



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

U.S.G.S. Station Name: G-2264	U.S.G.S. Station Number: 260342080115902	Agency: SFWM D	Date of Field Work: 09/19/19
Party Chief: T. AVERY	Field Book: SFWM D #1	Page(s): 17-21	Report Prepared by: DEWBERRY

SITE SPECIFIC DATA

Site Benchmark: G-2264	Benchmark Elevation(s) (NAVD88): 3.49 feet	Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) + 1.60 feet
Well Reference Elevation (NAVD88): 3.27'	Ground Elevation (NAVD88): 3.19'	Pad Elevation (NAVD88): N/A

GEOGRAPHIC DATA

Section 36	Township 50 SOUTH	Range 41 EAST
Well Latitude: 26°03'42.08"N	Well Longitude: 80°11'59.18"W	Location Source: AVERAGED FPRN & TRIMBLE VRSNOW RTK
State Plane Coordinates:	Northing (Y) = 628918'	Easting (X) = 918869'

Notes: NAVD88 – North American Vertical Datum of 1988; NGVD29- National Geodetic Vertical Datum of 1929; **Corpscon 6.0.1** - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL.

PICTURES

Benchmark "G-2264"
 Latitude: 26°03'40.7"
 Longitude: 80°11'59.4"
 NAVD88 EL = 3.49 FEET

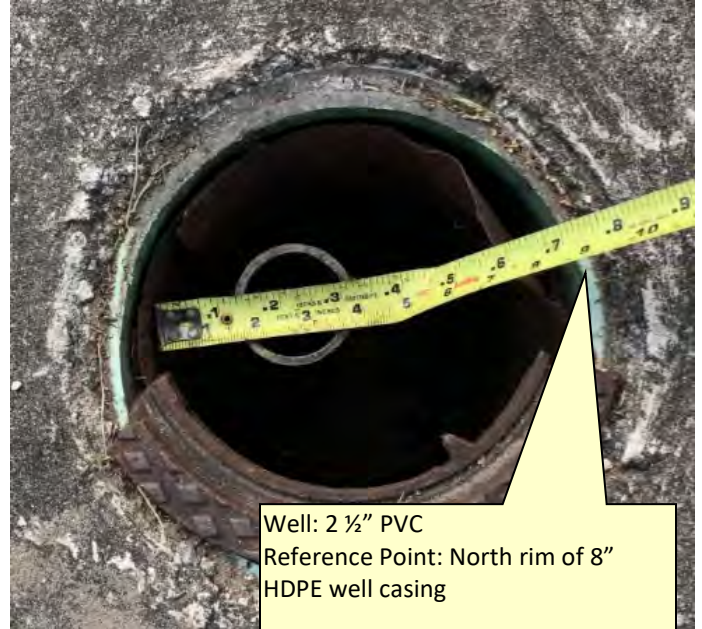
Not to scale (GoogleEarth product)



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Well Site and Well Head



Well: 2 1/2" PVC
Reference Point: North rim of 8" HDPE well casing
Reference Point El. = **3.27 feet NAVD88**
Distance to water = -2.82 feet from reference point (09/19/19 at 05:45 PM)



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New Aluminum Tag





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USGS RMs

RM 1 – Nail and disc in concrete slab



Latitude: 26° 03' 42.07"
Longitude: 80° 11' 59.17"
NAVD88 EL = 3.23 FEET

RM 3 – Nail and in concrete curb



Latitude: 26° 03' 42.11"
Longitude: 80° 11' 59.39"
NAVD88 EL = 3.93 FEET



Well G-2264

RM 2 – Nail and disc in concrete sidewalk



Latitude: 26° 03' 42.33"
Longitude: 80° 11' 59.12"
NAVD88 EL = 3.40 FEET



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Site Benchmark



Site BM: G2264



Latitude: 26°03'40.7"
Longitude: 80°11'59.4"
NAVD88 EL = 3.49 FEET



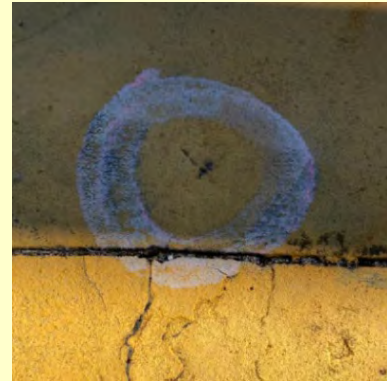
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Source Benchmarks



County Benchmark "1802"



Latitude: 26°03'45.14"
Longitude: 80°11'32.9"
NAVD88 EL = 7.58 FEET



County Benchmark "2685"



Latitude: 26°03'43.6"
Longitude: 80°11'03.3"
NAVD88 EL = 3.66 FEET



South Florida Water Management District Benchmark Datasheet

Designation: <u>G-2264</u>	Project Name: <u>USGS Ph 2, BROWARD</u>	Type: <u>V</u>	State Plane Zone: <u>FL East</u>
Stamping: <u>G2264 2019</u>	Field Book Name: <u>W 212 & N/A</u>	Field Book Page: <u>67 & N/A</u>	
Established By: <u>DEWBERRY / WHIDDEN</u>	Recovered By: <u>N/A</u>	Recovery Date: <u>N/A</u>	
Surveyor: <u>WILLIAM D. DONLEY</u>	Established Date: <u>10/11/2019 & 11/25/19</u>	Status: <u>New</u>	

GEOGRAPHIC POSITION INFORMATION

Section: <u>36</u>	Township: <u>50 SOUTH</u>	Range: <u>41 EAST</u>
County: <u>BROWARD</u>	Quadrangle: <u>FORT LAUDERDALE SOUTH</u>	Quad Index: <u>1702</u>
NAD83 Adj. Year: <u>2011</u>	Vertical Datum: <u>NAVD1988</u>	Horizontal Datum: <u>NAD1983</u>
NGVD88 Elevation (feet): <u>3.49</u>	NGVD29 Elevation (feet): <u>5.09</u>	2022 Elevation: <u>N/A</u>
NAVD88 Class: <u>N/A</u>	NGVD29 Class: <u>N/A</u>	Other Elevation: <u>N/A</u>
NAVD88 Order: <u>3</u>	NGVD29 Order: <u>N/A</u>	Other Elevation Type: <u>N/A</u>

CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): (A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL.)

Vertical Datum Offset: + <u>1.60</u>	Actual NGS Elevation or ngvd29.txt file: <u>N/A</u>	OPUS Ortho Height: <u>N/A</u>
Northing (Y) (feet): <u>628777.5</u>	Easting (X) (feet): <u>918850.3</u>	Source of Latitude & Longitude: <u>AVERAGED FPRN & TRIMBLE VRSNOW RTK</u>
Latitude: <u>26</u> DD°	<u>3</u> MM'	<u>40.69</u> SS"
Longitude: <u>80</u> DD°	<u>11</u> MM'	<u>59.4</u> SS"
Latitude (Decimal Degrees): <u>26.061303</u>	Longitude (Decimal Degrees): <u>-80.199833</u>	

RECOVERY DATA

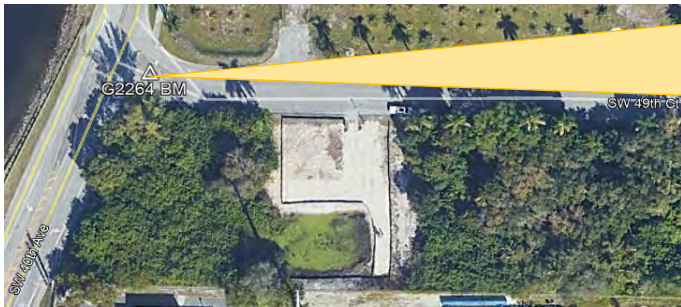
How to Reach: **1. FROM FL-7, HEAD EASTERLY ON SW 49TH CT FOR 0.45 MI**
2. TURN LEFT ON SW 40TH AVE, CONTINUE 369 FEET TO THE MARK ON THE RIGHT

Description/Notes: **2" ALUMINUM SFWMD DISK SET IN CURB OF CONCRETE TURN BARRIER**
***NO NGS BENCHMARKS WERE UTILIZED.**

Notable Landmarks:
 Other Source Benchmarks: **COUNTY BM "2685"**

PICTURES

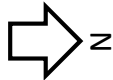
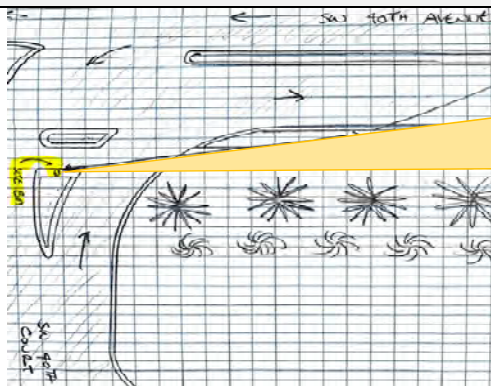
Aerial View of Overall Site



NOT TO SCALE. AERIAL FROM GOOGLE EARTH.

PICTURES

Site Sketch





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County Benchmark "1802"

Office

Project

15 November 2019

INPUT

Geographic, NAD83
Vertical - NGVD29 (Vertcon94), U.S. Feet

OUTPUT

State Plane, NAD83
0901 - Florida East, U.S. Feet
Vertical - NAVD88, U.S. Feet

Broward Co. BM 1802

1/1

Latitude: 26.062539
Longitude: 80.192472
Elevation/Z: 9.176

Northing/Y: 629241.598
Easting/X: 921264.244
Elevation/Z: 7.575
Convergence: 0 21 17.30971
Scale Factor: 1.000021761
Combined Factor: 1.000025389

Bench Mark Number: 1802

Section-Township-Range: 31-50-42

Elevation: 9.176

Description: X-CUT 2' EAST OF THE EAST BULLNOSE IN THE CENTERLINE OF STIRLING ROAD AND SOUTHWEST 35 AVE. 55' + OR - NORTHEAST OF POWER POLE # 34B8. B.M. FOUND 4-11-2000 FOUND GOOD 1-31-06

NGVD 29 Elevations acquired from
Broward County Highway
Construction and Engineering Division



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County Benchmark "2685"

Office

Project

17 October 2019

INPUT

State Plane, NAD83
0901 - Florida East, U.S. Feet
Vertical - NGVD29 (Vertcon94), U.S. Feet

OUTPUT

State Plane, NAD83
0901 - Florida East, U.S. Feet
Vertical - NAVD88, U.S. Feet

BM2685

1/1

Northing/Y: 629104.772

Easting/X: 923961.789

Elevation/Z: 5.26

Convergence: 0 21 30.28400

Scale Factor: 1.000023409

Combined Factor: 1.000027153

Northing/Y: 629104.772

Easting/X: 923961.789

Elevation/Z: 3.659

Convergence: 0 21 30.28400

Scale Factor: 1.000023409

Combined Factor: 1.000027229

Grid Shift (U.S. ft.): X/Easting = 0.0, Y/Northing = 0.0

Bench Mark Number: 2685

Section-Township-Range: 31-50-42

Elevation: 5.26

Description: BROWARD COUNTY NEAR FT. LAUDERDALE - CANAL CROSSING GRIFFIN ROAD AT SOUTHWEST 31 AVENUE. "SQUARE" CUT ON SOUTH HEADWALL. B.M. FOUND 4-13-2000 FOUND GOOD 1-31-06

NGVD 29 Elevations acquired from Broward County Highway Construction and Engineering Division



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Dewberry Field Notes (1 of 5)

SANTA FE CO	S.F.W.M.D	09/18/19
5/4' (River)	USGS WELLS & BMS	
TRIMBLE MGT	JOB # 50099999	
	WELL SITE # G-225A	

TASKS - DETERMINE HORIZONTAL LOCATIONS ON REFERENCE MONUMENT STATIONS @ WELL GAINING @ SITE.

- MEASURE & RECORD W/L (WATER LEVEL) @ SITE

		STATION				
PT #	(N) (E) (C) (S)	PT #	DESCR (PT)	CHG IN	CHG OUT	
5/0	E 0.005 - 0.073	5006	CHK IN	3.00		
5/0	B 0.073 - 0.058	5007	CHK OUT	"	"	

PT #	DESCRIPTION	NEW PT #
12006	RM1 HAND REC USGS SURVEY MARK	12021
12007	RM2 HAND REC USGS SURVEY MARK	12024
12008	RM3 HAND REC USGS SURVEY MARK	12025
12009	NW CORNER OF CONC SLAB	-
12010	NE CORNER OF CONC SLAB	-
12011	SW CORNER OF CONC SLAB	-
12012	SE CORNER OF CONC SLAB	-
12013	WELL CASING OPENING (HOLE) (MP)	12023
12014	PEE WLGST @ WELL CASING (PK)	12023

W/L RECORDING WAS TAKEN @ APPROX. 5:45 PM

READING 2.82' FROM MP (MEASURING POINT)



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Dewberry Field Notes (2 of 5)

Tolson SFWMD 08/19/19
 AFGZ USGS Wells & Bms
 S/N 1439 Job # S09999
 Well site # G0064

TASK: ELEVATE REFERENCE (UMENTATION),
 MEASURING POINT, CONC. SLAB AROUND
 WELL CASING, & GROUND SURF N. OF CASING.

ELEVATION	DESCRIPTION
4.215 3.49 (Whitten)	MARKER DISC - FLYING TO OF SW 90TH AVENUE S

BACK SIGHT (+)	FORESIGHT (-)	ADJ		
READINGS	MEAN ELEV	READINGS	MEAN ELEV	ELEV
4.925	4.515			
Bm 4.555	4.550	4.215	4.215	4.215 3.877
4.14	2.047	3.915		3.832
88 5/8 5'	60 1/4 5'			

Bm	4.555	4.725	4.725	4.725	4.725 3.322
		4.44			
		57 1/4 5'			

Bm	4.555	4.775	4.775	4.775	4.775 3.272
		4.485			
		58 1/4 5'			

Bm	4.555	4.93	4.930	4.930	4.930 3.117
		4.64			
		58 1/4 5'			

N: T AVERY
 K: J HUIE
 09/23/19

CHECK-IN / CHECK OUT	COPIES (B) (M)	S/N: 1165			
PT #	(W)	(E)	(E)	PT#	DESCR.
S/O 8	0.076'	-0.002	F.O. 105	S/O 8	CHEPT 8
* LOCATED PT'S USING PT# 5 12021-12025					
S/O 8	0.077	-0.007	C.O. 184	S/O 8	CHEPT 8
* RESULT DUE TO COLLECTOR BEING STOLEN					

TOP OF CURB IN CURB ISLAND @ INTERSECTION
 SW 90TH COURT & SW 90TH AVE

FORESIGHT (-)
 DESCRIPTIONS
 RM3 - REC NAIL & DISC, STAMPED "USGS SURVEY
 MARKER RM-3", LOCATED IN TOP OF CURB, WEST
 OF WELL ENCLOSURE, IN MEDIAN OF SW 90TH AVENUE

RM2 - REC NAIL & DISC, STAMPED "USGS SURVEY
 MARKER RM-2", LOCATED IN SE CORNER OF
 CONC SLAB AROUND WELL CASING

MP (NORTH RIM OF HDPE WELL CASING) (8" HDPE)

NORTH EDGE OF INTERIOR PIPE, PVC

* CONTINUE LEVELING ON NEXT PG (10)



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Dewberry Field Notes (3 of 5)

STATION		BACKSIGHT (+)		FORESIGHT (-)		MID	ELEV
STATION	READING	MEAN	ELEV	READING	MEAN	ELEV	ELEV
<p> STATION SFWM D 09/19/19 </p> <p> AT-GZ USGS WELL E BMS </p> <p> SL: 1432 JOB # 5009999 </p> <p> TASK: CONTINUE ELEVATING POINTS WELL SITE # G 2264 </p>							
Bm	4.5567	4.765	4.7667	99.7900			4.5567
	"	8.047	4.975				3.280
		58.5' / 142'					
Bm	4.5567	4.695	4.6967	99.8600			4.5567
	"	4.405					3.350
		58.5' / 142'					
Bm	4.5567	4.735	4.7350	99.8800			4.5567
	"	4.45					3.312
		57' / 140.5'					
Bm	4.5567	4.79	4.7900	99.7600			4.5567
	"	4.505					3.257
		57' / 140.5'					
Bm	4.5567	4.85	4.8483	99.7000			4.5567
	"	4.555					3.192
		58.5' / 142'					

N: T. AVERY

K: J. NUZZI

Pg. 19

FORESIGHT (-)

DESCRIPTIONS

SW CORNER OF CONC SLAB AROUND WELL CASING

NE CORNER OF CONC. SLAB AROUND WELL CASING

SE CORNER OF CONC. SLAB AROUND WELL CASING

SW CORNER OF CONC SLAB AROUND WELL CASING

GROUND SHOT (NORTH OF CONCRETE SLAB AROUND WELL CASING)



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Dewberry Field Notes (4 of 5)

BLK 2	S. F. W. M. D.	09/19/19	
AT-CR	USGS WELL C. BM2		
SPILLER	JOB # S049994		
	WELL SITE # G2264		
TASK: CONTINUE ELEVATING POINTS			
	BACKSIGHT (+)	FORESIGHT (-)	ADJ
STA ID	READING	MEAN ELEV	READING MEAN ELEV ELEV
		5.105	
Bm	11.5567	4.62	9.6883 99.866 11.5567
	8.047	4.27	3.359
		83.5/16.7'	
* BREAK SETUP			
	4.77	4.64	
RM2	4.35	4.3533	11.5567 9.225 4.2233 99.866 11.5567
	3.94	7.0517	2.805 3.489
	83.5/25.0	7.712	83.5/33.5'
* END LEVELING			

N. T. AVERY
K. J. HUFFE 8.00

FORESIGHT
DESCRIPTION

RM2, REC NAIL & DISC, STAMPED "USGS SURVEY MARKER RM2", LOCATED IN SIDEWALK NORTH OF WELL SITE ON EASTERLY R/W OF SW 40TH AVE.

BACK @ STARTING POINT (SITE BENCH MARK)

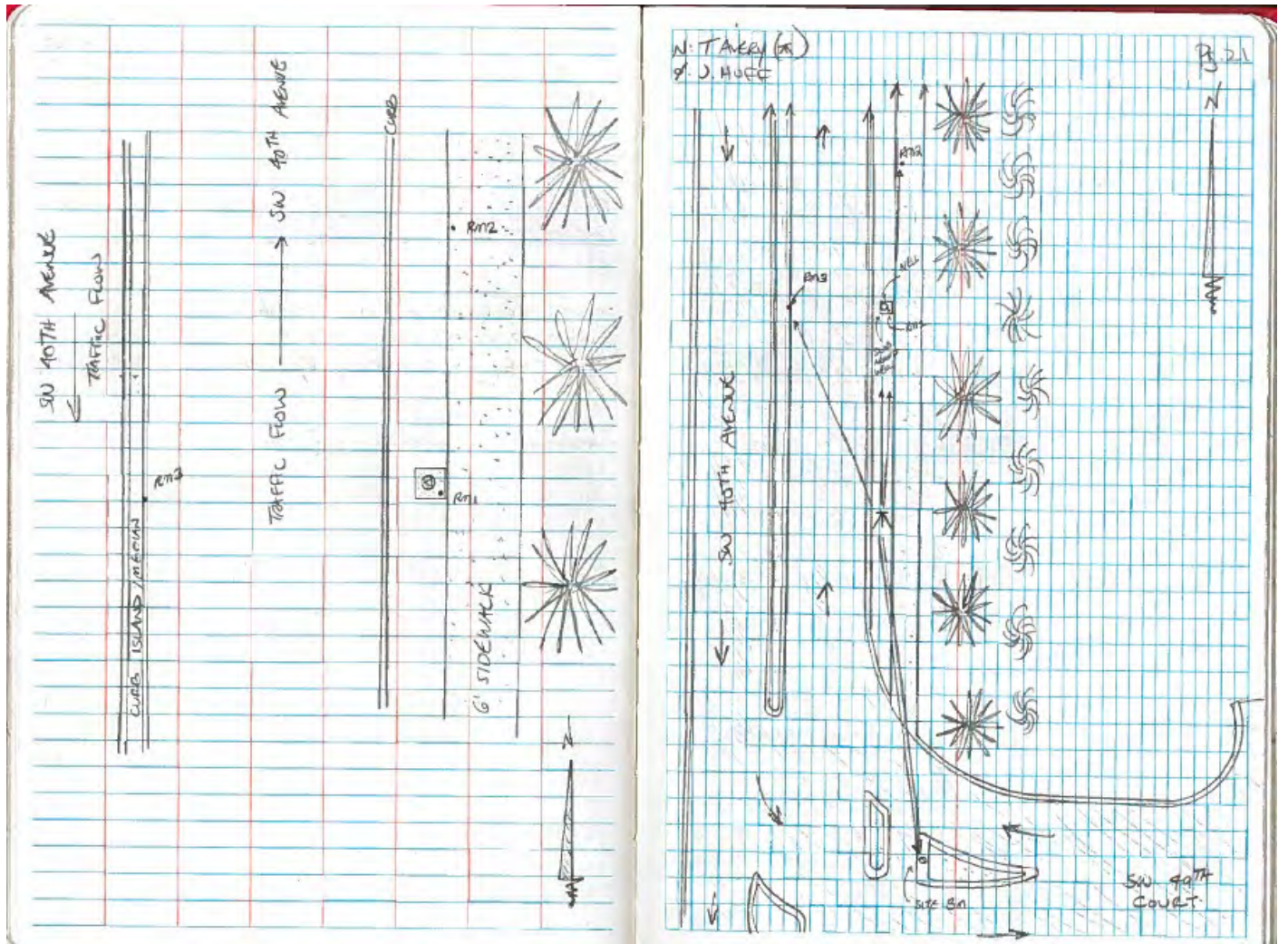
Check In = -0.001'



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Dewberry Field Notes (5 of 5)





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Whidden Field Notes (1 of 4)

SIT#	F	H/I	-	EL.
BM2665				5.26
	5.997	10.787		580.82 cut
TP1			5.023	5.724
	4.994	10.708		
TP2			4.693	5.015
	5.257	11.272		
TP3			5.884	5.1088
	5.611	11.500		
TP4			5.244	5.103
	5.293	10.797		
TP5			4.347	6.357
	5.132	11.505		
TP6			5.795	4.700
	5.520	11.228		

SIT#	F	H/I	-	EL.
TP7			5.22	6.008
	5.769	11.647		
TP8			5.871	6.073
	5.137	11.770		
TP9			4.783	6.407
	5.560	12.055		
TP10			5.958	6.120
	5.109	11.260		
TP11			5.909	6.740
	5.118	10.551		
TP12			5.441	5.113
	5.712	10.595		
GALCH (TP1)			5.605	5.085 (orig)



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Whidden Field Notes (2 of 4)

STA	#	HI	-	FL
	5.693	10.782		
TP 14			5.097	5.695
	5.690	11.375		
TP 15			5.781	5.493
	5.598	11.392		
TP 16			5.931	5.853
	5.702	11.585		
TP 17			5.764	6.740
	6.147	11.937		
TP 18			5.933	6.004
	5.386	11.890		
TP 19			5.117	6.373
	5.525	11.748		

STA	#	HI	-	FL
TP 20			5.757	6.041
	5.178	11.435		
TP 21			5.348	5.507
	6.885	12.752		
TP 24			7.016	5.735
	5.006	8.741		
5011407 (TP 25)			2.737	6.004
	5.877	11.816		
TP 29			5.954	5.562
	5.504	11.860		
TP 28			6.053	5.805
	6.350	10.155		
TP 26			6.714	5.744



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Whidden Field Notes (3 of 4)

STA.	H	H1	=	EL
	5.603	77.064		
BM 2605		5.7289	5.7289	54.4664 OUT
W. BROADWAY CONVEY. BENZONABERS ROAD 29				



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Whidden Field Notes (4 of 4)

62264-112814

DEKASE	20	62264	CM/D	"62264" (2M)
1826K	20	1822	XCVT	(2M)
CV-0223				

DW
MFB
EAM

11/25/14

62264-112814