247.700				251.000								
	6.003				5.928										
TP9	4.751	4.752		36.830	4.688	4.688	32.077			495.60	0.000119830	0.001062269	32.076	9.777	
	3.502	0.0010			3.449	0.0003			0.00						
	14.256				14.065				0.00						
			250.100				247.900								
	6.060				6.014										
TP10	4.802	4.801		36.873	4.762	4.761	32.069			500.70	0.000121063	0.001183332	32.067	9.774	
	3.540	-0.0013			3.508	-0.0007			0.00						
	14.402				14.284				0.00						
			252.000				250.600								
	6.462				5.204										
TP11	5.208	5.205		38.134	3.948	3.947	32.926			503.40	0.000121716	0.001305048	32.924	10.035	
	3.945	-0.0030			2.690	-0.0007			0.00						
	15.615				11.842				0.00						
			251.700				251.400								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC			
	6.629			5.519											
TP12	5.382	5.380	39.250	4.263	4.264	33.870			502.70	0.000121547	0.001426594	33.869	10.323		
	4.130	-0.0017		3.009	0.0007			0.00							
	16.141			12.791				0.00							
			249.900			251.000									
	4.481			6.218											
TP13	4.110	4.111	38.398	4.962	4.963	34.287			500.90	0.000121111	0.001547706	34.286	10.450		
	3.741	0.0007		3.708	0.0007			0.00							
	12.332			14.888				0.00							
			74.000			251.000									
	5.198			5.120											
TP14	4.832	4.833	38.476	4.754	4.755	33.643			147.00	0.000035543	0.001583249	33.642	10.254		
	4.468	0.0007		4.390	0.0007			0.00							
BM M1244	14.498			14.264				0.00							
PUB. EL.			73.000			73.000									
33.65'															
	6.348			4.559											
TP15	5.099	5.096	39.387	4.188	4.187	34.289			147.40	0.000035639	0.001618888	34.287	10.451		
	3.840	-0.0033		3.815	-0.0007			0.00							
	15.287			12.562				0.00							
			250.800			74.400									
	5.588			6.764											
TP16	4.333	4.334	38.207	5.512	5.514	33.873			500.60	0.000121039	0.001739927	33.871	10.324		
	3.080	0.0007		4.266	0.0020			0.00							
	13.001			16.542				0.00							
			250.800			249.800									
	5.342			6.530											
TP17	4.087	4.086	37.015	5.279	5.278	32.929			501.40	0.000121232	0.001861159	32.927	10.036		
	2.829	-0.0010		4.024	-0.0013			0.00							
	12.258			15.833				0.00							
			251.300			250.600									

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC			
	6.109			6.200											
TP18	4.859	4.859	36.926	4.945	4.948	32.067			501.50	0.000121256	0.001982415	32.065	9.774		
	3.608	-0.0003		3.698	0.0027			0.00							
	14.576			14.843				0.00							
			250.100			250.200									
	6.067			6.103											
TP19	4.828	4.828	36.902	4.852	4.852	32.074			500.30	0.000120966	0.002103382	32.072	9.776		
	3.589	0.0000		3.601	0.0000			0.00							
	14.484			14.556				0.00							
			247.800			250.200									
	5.847			5.978											
TP20	4.599	4.598	36.761	4.740	4.739	32.163			495.70	0.000119854	0.002223236	32.161	9.803		
	3.347	-0.0013		3.499	-0.0010			0.00							
	13.793			14.217				0.00							
			250.000			247.900									
	6.127			5.911											
TP21	4.879	4.878	36.977	4.662	4.662	32.099			499.80	0.000120845	0.002344081	32.096	9.783		
	3.627	-0.0013		3.413	0.0000			0.00							
	14.633			13.986				0.00							
			250.000			249.800									
	5.688			5.722											
TP22	4.440	4.439	36.947	4.467	4.469	32.508			500.40	0.000120990	0.002465072	32.506	9.908		
	3.188	-0.0013		3.218	0.0020			0.00							
	13.316			13.407				0.00							
			250.000			250.400									
	6.124			5.288											
TP23	4.878	4.877	37.784	4.042	4.040	32.907			499.90	0.000120870	0.002585941	32.904	10.029		
	3.629	-0.0010		2.789	-0.0023			0.00							
	14.631			12.119				0.00							
			249.500			249.900									

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	4.948				10.174										
TP24	3.695	3.697		32.554	8.925	8.927	28.857			498.70	0.000120579	0.002706521	28.854	8.795	
	2.447	0.0017			7.682	0.0020			0.00						
	11.090				26.781				0.00						
			250.100				249.200								
	3.629				5.143										
TP25	2.394	2.392		31.054	3.890	3.892	28.661			500.00	0.000120894	0.002827414	28.659	8.735	
	1.154	-0.0017			2.644	0.0023			0.00						
	7.177				11.677				0.00						
			247.500				249.900								
	4.889				4.228										
TP26	3.648	3.646		31.711	2.989	2.989	28.065			495.30	0.000119757	0.002947172	28.062	8.553	
	2.400	-0.0023			1.750	0.0000			0.00						
	10.937				8.967				0.00						
			248.900				247.800								
	4.552				5.164										
TP27	3.307	3.306		31.095	3.924	3.922	27.789			497.60	0.000120313	0.003067485	27.786	8.469	
	2.059	-0.0010			2.677	-0.0023			0.00						
	9.918				11.765				0.00						
			249.300				248.700								
	5.608				6.378										
TP28	4.363	4.360		30.324	5.128	5.131	25.964			498.30	0.000120483	0.003187968	25.961	7.913	
	3.109	-0.0030			3.888	0.0033			0.00						
	13.080				15.394				0.00						
			249.900				249.000								
	6.574				7.459										
TP29	5.320	5.323		29.433	6.213	6.214	24.110			498.90	0.000120628	0.003308596	24.107	7.348	
	4.074	0.0027			4.969	0.0007			0.00						
	15.968				18.641				0.00						
			250.000				249.000								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	7.305			6.328										
TP30	6.052	6.054	30.402	5.086	5.085	24.348			498.60	0.000120555	0.003429151	24.344	7.420	
	4.804	0.0017		3.842	-0.0007			0.00						
	18.161			15.256				0.00						
			250.100			248.600								
	5.986			5.506										
TP31	4.728	4.728	30.876	4.253	4.254	26.148			500.30	0.000120966	0.003550117	26.144	7.969	
	3.469	-0.0003		3.004	0.0013			0.00						
	14.183			12.763				0.00						
			251.700			250.200								
	6.344			5.484										
TP32	5.088	5.091	31.748	4.217	4.219	26.657			504.60	0.000122006	0.003672123	26.654	8.124	
	3.842	0.0033		2.955	0.0017			0.00						
	15.274			12.656				0.00						
			250.200			252.900								
	5.400			6.969										
TP33	4.162	4.164	30.191	5.724	5.721	26.027			500.10	0.000120918	0.003793041	26.023	7.932	
	2.930	0.0020		4.470	-0.0030			0.00						
	12.492			17.163				0.00						
			247.000			249.900								
	6.081			6.499										
TP34	4.840	4.837	29.767	5.260	5.261	24.930			494.60	0.000119588	0.003912629	24.926	7.598	
	3.591	-0.0027		4.023	0.0007			0.00						
	14.512			15.782				0.00						
			249.000			247.600								
	6.835			5.211										
TP35	5.589	5.588	31.393	3.960	3.961	25.806			499.00	0.000120652	0.004033281	25.802	7.865	
	4.340	-0.0010		2.711	0.0007			0.00						
	16.764			11.882				0.00						
			249.500			250.000								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	6.180			5.589										
TP36	4.925	4.925	31.988	4.332	4.330	27.063			501.40	0.000121232	0.004154513	27.059	8.247	
	3.670	0.0000		3.070	-0.0017			0.00						
	14.775			12.991				0.00						
			251.000			251.900								
	6.059			6.159										
TP37	4.810	4.813	31.895	4.909	4.906	27.082			501.90	0.000121353	0.004275866	27.077	8.253	
	3.570	0.0030		3.650	-0.0030			0.00						
	14.439			14.718				0.00						
			248.900			250.900								
	6.999			6.680										
TP38	5.750	5.753	32.222	5.429	5.426	26.468			499.90	0.000120870	0.004396736	26.464	8.066	
	4.511	0.0033		4.170	-0.0027			0.00						
	17.260			16.279				0.00						
			248.800			251.000								
	6.110			6.205										
TP39	4.869	4.866	32.130	4.959	4.958	27.264			498.30	0.000120483	0.004517219	27.259	8.309	
	3.620	-0.0027		3.710	-0.0010			0.00						
	14.599			14.874				0.00						
			249.000			249.500								
	6.111			6.011										
TP40	4.860	4.861	32.217	4.771	4.774	27.356			496.10	0.000119951	0.004637169	27.351	8.337	
	3.611	0.0007		3.540	0.0030			0.00						
	14.582			14.322				0.00						
			250.000			247.100								
	10.001			6.559										
TP41	8.750	8.751	35.662	5.309	5.306	26.910			500.80	0.000121087	0.004758256	26.906	8.201	
	7.501	0.0007		4.051	-0.0027			0.00						
	26.252			15.919				0.00						
			250.000			250.800								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC	
	5.925				6.394									
TP42	4.680	4.678		35.189	5.149	5.151	30.511			498.40	0.000120507	0.004878763	30.506	9.298
	3.430	-0.0017			3.910	0.0020			0.00					
	14.035				15.453				0.00					
			249.500				248.400							
	5.771				9.042									
TP43	4.520	4.517		31.914	7.791	7.792	27.398			499.50	0.000120773	0.004999536	27.393	8.349
	3.260	-0.0030			6.542	0.0007			0.00					
	13.551				23.375				0.00					
			251.100				250.000							
	7.321				6.568									
TP44	6.079	6.080		32.675	5.320	5.319	26.595			501.00	0.000121136	0.005120672	26.590	8.105
	4.840	0.0010			4.069	-0.0010			0.00					
	18.240				15.957				0.00					
			248.100				249.900							
	5.661				6.248									
TP45	4.409	4.407		32.083	5.000	4.999	27.676			498.00	0.000120410	0.005241082	27.671	8.434
	3.151	-0.0020			3.749	-0.0010			0.00					
	13.221				14.997				0.00					
			251.000				249.900							
	7.041				5.601									
TP46	5.798	5.796		33.538	4.340	4.341	27.742			503.00	0.000121619	0.005362701	27.737	8.454
	4.549	-0.0020			3.081	0.0007			0.00					
	17.388				13.022				0.00					
			249.200				252.000							
	7.360				6.502									
TP47	6.109	6.110		34.397	5.249	5.251	28.288			499.30	0.000120724	0.005483425	28.282	8.620
	4.861	0.0010			4.001	0.0017			0.00					
	18.330				15.752				0.00					
			249.900				250.100							

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	5.441			6.562										
TP48	4.190	4.187	33.263	5.321	5.321	29.076			498.20	0.000120459	0.005603884	29.071	8.861	
	2.930	-0.0030		4.079	-0.0003			0.00						
	12.561			15.962				0.00						
			251.100			248.300								
	7.088			6.251										
TP49	5.838	5.836	34.108	4.991	4.991	28.273			503.20	0.000121667	0.005725551	28.267	8.616	
	4.581	-0.0023		3.730	-0.0003			0.00						
	17.507			14.972				0.00						
			250.700			252.100								
	5.851			6.459										
TP50	4.610	4.610	33.508	5.210	5.210	28.899			500.60	0.000121039	0.005846590	28.893	8.807	
	3.370	0.0003		3.960	-0.0003			0.00						
	13.831			15.629				0.00						
			248.100			249.900								
	6.271			7.309										
TP51	5.031	5.028	32.473	6.060	6.063	27.445			496.90	0.000120144	0.005966734	27.439	8.363	
	3.781	-0.0033		4.821	0.0033			0.00						
	15.083			18.190				0.00						
			249.000			248.800								
	6.789			6.649										
TP52	5.549	5.546	32.620	5.400	5.399	27.074			499.00	0.000120652	0.006087386	27.068	8.250	
	4.301	-0.0027		4.149	-0.0007			0.00						
	16.639			16.198				0.00						
			248.800			250.000								
	5.990			5.502										
TP53	4.740	4.737	33.107	4.249	4.250	28.370			499.00	0.000120652	0.006208038	28.363	8.645	
	3.481	-0.0030		3.000	0.0013			0.00						
	14.211			12.751				0.00						
			250.900			250.200								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	6.581			4.439										
TP54	5.341	5.338	35.257	3.188	3.188	29.918			501.00	0.000121136	0.006329174	29.912	9.117	
	4.091	-0.0033		1.938	0.0003			0.00						
	16.013			9.565				0.00						
			249.000			250.100								
	6.278			5.799										
TP55	5.115	5.116	35.823	4.549	4.550	30.707			498.80	0.000120604	0.006449777	30.701	9.358	
	3.956	0.0013		3.301	0.0007			0.00						
	15.349			13.649				0.00						
			232.200			249.800								
	6.861			7.069										
TP56	5.699	5.698	35.620	5.901	5.901	29.922			465.80	0.000112625	0.006562402	29.915	9.118	
SET SFWM	4.533	-0.0013		4.733	0.0000			0.00						
BRASS	17.093			17.703				0.00						
DISK MF			232.800			233.600								
52 2008														
	5.610			6.078										
TP57	4.361	4.360	35.066	4.914	4.914	30.706			465.60	0.000112576	0.006674978	30.699	9.357	
	3.110	-0.0007		3.750	0.0000			0.00						
	13.081			14.742				0.00						
			250.000			232.800								
	5.228			6.710										
TP58	3.979	3.978	33.584	5.461	5.460	29.606			500.10	0.000120918	0.006795896	29.599	9.022	
	2.728	-0.0007		4.209	-0.0010			0.00						
	11.935			16.380				0.00						
			250.000			250.100								
	5.720			6.462										
TP59	4.471	4.471	32.844	5.211	5.211	28.373			500.20	0.000120942	0.006916838	28.366	8.646	
	3.222	0.0000		3.960	0.0000			0.00						
	13.413			15.633				0.00						
			249.800			250.200								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	6.994			7.011										
TP60	5.742	5.742	32.814	5.772	5.772	27.072			497.60	0.000120313	0.007037152	27.065	8.250	
	4.490	0.0000		4.533	0.0000			0.00						
	17.226			17.316				0.00						
			250.400			247.800								
	7.210			6.540										
TP61	5.959	5.959	33.482	5.291	5.291	27.523			500.20	0.000120942	0.007158094	27.516	8.387	
	4.708	0.0000		4.042	0.0000			0.00						
	17.877			15.873				0.00						
			250.200			249.800								
	6.698			5.792										
TP62	5.450	5.450	34.380	4.552	4.552	28.930			498.20	0.000120459	0.007278552	28.923	8.816	
	4.202	0.0000		3.312	0.0000			0.00						
	16.350			13.656				0.00						
			249.600			248.000								
	5.911			7.325										
TP63	4.652	4.652	32.957	6.075	6.075	28.305			499.60	0.000120797	0.007399349	28.298	8.625	
	3.393	0.0000		4.825	0.0000			0.00						
	13.956			18.225				0.00						
			251.800			250.000								
	6.374			5.092										
TP64	5.125	5.125	34.250	3.831	3.832	29.125			503.70	0.000121788	0.007521138	29.118	8.875	
	3.876	0.0000		2.573	0.0010			0.00						
	15.375			11.496				0.00						
			249.800			251.900								
	6.281			7.160										
TP65	5.031	5.031	33.369	5.912	5.912	28.338			499.40	0.000120749	0.007641886	28.331	8.635	
	3.781	0.0000		4.664	0.0000			0.00						
	15.093			17.736				0.00						
			250.000			249.600								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC	
	5.549				6.819									
TP66	4.299	4.299		32.098	5.571	5.570	27.799			499.90	0.000120870	0.007762756	27.792	8.471
	3.048	-0.0003			4.320	-0.0010			0.00					
	12.896				16.710				0.00					
			250.100				249.900							
	6.414				5.613									
TP67	5.159	5.158		32.894	4.362	4.362	27.736			500.30	0.000120966	0.007883722	27.728	8.452
	3.901	-0.0010			3.111	0.0000			0.00					
	15.474				13.086				0.00					
			251.300				250.200							
	6.540				7.475									
TP68	5.285	5.285		31.945	6.234	6.234	26.660			499.50	0.000120773	0.008004495	26.652	8.124
	4.030	0.0000			4.993	0.0000			0.00					
	15.855				18.702				0.00					
			251.000				248.200							
	8.910				5.740									
TP69	7.655	7.655		35.120	4.480	4.480	27.465			503.00	0.000121619	0.008126114	27.457	8.369
	6.400	0.0000			3.220	0.0000			0.00					
	22.965				13.440				0.00					
			251.000				252.000							
	6.399				5.801									
TP70	5.149	5.149		35.717	4.552	4.552	30.568			500.80	0.000121087	0.008247201	30.560	9.315
	3.899	0.0000			3.303	0.0000			0.00					
	15.447				13.656				0.00					
			250.000				249.800							
	6.719				9.997									
TP71	5.469	5.469		32.438	8.748	8.748	26.969			499.80	0.000120845	0.008368047	26.961	8.218
	4.219	0.0000			7.499	0.0000			0.00					
	16.407				26.244				0.00					
			250.000				249.800							

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	6.258				6.270										
TP72	5.017	5.017		32.436	5.019	5.019	27.419			500.20	0.000120942	0.008488989	27.411	8.355	
	3.776	0.0000			3.768	0.0000			0.00						
	15.051				15.057				0.00						
			248.200				250.200								
	6.453				6.358										
TP73	5.204	5.204		32.530	5.110	5.110	27.326			497.80	0.000120362	0.008609351	27.317	8.326	
	3.955	0.0000			3.862	0.0000			0.00						
	15.612				15.330				0.00						
			249.800				249.600								
	6.831				7.243										
TP74	5.582	5.581		32.109	6.002	6.002	26.528			497.90	0.000120386	0.008729737	26.519	8.083	
	4.331	-0.0007			4.762	0.0003			0.00						
	16.744				18.007				0.00						
			250.000				248.100								
	6.426				6.210										
TP75	5.172	5.172		32.320	4.961	4.961	27.148			499.80	0.000120845	0.008850582	27.139	8.272	
	3.918	0.0000			3.712	0.0000			0.00						
	15.516				14.883				0.00						
			250.800				249.800								
	5.976				6.449										
TP76	4.720	4.718		31.841	5.197	5.197	27.123			501.20	0.000121184	0.008971766	27.114	8.264	
	3.458	-0.0020			3.945	0.0000			0.00						
	14.154				15.591				0.00						
			251.800				250.400								
	5.462				7.219										
TP77	4.214	4.214		30.080	5.978	5.975	25.866			500.80	0.000121087	0.009092853	25.857	7.881	
	2.966	0.0000			4.729	-0.0027			0.00						
	12.642				17.926				0.00						
			249.600				249.000								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	6.609				6.335										
TP78	5.364	5.367		30.358	5.089	5.089	24.991			498.80	0.000120604	0.009213457	24.981	7.614	
	4.129	0.0033			3.843	0.0000			0.00						
	16.102				15.267				0.00						
			248.000				249.200								
	6.901				5.561										
TP79	5.645	5.646		31.682	4.322	4.322	26.036			495.80	0.000119878	0.009333335	26.027	7.933	
	4.393	0.0013			3.083	0.0000			0.00						
	16.939				12.966				0.00						
			250.800				247.800								
	5.507				6.261										
TP80	4.243	4.243		30.908	5.020	5.017	26.666			500.00	0.000120894	0.009454229	26.656	8.125	
	2.979	0.0000			3.769	-0.0033			0.00						
	12.729				15.050				0.00						
			252.800				249.200								
	5.602				6.010										
TP81	4.353	4.353		30.507	4.753	4.754	26.154			504.00	0.000121861	0.009576089	26.145	7.969	
	3.103	-0.0003			3.498	0.0007			0.00						
	13.058				14.261				0.00						
			249.900				251.200								
	6.435				7.405										
TP82	5.183	5.183		29.537	6.153	6.153	24.354			500.30	0.000120966	0.009697056	24.344	7.420	
	3.931	0.0000			4.901	0.0000			0.00						
	15.549				18.459				0.00						
			250.400				250.400								
	7.503				6.679										
TP83	6.260	6.259		30.370	5.425	5.426	24.111			501.00	0.000121136	0.009818191	24.102	7.346	
	5.015	-0.0007			4.173	0.0007			0.00						
	18.778				16.277				0.00						
			248.800				250.600								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15														
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	6.649			5.659										
TP84	5.405	5.405	31.365	4.410	4.410	25.960			498.60	0.000120555	0.009938746	25.950	7.910	
	4.161	0.0000		3.161	0.0000			0.00						
	16.215			13.230				0.00						
			248.800			249.800								
	5.408			4.900										
TP85	4.169	4.168	31.881	3.653	3.652	27.713			498.50	0.000120531	0.010059277	27.703	8.444	
	2.927	-0.0010		2.403	-0.0010			0.00						
	12.504			10.956				0.00						
			248.100			249.700								
	4.499			5.085										
TP86	3.259	3.259	31.301	3.842	3.839	28.042			497.70	0.000120338	0.010179615	28.032	8.544	
	2.019	0.0000		2.589	-0.0033			0.00						
	9.777			11.516				0.00						
			248.000			249.600								
	4.828			3.839										
TP87	3.593	3.590	32.293	2.597	2.598	28.703			496.00	0.000119927	0.010299542	28.693	8.746	
	2.350	-0.0027		1.359	0.0013			0.00						
	10.771			7.795				0.00						
			247.800			248.000								
	10.183			4.665										
TP88	8.934	8.935	37.823	3.406	3.405	28.888			499.90	0.000120870	0.010420411	28.878	8.802	
	7.688	0.0010		2.144	-0.0010			0.00						
	26.805			10.215				0.00						
			249.500			252.100								
	6.732			4.393										
TP89	5.449	5.448	40.128	3.143	3.143	34.680			499.50	0.000120773	0.010541184	34.670	10.567	
	4.163	-0.0010		1.893	0.0000			0.00						
	16.344			9.429				0.00						
			256.900			250.000								

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	6.800				16.559										
TP90	6.263	6.263		32.069	14.325	14.322	25.807			704.70	0.000170388	0.010711572	25.796	7.863	
	5.726	0.0000			12.081	-0.0033			0.00						
	18.789				42.965				0.00						
			107.400				447.800								
	5.498				4.712										
TP91	4.299	4.298		32.178	4.190	4.189	27.880			212.10	0.000051283	0.010762855	27.869	8.495	
	3.097	-0.0010			3.665	-0.0010			0.00						
	12.894				12.567				0.00						
			240.100				104.700								
	5.667				6.119										
TP92	4.423	4.420		31.674	4.925	4.924	27.254			239.20	0.000057836	0.010878744	27.243	8.304	
	3.171	-0.0027			3.727	-0.0013			0.00						
	13.261				14.771				0.00						
			249.600				239.200								
					8.058										
BM					6.797	6.798	24.876	24.865		501.50	0.000121256	0.011000000	24.865	7.579	
BM CHK					5.539	0.0010			0.00						
NGS BM					20.394				0.00						
M-522							251.900								
								LOR=		45494.50	CHECK VALUES TO VERIFY SAME				
											OR TO SEE THEY ARE WITHIN				
	TOTAL +=		22752.800				22741.700		0.00		THIRD ORDER SPECS(MAX DIFF. 33 FT.)				
							11.10								
							RAW CLOSURE=	0.011							
							ERROR PER FOOT=	0.000							
							MTS ALLOWABLE ERROR FOR THIRD ORDER=	0.088							
							ACTUAL ERROR=	0.011			RED IF BAD-----GREEN IF GOOD				

copy and insert to expand worksheet

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC			
NGS BM	6.719														
M-522	5.467	5.468	31.700				26.232								
	4.219	0.0013													
	16.405														
			250.000												
	5.984			4.348											
TP1	4.788	4.790	33.393	3.098	3.098	28.603			500.10	0.000065955	0.000065955	28.603	8.718		
	3.599	0.0023		1.847	-0.0003			0.00							
	14.371			9.293				0.00							
			238.500			250.100									
	4.649			5.362											
TP2	4.127	4.126	33.356	4.164	4.163	29.230			478.50	0.000063107	0.000129062	29.230	8.909		
	3.601	-0.0013		2.962	-0.0013			0.00							
	12.377			12.488				0.00							
			104.800			240.000									
	16.069			6.736											
TP3	13.779	13.782	40.937	6.202	6.202	27.154			211.70	0.000027920	0.000156982	27.154	8.277		
	11.499	0.0033		5.667	-0.0003			0.00							
	41.347			18.605				0.00							
			457.000			106.900									
	4.898			6.162											
TP4	3.649	3.649	39.675	4.908	4.911	36.026			707.00	0.000093242	0.000250224	36.026	10.981		
	2.399	-0.0003		3.662	0.0027			0.00							
	10.946			14.732				0.00							
			249.900			250.000									
	4.838			6.653											
TP5	3.589	3.589	37.860	5.405	5.403	34.272			500.10	0.000065955	0.000316179	34.271	10.446		
	2.339	-0.0003		4.151	-0.0020			0.00							
	10.766			16.209				0.00							
			249.900			250.200									
	5.463			5.240											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC			
TP6	4.209	4.211	38.082	3.988	3.989	33.871			500.00	0.000065942	0.000382121	33.871	10.324		
	2.961	0.0020		2.739	0.0010			0.00							
	12.633			11.967				0.00							
			250.200			250.100									
	5.908			5.868											
TP7	4.662	4.661	38.124	4.622	4.620	33.462			500.00	0.000065942	0.000448063	33.462	10.199		
	3.414	-0.0007		3.370	-0.0020			0.00							
	13.984			13.860				0.00							
			249.400			249.800									
	5.839			5.845											
TP8	4.602	4.601	38.134	4.591	4.590	33.533			500.40	0.000065995	0.000514058	33.533	10.221		
	3.362	-0.0010		3.335	-0.0007			0.00							
	13.803			13.771				0.00							
			247.700			251.000									
	6.003			5.928											
TP9	4.751	4.752	38.198	4.688	4.688	33.446			495.60	0.000065362	0.000579419	33.445	10.194		
	3.502	0.0010		3.449	0.0003			0.00							
	14.256			14.065				0.00							
			250.100			247.900									
	6.060			6.014											
TP10	4.802	4.801	38.237	4.762	4.761	33.437			500.70	0.000066034	0.000645454	33.436	10.191		
	3.540	-0.0013		3.508	-0.0007			0.00							
	14.402			14.284				0.00							
			252.000			250.600									
	6.462			5.204											
TP11	5.208	5.205	39.495	3.948	3.947	34.290			503.40	0.000066390	0.000711844	34.289	10.451		
	3.945	-0.0030		2.690	-0.0007			0.00							
	15.615			11.842				0.00							
			251.700			251.400									
	6.629			5.519											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	DATE	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
TP12	5.382	5.380		40.612	4.263	4.264	35.231			502.70	0.000066298	0.000778142	35.231	10.738	
	4.130	-0.0017			3.009	0.0007			0.00						
	16.141				12.791				0.00						
			249.900				251.000								
	4.481				6.218										
TP13	4.110	4.111		39.760	4.962	4.963	35.649			500.90	0.000066061	0.000844203	35.648	10.866	
	3.741	0.0007			3.708	0.0007			0.00						
	12.332				14.888				0.00						
			74.000				251.000								
	5.198				5.120										
TP14	4.832	4.833		39.838	4.754	4.755	35.005			147.00	0.000019387	0.000863590	35.004	10.669	
SFWMD	4.468	0.0007			4.390	0.0007			0.00						
BM M1244	14.498				14.264				0.00						
			73.000				73.000								
	6.348				4.559										
TP15	5.099	5.096		40.746	4.188	4.187	35.650			147.40	0.000019440	0.000883030	35.649	10.866	
	3.840	-0.0033			3.815	-0.0007			0.00						
	15.287				12.562				0.00						
			250.800				74.400								
	5.588				6.764										
TP16	4.333	4.334		39.566	5.512	5.514	35.232			500.60	0.000066021	0.000949051	35.231	10.738	
	3.080	0.0007			4.266	0.0020			0.00						
	13.001				16.542				0.00						
			250.800				249.800								
	5.342				6.530										
TP17	4.087	4.086		38.374	5.279	5.278	34.288			501.40	0.000066127	0.001015178	34.287	10.451	
	2.829	-0.0010			4.024	-0.0013			0.00						
	12.258				15.833				0.00						
			251.300				250.600								
	6.109				6.200										

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC
TP18	4.859	4.859		38.285	4.945	4.948		33.426			501.50	0.000066140	0.001081318	33.425	10.188
	3.608	-0.0003			3.698	0.0027				0.00					
	14.576				14.843					0.00					
			250.100				250.200								
	6.067				6.103										
TP19	4.828	4.828		38.261	4.852	4.852		33.433			500.30	0.000065982	0.001147299	33.432	10.190
	3.589	0.0000			3.601	0.0000				0.00					
	14.484				14.556					0.00					
			247.800				250.200								
	5.847				5.978										
TP20	4.599	4.598		38.120	4.740	4.739		33.522			495.70	0.000065375	0.001212674	33.521	10.217
	3.347	-0.0013			3.499	-0.0010				0.00					
	13.793				14.217					0.00					
			250.000				247.900								
	6.127				5.911										
TP21	4.879	4.878		38.335	4.662	4.662		33.458			499.80	0.000065916	0.001278590	33.456	10.198
	3.627	-0.0013			3.413	0.0000				0.00					
	14.633				13.986					0.00					
			250.000				249.800								
	5.688				5.722										
TP22	4.440	4.439		38.305	4.467	4.469		33.866			500.40	0.000065995	0.001344585	33.865	10.322
	3.188	-0.0013			3.218	0.0020				0.00					
	13.316				13.407					0.00					
			250.000				250.400								
	6.124				5.288										
TP23	4.878	4.877		39.142	4.042	4.040		34.265			499.90	0.000065929	0.001410513	34.264	10.444
	3.629	-0.0010			2.789	-0.0023				0.00					
	14.631				12.119					0.00					
			249.500				249.900								
	4.948				10.174										

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC			
TP24	3.695	3.697	33.912	8.925	8.927	30.215			498.70	0.000065771	0.001476284	30.214	9.209		
	2.447	0.0017		7.682	0.0020			0.00							
	11.090			26.781				0.00							
			250.100			249.200									
	3.629			5.143											
TP25	2.394	2.392	32.412	3.890	3.892	30.020			500.00	0.000065942	0.001542226	30.018	9.150		
	1.154	-0.0017		2.644	0.0023			0.00							
	7.177			11.677				0.00							
			247.500			249.900									
	4.889			4.228											
TP26	3.648	3.646	33.069	2.989	2.989	29.423			495.30	0.000065322	0.001607548	29.421	8.968		
	2.400	-0.0023		1.750	0.0000			0.00							
	10.937			8.967				0.00							
			248.900			247.800									
	4.552			5.164											
TP27	3.307	3.306	32.453	3.924	3.922	29.147			497.60	0.000065626	0.001673174	29.145	8.884		
	2.059	-0.0010		2.677	-0.0023			0.00							
	9.918			11.765				0.00							
			249.300			248.700									
	5.608			6.378											
TP28	4.363	4.360	31.682	5.128	5.131	27.322			498.30	0.000065718	0.001738892	27.320	8.327		
	3.109	-0.0030		3.888	0.0033			0.00							
	13.080			15.394				0.00							
			249.900			249.000									
	6.574			7.459											
TP29	5.320	5.323	30.791	6.213	6.214	25.468			498.90	0.000065797	0.001804688	25.466	7.762		
	4.074	0.0027		4.969	0.0007			0.00							
	15.968			18.641				0.00							
			250.000			249.000									
	7.305			6.328											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC
TP30	6.052	6.054		31.759	5.086	5.085		25.705			498.60	0.000065757	0.001870446	25.703	7.834
	4.804	0.0017			3.842	-0.0007				0.00					
	18.161				15.256					0.00					
			250.100					248.600							
	5.986				5.506										
TP31	4.728	4.728		32.232	4.253	4.254		27.505			500.30	0.000065982	0.001936427	27.503	8.383
	3.469	-0.0003			3.004	0.0013				0.00					
	14.183				12.763					0.00					
			251.700					250.200							
	6.344				5.484										
TP32	5.088	5.091		33.105	4.217	4.219		28.014			504.60	0.000066549	0.002002976	28.012	8.538
	3.842	0.0033			2.955	0.0017				0.00					
	15.274				12.656					0.00					
			250.200					252.900							
	5.400				6.969										
TP33	4.162	4.164		31.548	5.724	5.721		27.384			500.10	0.000065955	0.002068931	27.382	8.346
	2.930	0.0020			4.470	-0.0030				0.00					
	12.492				17.163					0.00					
			247.000					249.900							
	6.081				6.499										
TP34	4.840	4.837		31.125	5.260	5.261		26.287			494.60	0.000065230	0.002134161	26.285	8.012
	3.591	-0.0027			4.023	0.0007				0.00					
	14.512				15.782					0.00					
			249.000					247.600							
	6.835				5.211										
TP35	5.589	5.588		32.752	3.960	3.961		27.164			499.00	0.000065810	0.002199971	27.162	8.279
	4.340	-0.0010			2.711	0.0007				0.00					
	16.764				11.882					0.00					
			249.500					250.000							
	6.180				5.589										

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC
TP36	4.925	4.925		33.347	4.332	4.330		28.422			501.40	0.000066127	0.002266098	28.419	8.662
	3.670	0.0000			3.070	-0.0017				0.00					
	14.775				12.991					0.00					
			251.000				251.900								
	6.059				6.159										
TP37	4.810	4.813		33.254	4.909	4.906		28.441			501.90	0.000066193	0.002332291	28.438	8.668
	3.570	0.0030			3.650	-0.0030				0.00					
	14.439				14.718					0.00					
			248.900				250.900								
	6.999				6.680										
TP38	5.750	5.753		33.581	5.429	5.426		27.827			499.90	0.000065929	0.002398220	27.825	8.481
	4.511	0.0033			4.170	-0.0027				0.00					
	17.260				16.279					0.00					
			248.800				251.000								
	6.110				6.205										
TP39	4.869	4.866		33.489	4.959	4.958		28.623			498.30	0.000065718	0.002463937	28.620	8.723
	3.620	-0.0027			3.710	-0.0010				0.00					
	14.599				14.874					0.00					
			249.000				249.500								
	6.111				6.011										
TP40	4.860	4.861		33.576	4.771	4.774		28.715			496.10	0.000065428	0.002529365	28.712	8.752
	3.611	0.0007			3.540	0.0030				0.00					
	14.582				14.322					0.00					
			250.000				247.100								
	10.001				6.559										
TP41	8.750	8.751		37.020	5.309	5.306		28.269			500.80	0.000066048	0.002595413	28.267	8.616
	7.501	0.0007			4.051	-0.0027				0.00					
	26.252				15.919					0.00					
			250.000				250.800								
	5.925				6.394										

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15																
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC	
TP42	4.680	4.678		36.547	5.149	5.151		31.869				498.40	0.000065731	0.002661144	31.866	9.713
	3.430	-0.0017			3.910	0.0020				0.00						
	14.035				15.453					0.00						
			249.500					248.400								
	5.771				9.042											
TP43	4.520	4.517		33.273	7.791	7.792		28.756				499.50	0.000065876	0.002727020	28.753	8.764
	3.260	-0.0030			6.542	0.0007				0.00						
	13.551				23.375					0.00						
			251.100					250.000								
	7.321				6.568											
TP44	6.079	6.080		34.034	5.320	5.319		27.954				501.00	0.000066074	0.002793094	27.951	8.519
	4.840	0.0010			4.069	-0.0010				0.00						
	18.240				15.957					0.00						
			248.100					249.900								
	5.661				6.248											
TP45	4.409	4.407		33.442	5.000	4.999		29.035				498.00	0.000065678	0.002858772	29.032	8.849
	3.151	-0.0020			3.749	-0.0010				0.00						
	13.221				14.997					0.00						
			251.000					249.900								
	7.041				5.601											
TP46	5.798	5.796		34.897	4.340	4.341		29.101				503.00	0.000066338	0.002925110	29.098	8.869
	4.549	-0.0020			3.081	0.0007				0.00						
	17.388				13.022					0.00						
			249.200					252.000								
	7.360				6.502											
TP47	6.109	6.110		35.756	5.249	5.251		29.646				499.30	0.000065850	0.002990959	29.643	9.035
	4.861	0.0010			4.001	0.0017				0.00						
	18.330				15.752					0.00						
			249.900					250.100								
	5.441				6.562											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC			
TP48	4.190	4.187	34.623	5.321	5.321	30.436			498.20	0.000065705	0.003056664	30.433	9.276		
	2.930	-0.0030		4.079	-0.0003			0.00							
	12.561			15.962				0.00							
			251.100			248.300									
	7.088			6.251											
TP49	5.838	5.836	35.468	4.991	4.991	29.632			503.20	0.000066364	0.003123028	29.629	9.031		
	4.581	-0.0023		3.730	-0.0003			0.00							
	17.507			14.972				0.00							
			250.700			252.100									
	5.851			6.459											
TP50	4.610	4.610	34.868	5.210	5.210	30.258			500.60	0.000066021	0.003189049	30.255	9.222		
	3.370	0.0003		3.960	-0.0003			0.00							
	13.831			15.629				0.00							
			248.100			249.900									
	6.271			7.309											
TP51	5.031	5.028	33.833	6.060	6.063	28.805			496.90	0.000065533	0.003254582	28.802	8.779		
	3.781	-0.0033		4.821	0.0033			0.00							
	15.083			18.190				0.00							
			249.000			248.800									
	6.789			6.649											
TP52	5.549	5.546	33.980	5.400	5.399	28.433			499.00	0.000065810	0.003320393	28.430	8.665		
	4.301	-0.0027		4.149	-0.0007			0.00							
	16.639			16.198				0.00							
			248.800			250.000									
	5.990			5.502											
TP53	4.740	4.737	34.466	4.249	4.250	29.729			499.00	0.000065810	0.003386203	29.726	9.060		
	3.481	-0.0030		3.000	0.0013			0.00							
	14.211			12.751				0.00							
			250.900			250.200									
	6.581			4.439											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15																
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC	
TP54	5.341	5.338		36.616	3.188	3.188		31.278				501.00	0.000066074	0.003452277	31.275	9.533
	4.091	-0.0033			1.938	0.0003				0.00						
	16.013				9.565					0.00						
			249.000					250.100								
	6.278				5.799											
TP55	5.115	5.116		37.182	4.549	4.550		32.066				498.80	0.000065784	0.003518060	32.062	9.773
	3.956	0.0013			3.301	0.0007				0.00						
	15.349				13.649					0.00						
			232.200					249.800								
	6.861				7.069											
TP56	5.699	5.698		36.979	5.901	5.901		31.281				465.80	0.000061432	0.003579492	31.278	9.533
SET SFWM	4.533	-0.0013			4.733	0.0000				0.00						
BRASS	17.093				17.703					0.00						
DISK MF			232.800					233.600								
52 2008																
	5.610				6.078											
TP57	4.361	4.360		36.425	4.914	4.914		32.065				465.60	0.000061405	0.003640897	32.061	9.772
	3.110	-0.0007			3.750	0.0000				0.00						
	13.081				14.742					0.00						
			250.000					232.800								
	5.228				6.710											
TP58	3.979	3.978		34.944	5.461	5.460		30.965				500.10	0.000065955	0.003706852	30.962	9.437
	2.728	-0.0007			4.209	-0.0010				0.00						
	11.935				16.380					0.00						
			250.000					250.100								
	5.720				6.462											
TP59	4.471	4.471		34.204	5.211	5.211		29.733				500.20	0.000065968	0.003772821	29.729	9.061
	3.222	0.0000			3.960	0.0000				0.00						
	13.413				15.633					0.00						
			249.800					250.200								
	6.994				7.011											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15																
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC	
TP60	5.742	5.742		34.174	5.772	5.772		28.432				497.60	0.000065626	0.003838446	28.428	8.665
	4.490	0.0000			4.533	0.0000				0.00						
	17.226				17.316					0.00						
			250.400					247.800								
	7.210				6.540											
TP61	5.959	5.959		34.842	5.291	5.291		28.883				500.20	0.000065968	0.003904415	28.879	8.802
	4.708	0.0000			4.042	0.0000				0.00						
	17.877				15.873					0.00						
			250.200					249.800								
	6.698				5.792											
TP62	5.450	5.450		35.740	4.552	4.552		30.290				498.20	0.000065705	0.003970119	30.286	9.231
	4.202	0.0000			3.312	0.0000				0.00						
	16.350				13.656					0.00						
			249.600					248.000								
	5.911				7.325											
TP63	4.652	4.652		34.317	6.075	6.075		29.665				499.60	0.000065889	0.004036009	29.661	9.041
	3.393	0.0000			4.825	0.0000				0.00						
	13.956				18.225					0.00						
			251.800					250.000								
	6.374				5.092											
TP64	5.125	5.125		35.610	3.831	3.832		30.485				503.70	0.000066430	0.004102439	30.481	9.290
	3.876	0.0000			2.573	0.0010				0.00						
	15.375				11.496					0.00						
			249.800					251.900								
	6.281				7.160											
TP65	5.031	5.031		34.729	5.912	5.912		29.698				499.40	0.000065863	0.004168302	29.693	9.051
	3.781	0.0000			4.664	0.0000				0.00						
	15.093				17.736					0.00						
			250.000					249.600								
	5.549				6.819											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15																
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC	
TP66	4.299	4.299		33.457	5.571	5.570		29.159				499.90	0.000065929	0.004234231	29.154	8.886
	3.048	-0.0003			4.320	-0.0010				0.00						
	12.896				16.710					0.00						
			250.100					249.900								
	6.414				5.613											
TP67	5.159	5.158		34.253	4.362	4.362		29.095				500.30	0.000065982	0.004300212	29.091	8.867
	3.901	-0.0010			3.111	0.0000				0.00						
	15.474				13.086					0.00						
			251.300					250.200								
	6.540				7.475											
TP68	5.285	5.285		33.304	6.234	6.234		28.019				499.50	0.000065876	0.004366088	28.015	8.539
	4.030	0.0000			4.993	0.0000				0.00						
	15.855				18.702					0.00						
			251.000					248.200								
	8.910				5.740											
TP69	7.655	7.655		36.479	4.480	4.480		28.824				503.00	0.000066338	0.004432426	28.820	8.784
	6.400	0.0000			3.220	0.0000				0.00						
	22.965				13.440					0.00						
			251.000					252.000								
	6.399				5.801											
TP70	5.149	5.149		37.076	4.552	4.552		31.927				500.80	0.000066048	0.004498473	31.923	9.730
	3.899	0.0000			3.303	0.0000				0.00						
	15.447				13.656					0.00						
			250.000					249.800								
	6.719				9.997											
TP71	5.469	5.469		33.797	8.748	8.748		28.328				499.80	0.000065916	0.004564389	28.324	8.633
	4.219	0.0000			7.499	0.0000				0.00						
	16.407				26.244					0.00						
			250.000					249.800								
	6.258				6.270											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15															
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC
TP72	5.017	5.017		33.795	5.019	5.019		28.778			500.20	0.000065968	0.004630358	28.774	8.770
	3.776	0.0000			3.768	0.0000				0.00					
	15.051				15.057					0.00					
			248.200				250.200								
	6.453				6.358										
TP73	5.204	5.204		33.889	5.110	5.110		28.685			497.80	0.000065652	0.004696009	28.681	8.742
	3.955	0.0000			3.862	0.0000				0.00					
	15.612				15.330					0.00					
			249.800				249.600								
	6.831				7.243										
TP74	5.582	5.581		33.468	6.002	6.002		27.887			497.90	0.000065665	0.004761674	27.882	8.499
	4.331	-0.0007			4.762	0.0003				0.00					
	16.744				18.007					0.00					
			250.000				248.100								
	6.426				6.210										
TP75	5.172	5.172		33.679	4.961	4.961		28.507			499.80	0.000065916	0.004827590	28.503	8.688
	3.918	0.0000			3.712	0.0000				0.00					
	15.516				14.883					0.00					
			250.800				249.800								
	5.976				6.449										
TP76	4.720	4.718		33.200	5.197	5.197		28.482			501.20	0.000066100	0.004893690	28.477	8.680
	3.458	-0.0020			3.945	0.0000				0.00					
	14.154				15.591					0.00					
			251.800				250.400								
	5.462				7.219										
TP77	4.214	4.214		31.439	5.978	5.975		27.225			500.80	0.000066048	0.004959738	27.220	8.297
	2.966	0.0000			4.729	-0.0027				0.00					
	12.642				17.926					0.00					
			249.600				249.000								
	6.609				6.335										

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15																
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC	
TP78	5.364	5.367		31.717	5.089	5.089		26.350				498.80	0.000065784	0.005025522	26.345	8.030
	4.129	0.0033			3.843	0.0000				0.00						
	16.102				15.267					0.00						
			248.000					249.200								
	6.901				5.561											
TP79	5.645	5.646		33.042	4.322	4.322		27.395				495.80	0.000065388	0.005090910	27.390	8.349
	4.393	0.0013			3.083	0.0000				0.00						
	16.939				12.966					0.00						
			250.800					247.800								
	5.507				6.261											
TP80	4.243	4.243		32.268	5.020	5.017		28.025				500.00	0.000065942	0.005156852	28.020	8.540
	2.979	0.0000			3.769	-0.0033				0.00						
	12.729				15.050					0.00						
			252.800					249.200								
	5.602				6.010											
TP81	4.353	4.353		31.867	4.753	4.754		27.514				504.00	0.000066470	0.005223322	27.509	8.385
	3.103	-0.0003			3.498	0.0007				0.00						
	13.058				14.261					0.00						
			249.900					251.200								
	6.435				7.405											
TP82	5.183	5.183		30.897	6.153	6.153		25.714				500.30	0.000065982	0.005289303	25.709	7.836
	3.931	0.0000			4.901	0.0000				0.00						
	15.549				18.459					0.00						
			250.400					250.400								
	7.503				6.679											
TP83	6.260	6.259		31.731	5.425	5.426		25.471				501.00	0.000066074	0.005355377	25.466	7.762
	5.015	-0.0007			4.173	0.0007				0.00						
	18.778				16.277					0.00						
			248.800					250.600								
	6.649				5.659											

7050.06 PARTY CHIEF D. FERELS DATE 12-26-07-01-08-08 NAVD 1988 F.B. 287 PGS. 2-15																
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC	
TP84	5.405	5.405		32.726	4.410	4.410		27.321				498.60	0.000065757	0.005421134	27.315	8.326
	4.161	0.0000			3.161	0.0000					0.00					
	16.215				13.230						0.00					
			248.800					249.800								
	5.408				4.900											
TP85	4.169	4.168		33.242	3.653	3.652		29.074				498.50	0.000065744	0.005486879	29.068	8.860
	2.927	-0.0010			2.403	-0.0010					0.00					
	12.504				10.956						0.00					
			248.100					249.700								
	4.499				5.085											
TP86	3.259	3.259		32.662	3.842	3.839		29.403				497.70	0.000065639	0.005552517	29.397	8.960
	2.019	0.0000			2.589	-0.0033					0.00					
	9.777				11.516						0.00					
			248.000					249.600								
	4.828				3.839											
TP87	3.593	3.590		33.654	2.597	2.598		30.064				496.00	0.000065415	0.005617932	30.058	9.162
	2.350	-0.0027			1.359	0.0013					0.00					
	10.771				7.795						0.00					
			247.800					248.000								
	10.183				4.665											
TP88	8.934	8.935		39.184	3.406	3.405		30.249				499.90	0.000065929	0.005683861	30.243	9.218
	7.688	0.0010			2.144	-0.0010					0.00					
	26.805				10.215						0.00					
			249.500					252.100								
	6.732				4.393											
TP89	5.449	5.448		41.489	3.143	3.143		36.041				499.50	0.000065876	0.005749737	36.035	10.984
	4.163	-0.0010			1.893	0.0000					0.00					
	16.344				9.429						0.00					
			256.900					250.000								
	6.800				16.559											

7050.06 PARTY CHIEF		D. FERELS	DATE	12-26-07-01-08-08				NAVD 1988	F.B. 287	PGS. 2-15					
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC
TP90	6.263	6.263		33.430	14.325	14.322		27.167			704.70	0.000092939	0.005842675	27.161	8.279
	5.726	0.0000			12.081	-0.0033				0.00					
	18.789				42.965					0.00					
			107.400				447.800								
	5.498				4.712										
TP91	4.299	4.298		33.539	4.190	4.189		29.241			212.10	0.000027973	0.005870648	29.235	8.911
	3.097	-0.0010			3.665	-0.0010				0.00					
	12.894				12.567					0.00					
			240.100				104.700								

7050.06 PARTY CHIEF		D. FERELS		DATE		12-26-07-01-08-08		NAVD 1988		F.B. 287		PGS. 2-15			
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC

7050.06 PARTY CHIEF		D. FERELS		DATE		12-26-07-01-08-08		NAVD 1988		F.B. 287		PGS. 2-15			
STATION	3 WIRE	AVG.(ENG)		HI	3 WIRE	AVG.(ENG)		ELEV.	BM EL.	DIST.		ERROR	ACCUM.	ADJ. EL.	METRIC

7050.06 PARTY CHIEF		D. FERELS		DATE		12-26-07-01-08-08		NAVD 1988			F.B. 287		PGS. 2-15	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. EL.	METRIC		
	5.667			6.119										
TP92	4.423	4.420	33.036	4.925	4.924	28.616			239.20	0.000031547	0.005933860	28.610	8.720	
	3.171	-0.0027		3.727	-0.0013			0.00						
	13.261			14.771				0.00						
			249.600			239.200								
				8.058										
BM				6.797	6.798	26.238	26.232		501.50	0.000066140	0.006000000	26.232	7.996	
BM CHK				5.539	0.0010			0.00						
NGS BM				20.394				0.00						
M-522						251.900								
							LOR=		45494.50	CHECK VALUES TO VERIFY SAME OR TO SEE THEY ARE WITHIN THIRD ORDER SPECS(MAX DIFF. 33 FT.)				
	TOTAL +=		22752.800			22741.700		0.00						
						11.10								
						RAW CLOSURE=	0.006							
						ERROR PER FOOT=	0.000							
						MTS ALLOWABLE ERROR FOR THIRD ORDER=	0.088							
						ACTUAL ERROR=	0.006			RED IF BAD-----GREEN IF GOOD				

copy and insert to expand worksheet