

Rev. 1/16

U.S.G.S. Station Name: G-2149	U.S.G.S. Station Number: 261403080070801		Agency: SFWMD		Date of Field Work: 09/25/19	
Party Chief: T. AVERY	Field Book: SFWMD #1	Page(s): 58-61			Report Prepared by: DEWBERRY	
	SITE SP	ECIFIC DAT	·A			
Site Benchmark:	Benchmark Elevation(s) (NAVD88	'):	Corpscon 6.0.1	factor (NAVD88 to NGVD29)		
G-2149	15.32' + 1.58 feet					
Well Reference Elevation (NAVD88):		Groun	Ground Elevation (NAVD88):		Pad Elevation (NAVD88):	
15.20'				N/A		
	GEOGR	APHIC DAT	A			
Section 35	Township 48 SOUTH			Range 42 EAST		
Well Latitude:	Well Longitude:	Locati	on Source:			
26°14′03.67"N	80°07′07.95"W	AVER	AVERAGED FPRN & TRIMBL		SNOW RTK	
State Plane Coordinates:	Northing (Y) = 691850'	Eastin	Easting (X) = 945003'			

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



Well Site

Latitude: 26°14'03.7" Longitude: 80°07'08"



Benchmark " G-2149" Latitude: 26°14'03.6" Longitude: 80°07'07.9" NAVD88 EL = 15.32 FEET

Not to scale (GoogleEarth product)



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Well Site and Well Head







Well: 2 1/8" metal well head in 7"
well casing
Reference Point: North edge of metal
well head

Reference Point El. = 15.20 feet NAVD88

Distance to water = -12.69 feet from reference point (09/25/19 at 5:15 PM)



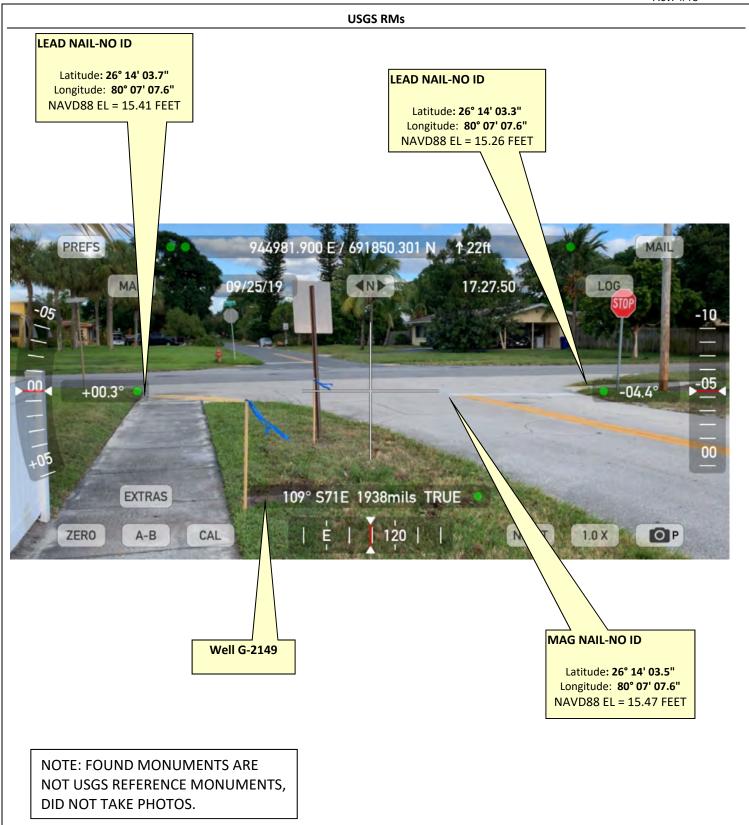
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New Aluminum Tag





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Latitude: 26°14'03.6" Longitude: 80°07'07.9" NAVD88 EL = 15.32 FEET





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Source Benchmarks





Latitude: **26°13'57.3"** Longitude: **80°07'31.7"** NAVD88 EL = 13.75 FEET





Latitude: **26°13′54.6**″ Longitude: **80°06′34.5′** NAVD88 EL = 10.76 FEET

		South Florida Water Man	nagement District Be	nchmark Datasheet	
Designation		Project Name: <u>USGS Ph 2, E</u> Field Book Name: W212	BROWARD	Type: V	State Plane Zone: FL East
	G2149 2019 by: DEWBERRY / WHIDDEN	Recovered By: N/A		Field Book Page: 26 Recovery Date: N/A	
	WILLIAM D. DONLEY	Established Date: 09/24/19		Status: New	
		GEOGRAP	HIC POSITION INFORMATION	ON	
Section:	35	Township:	48 SOUTH		Range: 42 EAST
•	BROWARD	Quadrangle: POMPANO B		Quad Index: 1801	NGS Source BM(s): <u>U 311 / 024</u>
NAD83 Adj. Year:		Vertical Datum: NAVD1988		Horizontal Datum: NAD1983	NGS PID(s): AD2595 / DO2663
NAVD88 Elevation (feet): NAVD88 Class:		D29 Elevation (feet): 16.895 NGVD29 Class: N/A		2022 Elevation: N/A Other Elevation: N/A	NGS NAVD88 Elev (ft): 10.76 / 13.75 NGS NAVD88 Elev (m): 3.279 / 4.19
NAVD88 Order:		NGVD29 Order: N/A	Oth	er Elevation Type: N/A	NGS 2022 Elev (ft): N/A
			and Development Center Topographic Eng	neering Center Alexandria, Virginia Windows-ba	ased program to convert coordinates and elevations between datum's using vertcon05.txt
nd vertcon05.05 files supplied by the U.S. A 'ertical Datum Offset: +	rmy Corps of Engineers South Atlantic Division, Jac 1.58		or ngvd29.txt file: N/A	OPUS Ortho	o Height: N/A
Northing (Y) (feet):		Easting (X) (feet): 945010.7			Longitude: AVERAGED FPRN & TRIMBLE VRSNOW RTK
Latitude:			3.63	Longitude: 80	
atitude (Decimal Degrees):	DD° 26.234342	MM'	SS" Longitude	DE (Decimal Degrees): -80.11	
					
low to Reach:	I	EAD NORTH ON N DIXIE HWY FOR	RECOVERY DATA		
Description/Notes:	2" ALUMINUM SFWMD DISK S	ET IN A POURED IN PLACE CONCRE	TE MONUMENT		
Other Source Benchmarks:	NGS "N 400" (AD8001)	,			
			PICTURES		
G2148	NESTIFIA AVE		N NOT TO	09/25/19	289 E / 691832.681 N
			Site Sketch		
NE 3RD ST.	FARCING SCARS	em em			S 2 4 S E 20 18 TO 20





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"024" Benchmark Datasheet (1 of 2)

The NGS Data Sheet

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

```
PROGRAM = datasheet95, VERSION = 8.12.5.2
        National Geodetic Survey, Retrieval Date = MAY 20, 2019
DO2663 DESIGNATION - 024
D02663 PID

    D02663

 DO2663 STATE/COUNTY- FL/BROWARD
 DO2663 COUNTRY
                  - US
 DO2663 USGS QUAD - FORT LAUDERDALE NORTH (1995)
 D02663
                              *CURRENT SURVEY CONTROL
D02663
D02663
 DO2663* NAD 83(1986) POSITION- 26 13 57.
                                            (N) 080 07 31.
                                                              (W)
                                                                    SCALED
 DO2663* NAVD 88 ORTHO HEIGHT -
                                 4.190 (meters)
                                                      13.75 (feet) ADJUSTED
 D02663
DO2663 GEOID HEIGHT
                                -25.786 (meters)
                                                                    GEOID12B
DO2663 DYNAMIC HEIGHT -
                                                      13.73 (feet) COMP
                                  4.184 (meters)
 DO2663 MODELED GRAVITY -
                            979,070.7 (mgal)
                                                                    NAVD 88
D02663

    SECOND

 DO2663 VERT ORDER
                                  CLASS II
 D02663
D02663. The horizontal coordinates were scaled from a topographic map and have
 DO2663.an estimated accuracy of +/- 6 seconds.
 D02663.
 DO2663. The orthometric height was determined by differential leveling and
 DO2663.adjusted by the NATIONAL GEODETIC SURVEY
 D02663.in December 2012.
 D02663
DO2663.Significant digits in the geoid height do not necessarily reflect accuracy.
 DO2663.GEOID12B height accuracy estimate available here.
 D02663.Photographs are available for this station.
D02663
DO2663. The dynamic height is computed by dividing the NAVD 88
 DO2663.geopotential number by the normal gravity value computed on the
 DO2663.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 D02663.degrees latitude (g = 980.6199 gals.).
D02663. The modeled gravity was interpolated from observed gravity values.
D02663
D02663:
                          North
                                                Units Estimated Accuracy
                                        East
 D02663;SPC FL E
                   210,670.
                                     287,400.
                                                  MT (+/- 180 meters Scaled)
 DO2663 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK873017(NAD 83)
 D02663
                               SUPERSEDED SURVEY CONTROL
 D02663
 D02663
 D02663.No superseded survey control is available for this station.
 DO2663_MARKER: DB = BENCH MARK DISK
 DO2663_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 D02663 STAMPING: 024 2011
 DO2663 MARK LOGO: FL2570
 DO2663_PROJECTION: RECESSED 5 CENTIMETERS
 DO2663_MAGNETIC: R = STEEL ROD IMBEDDED IN MONUMENT
 DO2663_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DO2663+STABILITY: SURFACE MOTION
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"024" Benchmark Datasheet (2 of 2)

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DO2663_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DO2663+SATELLITE: SATELLITE OBSERVATIONS - July 17, 2014
D02663
                   - Date
DO2663 HISTORY
                                                Report By
                               Condition
DO2663 HISTORY

    20120103 MONUMENTED

                                                STONER
DO2663 HISTORY
                                                GEOCAC
                   - 20140717 GOOD
D02663
D02663
                                STATION DESCRIPTION
D02663
DO2663 DESCRIBED BY STONER AND ASSOCIATES INC 2012 (DWS)
DO2663'THE MARK IS ABOUT 7.7 MI (12.4 KM) NORTH OF FORT LAUDERDALE, 7.4 MI
DO2663'(11.9 KM) SOUTHEAST OF WEST DIXIE BEND, IN POMPANO BEACH, IN SECTION
DO2663'35, TOWNSHIP 48 SOUTH, RANGE 42 EAST. OWNERSHIP IS THE CITY OF
DO2663'POMPANO BEACH.
D02663 '
DO2663'TO REACH THE MARK FROM THE INTERSECTION OF EAST ATLANTIC BOULEVARD AND
DO2663'NORTH DIXIE HIGHWAY IN POMPANO BEACH, GO EAST ON EAST ATLANTIC
DO2663'BOULEVARD FOR 0.1 MI (0.2 KM) TO THE INTERSECTION OF FIRST AVENUE.
DO2663'TURN LEFT ON NORTHEAST FIRST AVENUE AND GO NORTH FOR 0.5 MI (0.8 KM)
DO2663'TO THE INTERSECTION OF NORTHEAST FIRST STREET. TURN LEFT ON NORTHEAST
DO2663'FIRST STREET AND GO WEST FOR 0.5 MI (0.8 KM) TO A 90 DEGREE CURVE
DO2663 RIGHT TO NORTH FLAGLER AVENUE. TURN RIGHT ON NORTH FLAGLER AVENUE AND
DO2663'GO NORTH FOR 50.0 FT (15.2 M) TO THE MARK ON THE LEFT, SET IN THE TOP
DO2663 OF A 10-INCH (25 CM) ROUND CONCRETE MONUMENT RECESSED 0.2 FT (6 CM)
DO2663'BELOW THE LEVEL OF THE GROUND AND 0.5 FT (15 CM) ABOVE THE LEVEL OF
DO2663'NORTH FLAGLER AVENUE.
DO2663'LOCATED 48.0 FT (14.6 M) WEST OF THE CENTERLINE OF NORTH FLAGLER
DO2663'AVENUE, 45.0 FT (13.7 M) NORTH OF THE CENTERLINE OF NORTHEAST FIRST
DO2663'STREET, 21.8 FT (6.6 M) EAST OF THE EAST RAIL OF THE F.E.C. RAIL
DO2663 ROAD, 19.7 FT (6.0 M) NORTHWEST OF A DRAINAGE CATCH BASIN, 8.9 FT (2.7
DO2663'M) WEST OF THE WEST EDGE OF THE PAVEMENT OF THE PARKING LOT ALONG THE
DO2663'WEST SIDE OF NORTH FLAGLER AVENUE, 5.6 FT (1.7 M) SOUTHEAST OF A SIGN
DO2663'POLE AND 1.0 FT (0.3 M) EAST OF A CARSONITE WITNESS POST.
DO2663'NOTE REBAR ROD IS IMBEDDED IN THE MONUMENT.
D02663
                                STATION RECOVERY (2014)
D02663
D02663
DO2663'RECOVERY NOTE BY GEOCACHING 2014 (KEN)
DO2663'RECOVERED IN GOOD CONDITION.
*** retrieval complete.
Elapsed Time = 00:00:04
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"U 311" Benchmark Datasheet (1 of 3)

The NGS Data Sheet

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

```
PROGRAM = datasheet95, VERSION = 8.12.5.2
        National Geodetic Survey, Retrieval Date = MAY 20, 2019
AD2595 DESIGNATION - U 311

    AD2595

AD2595 PID
AD2595 STATE/COUNTY- FL/BROWARD
AD2595 COUNTRY
                   – US
AD2595 USGS QUAD - POMPANO BEACH (1983)
AD2595
AD2595
                                *CURRENT SURVEY CONTROL
AD2595
AD2595* NAD 83(1986) POSITION- 26 13 54.7 (N) 080 06 34.6
                                                                 (W)
                                                                      HD HELD2
AD2595* NAVD 88 ORTHO HEIGHT -
                                   3.279 (meters)
                                                        10.76 (feet) ADJUSTED
AD2595
AD2595 GEOID HEIGHT
                                 -25.836 (meters)
                                                                       GEOID12B
                                   3.274 (meters)
AD2595 DYNAMIC HEIGHT -
                                                        10.74 (feet) COMP
AD2595 MODELED GRAVITY -
                             979,070.3 (mgal)
                                                                       NAVD 88
AD2595
AD2595 VERT ORDER

    SECOND

                                     CLASS 0
AD2595. The horizontal coordinates were established by autonomous hand held GPS
AD2595.observations and have an estimated accuracy of +/- 10 meters.
AD2595.
AD2595. The orthometric height was determined by differential leveling and
AD2595.adjusted by the NATIONAL GEODETIC SURVEY
AD2595.in June 1991.
AD2595
AD2595.Significant digits in the geoid height do not necessarily reflect accuracy.
AD2595.GEOID12B height accuracy estimate available <a href="here">here</a>.
AD2595
AD2595. Photographs are available for this station.
AD2595
AD2595. The dynamic height is computed by dividing the NAVD 88
AD2595.geopotential number by the normal gravity value computed on the
AD2595.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD2595.degrees latitude (g = 980.6199 gals.).
AD2595
AD2595. The modeled gravity was interpolated from observed gravity values.
AD2595
AD2595;
                           North
                                          East
                                                 Units Estimated Accuracy
AD2595;SPC FL E
                                                    MT (+/- 10 meters HH2 GPS)
                   - 210.607.
                                      288,965.
AD2595_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK8893401666(NAD 83)
AD2595
AD2595
                                 SUPERSEDED SURVEY CONTROL
AD2595
AD2595 NGVD 29 (??/??/92)
                             3.761 (m)
                                                   12.34
                                                          (f) ADJ UNCH
AD2595
AD2595.Superseded values are not recommended for survey control.
AD2595.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AD2595.See file dsdata.pdf to determine how the superseded data were derived.
AD2595
AD2595 MARKER: DB = BENCH MARK DISK
AD2595 SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AD2595 STAMPING: U 311 1970
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"U 311" Benchmark Datasheet (2 of 3)

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AD2595_MARK_LOGO: CGS
AD2595 PROJECTION: FLUSH
AD2595_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AD2595+STABILITY: SURFACE MOTION
AD2595 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AD2595+SATELLITE: SATELLITE OBSERVATIONS - January 29, 2016
AD2595
AD2595 HISTORY
                   - Date
                               Condition
                                                Report By
                   - 1970
                               MONUMENTED
AD2595 HISTORY
                                                NGS
AD2595 HISTORY
                   - 1973
                               GOOD
                                                NGS
                                                LOCSUR
AD2595 HISTORY
                   - 1983
                               GOOD
AD2595 HISTORY
                    1987
                               GOOD
                                                USPSOD
AD2595 HISTORY
                    - 1988
                               GOOD
                                                USPSQD
AD2595 HISTORY
                   - 1989
                               GOOD
                                                USPSOD
                                                USPSOD
AD2595 HISTORY
                   - 1990
                               GOOD
AD2595 HISTORY
                   - 19910615 GOOD
                                                USPSOD
                 - 19951230 MARK NOT FOUND
AD2595 HISTORY
                                               USPSQD
AD2595 HISTORY
                   - 19980927 GOOD
                                                USPSOD
AD2595 HISTORY
                   - 20021121 GOOD
                                                USPSOD
                   - 20160129 GOOD
AD2595 HISTORY
                                                GEOCAC
AD2595
                                STATION DESCRIPTION
AD2595
AD2595
AD2595'DESCRIBED BY NATIONAL GEODETIC SURVEY 1970
AD2595'AT POMPANO BEACH.
AD2595'AT POMPANO BEACH, ABOUT 0.4 MILE WEST ALONG STATE HIGHWAY 814
AD2595'(ATLANTIC BLVD) FROM THE INTERSECTION OF U.S. HIGHWAY 1, 31 FEET
AD2595'NORTH OF THE CENTER LINE OF THE WESTBOUND LANE OF THE HIGHWAY, 26
AD2595'FEET WEST OF THE APPROXIMATE CENTER LINE OF NE 14 TH AVENUE, 2
AD2595'FEET NORTH OF THE NORTH EDGE OF A CONCRETE SIDEWALK, 2 FEET
AD2595'NORTHWEST OF A STOP SIGN, ABOUT LEVEL WITH THE HIGHWAY AND SET
AD2595'IN THE TOP OF A CONCRETE POST FLUSH WITH THE GROUND.
AD2595
AD2595
                                STATION RECOVERY (1973)
AD2595'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1973
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
                                STATION RECOVERY (1983)
AD2595
AD2595'RECOVERY NOTE BY LOCAL SURVEYOR (INDIVIDUAL OR FIRM) 1983
AD2595'12.7 FEET EAST OF TE SOUTHEAST CORNER OF BUILDING 10.5 FEET NORTH OF
AD2595'NORTH CURB LINE EXTENDED 2 FEET NORTH OF A STOP SIGN, 2 FEET NORTH OF
AD2595'THE NORTHEDGE OF A CONCRETE SIDEWALK.
AD2595
AD2595
                                STATION RECOVERY (1987)
AD2595'RECOVERY NOTE BY US POWER SQUADRON 1987 (JHH)
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
AD2595
                                STATION RECOVERY (1988)
AD2595'RECOVERY NOTE BY US POWER SQUADRON 1988 (CEP)
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
AD2595
                                STATION RECOVERY (1989)
AD2595
AD2595'RECOVERY NOTE BY US POWER SQUADRON 1989 (FEC)
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
AD2595
                                STATION RECOVERY (1990)
AD2595
AD2595'RECOVERY NOTE BY US POWER SQUADRON 1990 (JHH)
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
```



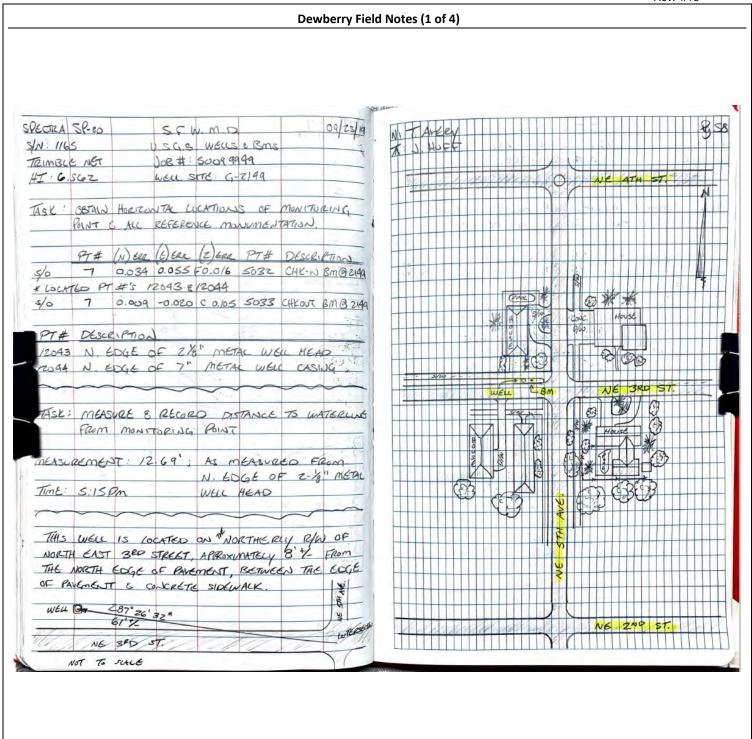
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AD2595
                                STATION RECOVERY (1991)
AD2595
AD2595'RECOVERY NOTE BY US POWER SQUADRON 1991 (JHH)
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
                                STATION RECOVERY (1995)
AD2595
AD2595
AD2595'RECOVERY NOTE BY US POWER SQUADRON 1995
AD2595'MARK NOT FOUND.
AD2595
AD2595
                                STATION RECOVERY (1998)
AD2595
AD2595'RECOVERY NOTE BY US POWER SQUADRON 1998
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
                                STATION RECOVERY (2002)
AD2595
AD2595'RECOVERY NOTE BY US POWER SQUADRON 2002 (RT)
AD2595'RECOVERED IN GOOD CONDITION.
AD2595
AD2595
                                STATION RECOVERY (2016)
AD2595
AD2595'RECOVERY NOTE BY GEOCACHING 2016 (KEN)
AD2595'RECOVERED IN GOOD CONDITION.
*** retrieval complete.
Elapsed Time = 00:00:04
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Tolcon				1. M.D			09/25/19	NITAHAY MAYZAY (WHIDDEN) BES
AT-GZ			543 W				, ,	A: JHOFF MIND (88)
S/N 143	9		DOB # :	5009 99	49			ELEVATION DESCRIPTION
100		1	weu s	TE G	-2199			BELGIN @ 10000 - ALIMINUM TASE FOUND IN
				1				CAST CONCRETE @ GRADE, ON WORTH EVEN OF NE
TASK:	ELEVA	TE m	NITORI	JG Po	NOT &	EFERE	NUE	3RD STREET NEAR WITHERSECTION WITH NA STA
						WELL 5		AVENUE, COCATED BETWEEN EP E SIDEWALC.
BA	CKSIGH	T(+)	T	FORE	SIGHT	(-)	AD)	FORESIGNT (-)
STA 10	Ros	MEAN	ELEV.	205	MEAN	ELEV.	ELEV.	DESCRIPTION
	117			-		100.00	15.32	
	5.165			5.185				
Bm	501	501	105.01		5.015	99.995	5.205	NO CORNER OF TONG SCAPS ARBUND WELL CASING
	4.855		20.33	4.845			15.315	
	31/31			34/65				
100				5.195				
			2033	5.025	.5.025	99.985	15,218	NE CHENER OF CONC. SLAB AROUND WELL CASING
			, -	4 855			15.305	
				34/65				
				5.19				
10 H	-	-	20.33	5.025	5.0267	99.9853	15,273	SE CORNER OF CONK, SUAB AROUND WIFE CASING
				4.865			15.303	
				32.5/63	5			
				-	1			
				515				
k h	100		2033	4.99	4.9917	100-0185		SU CORNER OF GONG SLAR AROUND WELL CASING
				4.835			15.338	
				31.5/62	5			
				5.225				
h te			20.33	5.045	5.0483	99.9617	15,252	GROUND SHOT NORTH OF CONC. SLAB AROUND WELL
				4.875			15.282	CAWAS
				35/66				



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SFWM.D. Og/25/19 N:TAKEY USGS WEUS E Bros 89 JOB #: 5000 9049	Ψ
	4
WELL SITE: G-ZIAG	
CONTINUE ELEVATING POINTS OF INTEREST	
ACKSIGHT (+) TO FORESIGHT (-) AD) FORESIGHT (-)	
RDS MEAN ELEV ROS MEAN ELEV. ELEV. DESCRIPTION	
5.305	
165.01 5.14 5.1383 99.897 15.162 NORTH GOGE OF 2" DVC PIPE	+
20.33 4.97 15.192	
39.5 / 64.5	
5.08	
10500 4.911 40.0935 5.388 NORTH COGE OF METAL CABINE (MEASURIN	a PBINT
20.33 4.145 15.418	
33.5 64.5'	
SET-UP	
5.36 5.445 5.195 5.1933 65.2917 5.296 5.2917 100.000 15.297 BACK @ STARTING POINT (SITE BAN)	
5.025 20.612 5.140 15.319 33.5/48: 30.5/28.5: CHECK IN = + 0.001	++++
33.5/98 30.5/28 5 CHECK IN = + 0.001	
	++++
UKIKU 100P	
	++++
REF. MONUMENTATION FOUND ON SITE	1111



