

① Broward Co. Wells FR#1 04/30/97

REC. 20 TWP 49S LEE 42E

Bound line to ESTABLISH ELEVATION for
 benchmark SET AT FLORIAN WELLSITE @ S. 36,
 C-13 FORT LAUDERDALE

Ref: J. Swanson Hydrogeologist BR-LOC. 1. Date 2/12/96
 D INSTRUCTIONS: FR. J. LUKASIEWICZ & L. BARANES (SHAW)

STA	+	H.I.	-	INVD	BM ELEV
BM	11.25 9.40	15.25		11.00	[10.997]
IP			11.92 8.73	10.33	
	5.12 2.53	15.45			
IP			4.92 2.67	10.47	
	3.35 10.30	13.82			
IP			4.39 9.26	9.43	
	4.83 8.82	14.26			
IP			5.17 2.48	9.09	
	4.66 2.99	13.75			
IP			4.26 9.39	9.49	

Broward Co. Wells FR#1 04/30/97 (19)

FRANKS &
 SWANSON

Comments

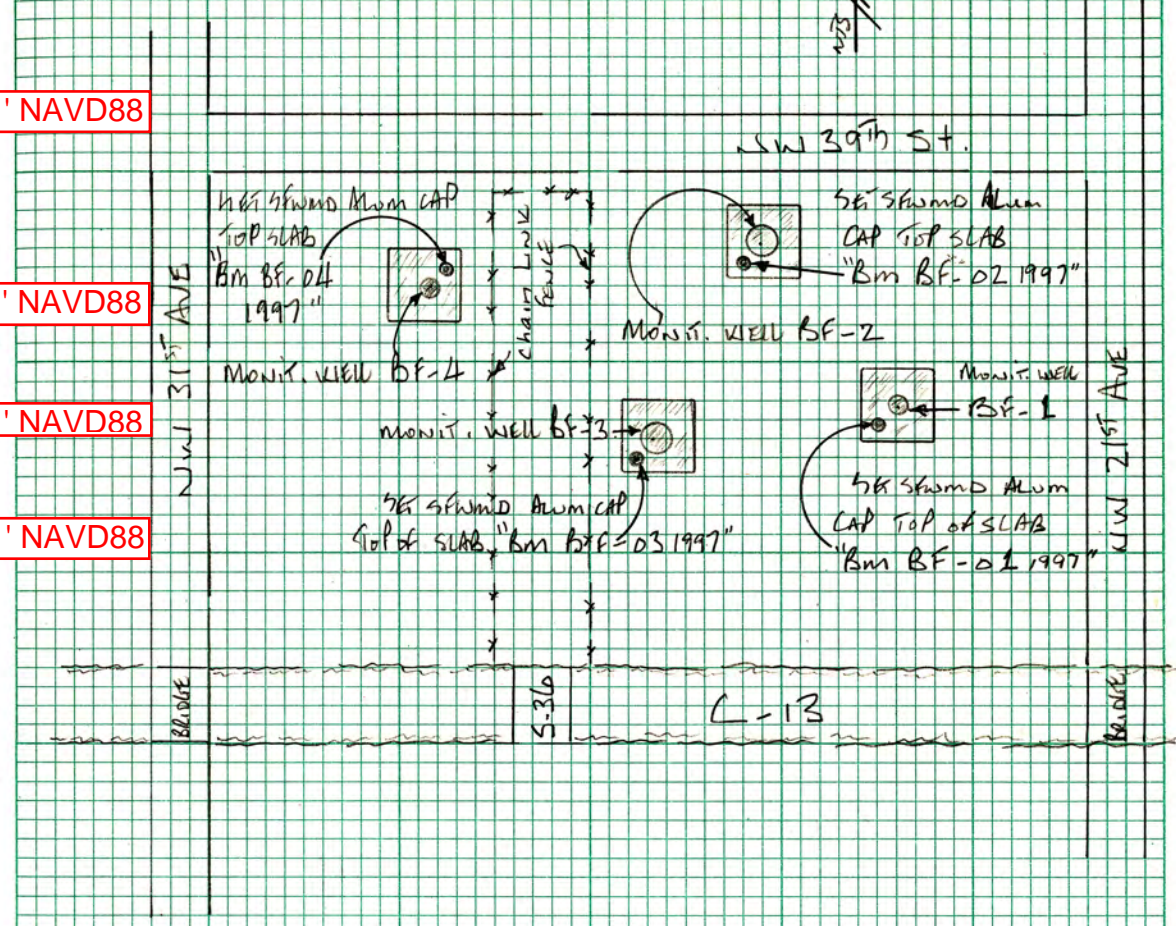
BM is set back from as described
 w/ CONC. SIDEWALK N.W. COR. BEHIND C-13/WWW 31ST AVE

253
5/22/97

Contd from Pg. 19

STA	+	H.I.	—	CREV	BM CREV
		4.93	14.42	9.49	
		8.72			
B.M.			4.27	10.15	10.15
BF-04			9.38		
		2.59	12.74		
		11.06	11.169'		
B.M.			2.76	9.98	9.98
BF-03			10.89		
B.M.			4.67	8.07	8.07
BF-02			8.98		
B.M.			3.36	9.38	9.38
BF-01			10.29		
B.M.		3.40	12.78	9.38	
BF-01		10.25			
B.M.			4.72	8.06	
BF-02			8.93		
B.M.			2.80	9.98	
BF-03			10.85		
B.M.			2.63	10.15	
BF-04			11.02		
		4.32	14.47		
		9.33			
			4.98	9.49	
			8.67		

Comments:



Notes - (to show well & BM Location)

[Handwritten signature]
5/28/97

Lewis Co. No. 20

GRA	x	H.c.	-	Even	km flow
	4.31 9.34	13.80		9.49	
AP.			4.67 8.98	9.13	
	5.20 8.48	14.33			
AP.			4.93 2.72	9.40	
	4.50 9.15	13.90			
AP.			3.49 10.16	10.41	
	5.01 8.64	15.42			
AP.			5.18 8.47	10.24	
	4.91 8.74	15.15			
ben.			4.15 9.50	11.00	[10.997]

Comments.

SLD. Disc. NW. Cor. BRIDGE C-13/NW STAVE (See Pg. 19)

SOUTH FLORIDA WATER MANAGEMENT DISTRICT



Survey Data Entry and Retrieval Application (SDERA) Print Output

Control Point Search Results

Derived Data - Denoted By:

**

Designation	BF01	Record State	ACCEPTED
NGS PID			
Project Name	BF01 WELL SITE	Date Entered/Updated	01/05/2016
Updated By	hehmke	Status	
Party Chief	EBANKS, ELVIE	Type	V
Monument Set By	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	Date Established	01/01/1997
County	BROWARD COUNTY	Section	20
Township	49	Range	42
Quadrangle	FORT LAUDERDALE NORTH	Offset (29 to 88)	
NGS Source BM		CCR Link	
Ctrl Pt Source(s)			

<u>Horizontal</u>	<u>NAD 1927</u>	<u>NAD 1983</u>	<u>Vertical</u>	<u>NGVD 1929</u>	<u>NAVD 1988</u>
Latitude		26 10 24.2	Class		
Longitude		80 10 42.4	Order	3	3
Northing(Y)			Elevation	9.38	7.809
Easting(X)			Measurement Unit	Feet	Feet
Class					
Order					
NAD83 Adj Year					

Field Book

BROWARD CO WELLS 1

Field Book Pages

20

Stamping

BF-01 1997

How to Reach

Located at South Florida Water Management District s (SFWMD s) Structure-36 (Canal 13) on the North side between NW 31 Avenue and NW 21 Avenue.

Benchmark is a SFWMD aluminum cap stamped BF-01 1997, set on the Southwest corner of the concrete slab at monitoring well BF-1.

NGS Source Benchmark: 10.99 (DL2220)

Source benchmark is Broward county benchmark 2445. El. 10.997 NGVD 1929. (HJE 5-mar-08)

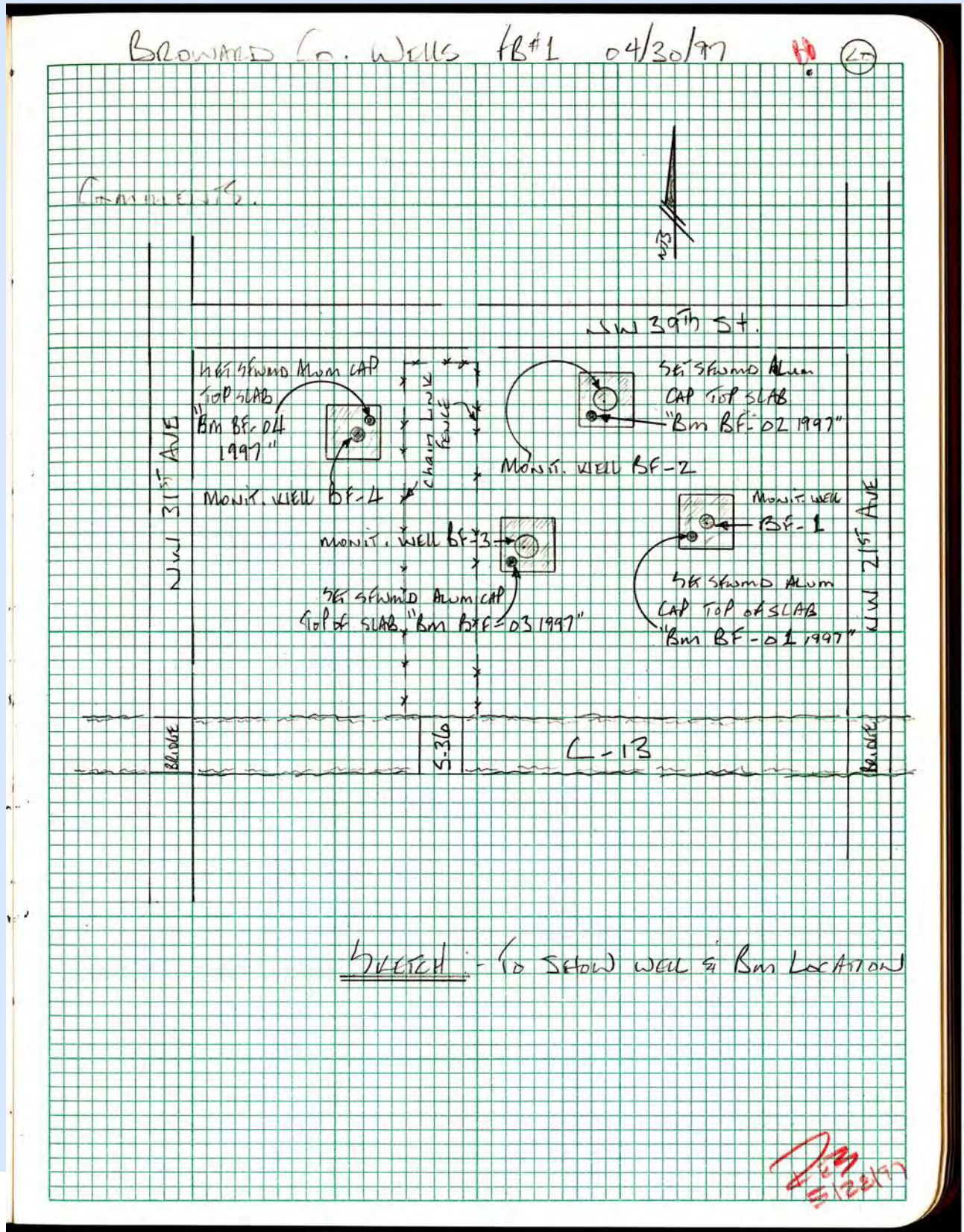
Description

A SFWMD aluminum cap.

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Survey Data Entry and Retrieval Application (SDERA) Print Output

Control Point Search Results

Derived Data - Denoted By:

**

Designation	BF02	Record State	ACCEPTED
NGS PID			
Project Name	BF02 WELL SITE	Date Entered/Updated	01/05/2016
Updated By	hehmke	Status	
Party Chief	EBANKS, ELVIE	Type	V
Monument Set By	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	Date Established	01/01/1997
County	BROWARD COUNTY	Section	20
Township	49	Range	42
Quadrangle	FORT LAUDERDALE NORTH	Offset (29 to 88)	
NGS Source BM		CCR Link	
Ctrl Pt Source(s)			

<u>Horizontal</u>	<u>NAD 1927</u>	<u>NAD 1983</u>	<u>Vertical</u>	<u>NGVD 1929</u>	<u>NAVD 1988</u>
Latitude		26 10 24.3	Class		
Longitude		80 10 43.2	Order	3	3
Northing(Y)			Elevation	8.065	6.499
Easting(X)			Measurement Unit	Feet	Feet
Class					
Order					
NAD83 Adj Year					

Field Book

BROWARD CO WELLS 1

Field Book Pages

20

Stamping

BF-02 1997

How to Reach

Located at South Florida Water Management District s (SFWMD s) Structure-36 (Canal 13) on the North side between NW 31 Avenue and NW 21 Avenue.
 Benchmark is a SFWMD aluminum cap stamped BF-02 1997, set on the Southwest corner of the concrete slab at monitoring well BF-2.
 NGS Source Benchmark: 10.99 (DL2220)

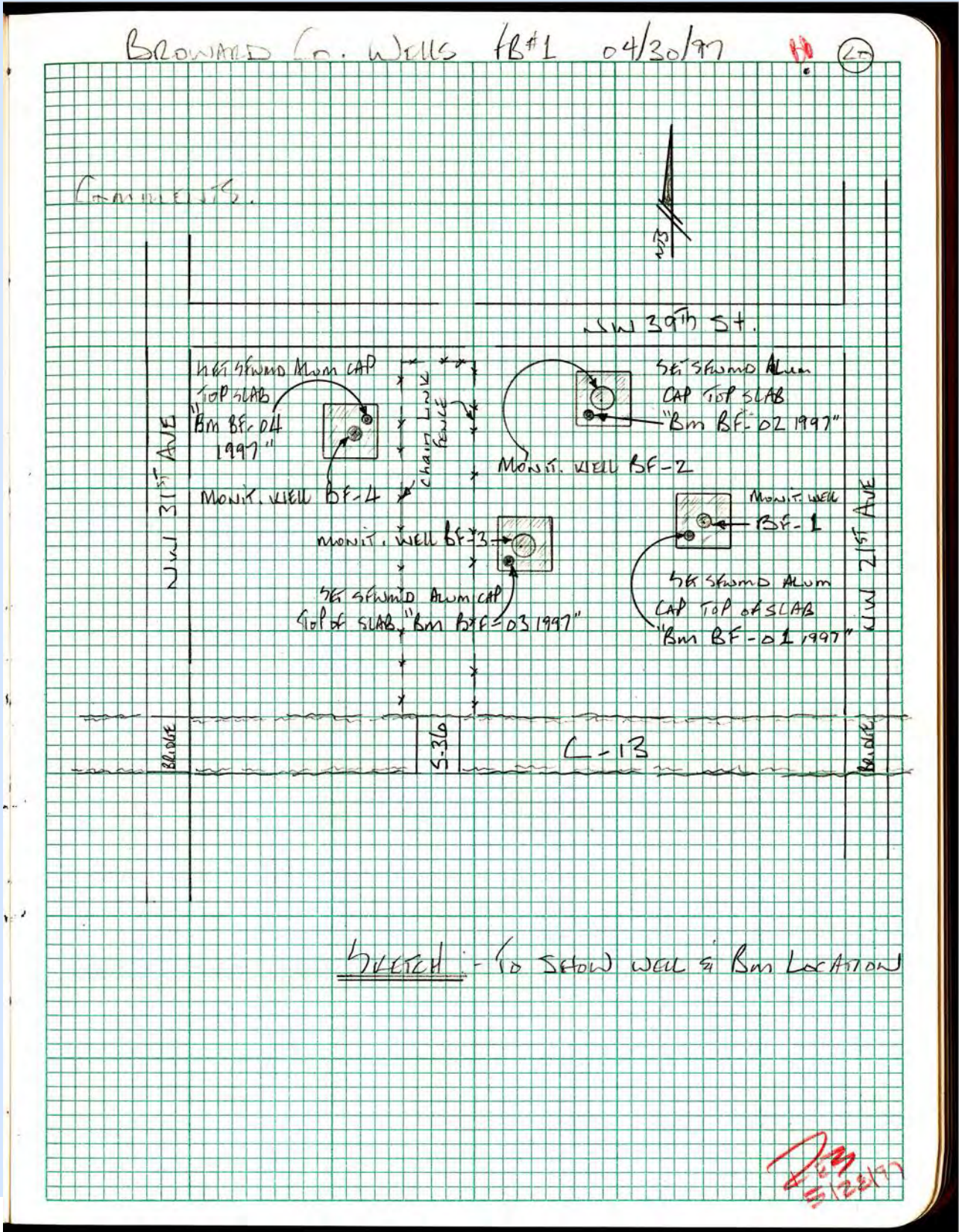
Description

A SFWMD aluminum cap

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT



Survey Data Entry
and Retrieval Application

Survey Data Entry and Retrieval Application (SDERA) Print Output

Control Point Search Results

Derived Data - Denoted By:

**

Designation	BF03	Record State	ACCEPTED
NGS PID			
Project Name	BF03 WELL SITE	Date Entered/Updated	01/05/2016
Updated By	hehmke	Status	
Party Chief	EBANKS, ELVIE	Type	V
Monument Set By	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	Date Established	01/01/1997
County	BROWARD COUNTY	Section	20
Township	49	Range	42
Quadrangle	FORT LAUDERDALE NORTH	Offset (29 to 88)	
NGS Source BM		CCR Link	
Ctrl Pt Source(s)			

<u>Horizontal</u>	<u>NAD 1927</u>	<u>NAD 1983</u>	<u>Vertical</u>	<u>NGVD 1929</u>	<u>NAVD 1988</u>
Latitude		26 10 23.3	Class		
Longitude		80 10 45.2	Order	3	3
Northing(Y)			Elevation	9.98	8.409
Easting(X)			Measurement Unit	Feet	Feet
Class					
Order					
NAD83 Adj Year					

Field Book

BROWARD CO WELLS 1

Field Book Pages

20

Stamping

BF-03 1997

How to Reach

Located at South Florida Water Management District s (SFWMD s) Structure-36 (Canal 13) on the North side between NW 31 Avenue and NW 21 Avenue.

Benchmark is a SFWMD aluminum cap stamped BF-03 1997, set on the Southwest corner of the concrete slab at monitoring well BF-3.

NGS Source Benchmark: 10.99 (DL2220)

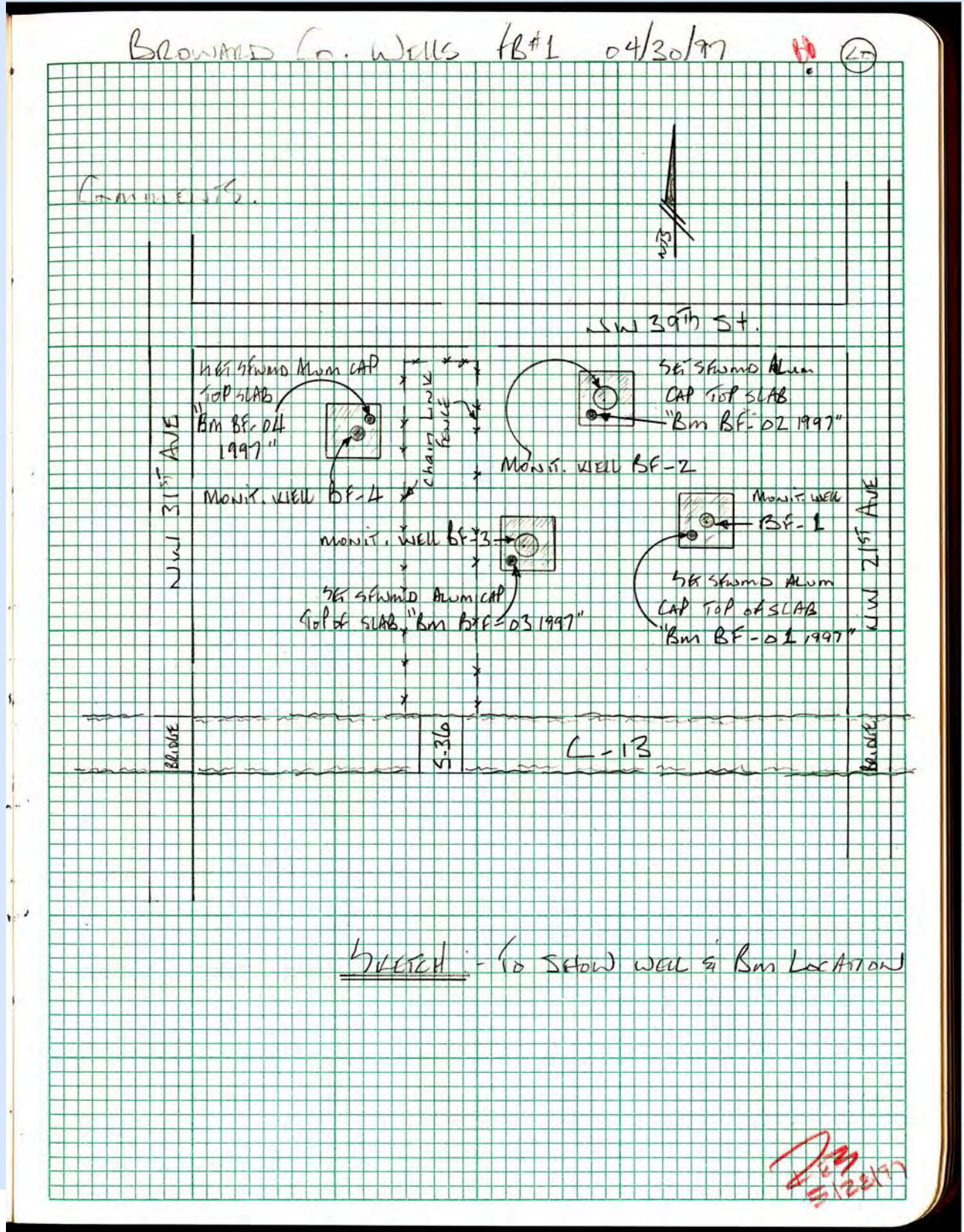
Description

A SFWMD aluminum cap

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Survey Data Entry and Retrieval Application (SDERA) Print Output

Control Point Search Results

Derived Data - Denoted By:

**

Designation	BF04	Record State	ACCEPTED
NGS PID			
Project Name	BF04 WELL SITE	Date Entered/Updated	01/05/2016
Updated By	hehmke	Status	
Party Chief	EBANKS, ELVIE	Type	V
Monument Set By	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	Date Established	01/01/1997
County	BROWARD COUNTY	Section	20
Township	49	Range	42
Quadrangle	FORT LAUDERDALE NORTH	Offset (29 to 88)	
NGS Source BM		CCR Link	
Ctrl Pt Source(s)			

<u>Horizontal</u>	<u>NAD 1927</u>	<u>NAD 1983</u>	<u>Vertical</u>	<u>NGVD 1929</u>	<u>NAVD 1988</u>
Latitude		26 10 24.2	Class		
Longitude		80 10 47.3	Order	3	3
Northing(Y)			Elevation	10.15	8.579
Easting(X)			Measurement Unit	Feet	Feet
Class					
Order					
NAD83 Adj Year					

Field Book

Broward County Wells 1

Field Book Pages

20

Stamping

BF-04 1997

How to Reach

Located at South Florida Water Management District s (SFWMD s) Structure-36 (Canal 13) on the North side between NW 31 Avenue and NW 21 Avenue.
 Benchmark is a SFWMD aluminum cap stamped BF-04 1997, set on the Southwest corner of the concrete slab at monitoring well BF-4.
 NGS Source Benchmark: 10.99 (DL2220)

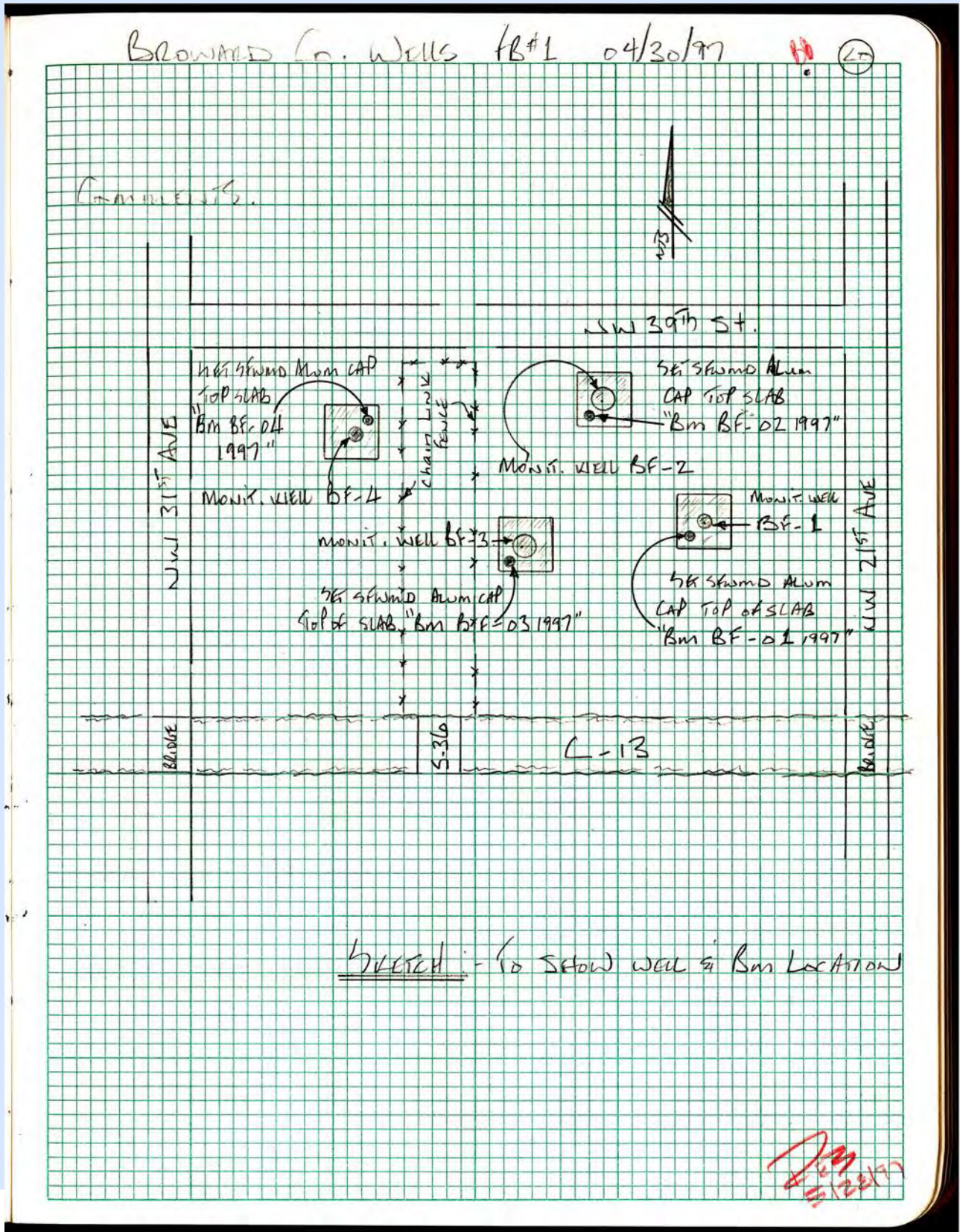
Description

A SFWMD aluminum cap

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Survey Data Entry and Retrieval Application (SDERA) Print Output

Control Point Search Results

Derived Data - Denoted By: **

Designation	1099	Record State	ACCEPTED
NGS PID	DL2220		
Project Name	S-036	Date Entered/Updated	01/05/2016
Updated By	hehmke	Status	GOOD
Party Chief		Type	V
Monument Set By	FL DEPT OF TRANSPORTATION	Date Established	
County	BROWARD COUNTY	Section	10
Township	49	Range	42
Quadrangle	FORT LAUDERDALE NORTH	Offset (29 to 88)	
NGS Source BM		CCR Link	
Ctrl Pt Source(s)			

	<u>NAD 1927</u>	<u>NAD 1983</u>	<u>Vertical</u>	<u>NGVD 1929</u>	<u>NAVD 1988</u>
Latitude		26 10 22.4	Class	II	II
Longitude		80 11 15.1	Order	I	I
Northing(Y)			Elevation	11.05	9.429
Easting(X)			Measurement Unit	Feet	Feet

Class
Order
NAD83 Adj Year

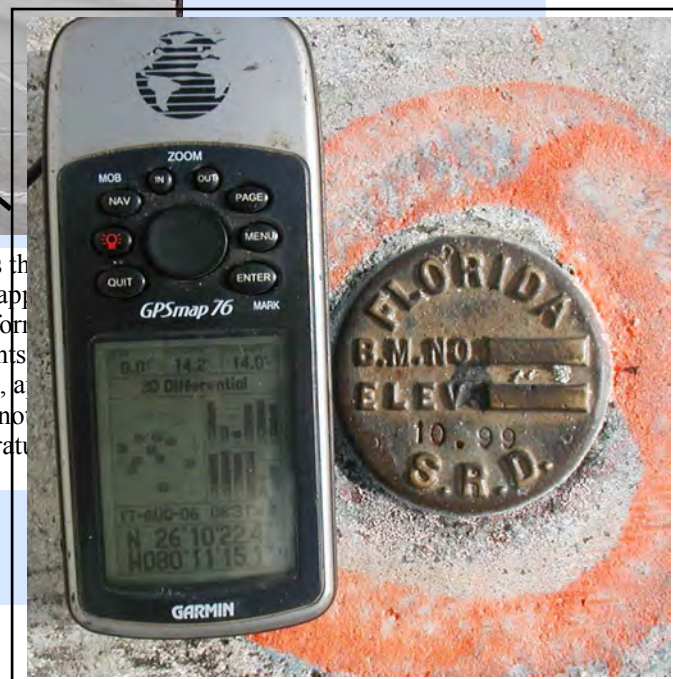
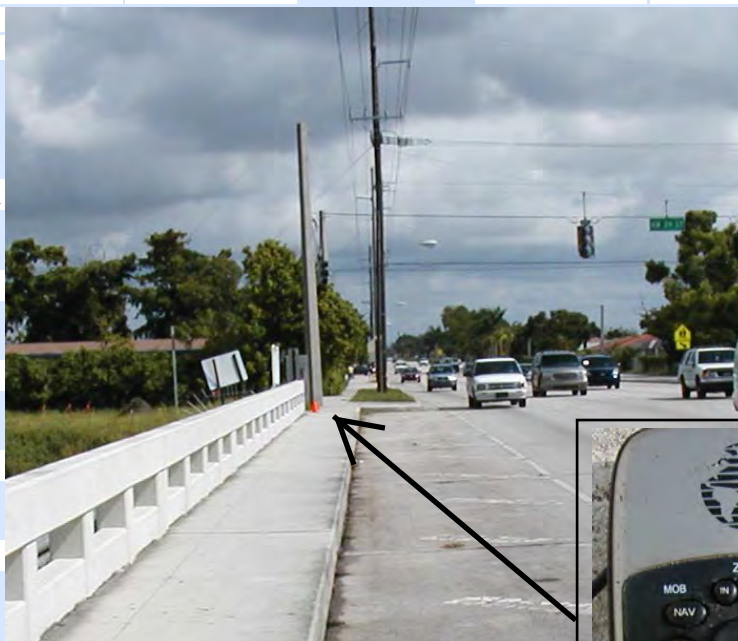
Field Book
Broward Co. Wells 1

Field Book Pages
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Stamping
10.99

How to Reach

Description
FLSRD Survey Disk



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The NGS Data Sheet

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

```

PROGRAM = datasheet95, VERSION = 8.8
1      National Geodetic Survey,  Retrieval Date = JANUARY  5, 2016
DL2220 *****
DL2220 DESIGNATION - 10.99
DL2220 PID - DL2220
DL2220 STATE/COUNTY- FL/BROWARD
DL2220 COUNTRY - US
DL2220 USGS QUAD - FORT LAUDERDALE NORTH (1995)
DL2220
DL2220 *CURRENT SURVEY CONTROL
DL2220
DL2220 * NAD 83(1986) POSITION- 26 10 23. (N) 080 11 14. (W) SCALED
DL2220 * NAVD 88 ORTHO HEIGHT - 2.874 (meters) 9.43 (feet) ADJUSTED
DL2220
DL2220 GEOID HEIGHT - -25.583 (meters) GEOID12B
DL2220 DYNAMIC HEIGHT - 2.869 (meters) 9.41 (feet) COMP
DL2220 MODELED GRAVITY - 979,064.3 (mgal) NAVD 88
DL2220
DL2220 VERT ORDER - FIRST CLASS II
DL2220
DL2220.The horizontal coordinates were scaled from a topographic map and have
DL2220.an estimated accuracy of +/- 6 seconds.
DL2220.
DL2220.The orthometric height was determined by differential leveling and
DL2220.adjusted by the NATIONAL GEODETIC SURVEY
DL2220.in June 2009.
DL2220
DL2220.Significant digits in the geoid height do not necessarily reflect accuracy.
DL2220.GEOID12B height accuracy estimate available here.
DL2220
DL2220.The dynamic height is computed by dividing the NAVD 88
DL2220.geopotential number by the normal gravity value computed on the
DL2220.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DL2220.degrees latitude (g = 980.6199 gals.).
DL2220
DL2220.The modeled gravity was interpolated from observed gravity values.
DL2220
DL2220; North East Units Estimated Accuracy
DL2220;SPC FL E - 204,040. 281,250. MT (+/- 180 meters Scaled)
DL2220
DL2220 SUPERSEDED SURVEY CONTROL
DL2220
DL2220 No superseded survey control is available for this station.
DL2220
DL2220_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNJ812951(NAD 83)
DL2220
DL2220_MARKER: DD = SURVEY DISK
DL2220_SETTING: 31 = SET IN A PAVEMENT SUCH AS STREET, SIDEWALK, CURB, ETC.
DL2220_SP_SET: SIDEWALK
DL2220_STAMPING: 10.99
DL2220_MARK LOGO: FLSRD

```

DL2220_MAGNETIC: N = NO MAGNETIC MATERIAL

DL2220_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY

DL2220_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

DL2220+SATELLITE: SATELLITE OBSERVATIONS - August 03, 2006

DL2220

DL2220	HISTORY	- Date	Condition	Report By
--------	---------	--------	-----------	-----------

DL2220	HISTORY	- 20060803	MONUMENTED	FLSRD
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DL2220

DL2220 STATION DESCRIPTION

DL2220

DL2220'DESCRIBED BY FLORIDA STATEROAD DEPARTMENT 2006 (JLM)

DL2220'THE MARK IS IN OAKLAND PARK, IN SECTION 10, TOWNSHIP 49 SOUTH, RANGE

DL2220'42 EAST.

DL2220'

DL2220'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE 95 (EXIT 31) AND

DL2220'OAKLAND PARK BOULEVARD (STATE HIGHWAY 816) IN OAKLAND PARK, GO WEST

DL2220'ON OAKLAND PARK BOULEVARD (STATE HIGHWAY 816) FOR 1.7 MI TO THE

DL2220'INTERSECTION OF NORTHWEST 31ST AVENUE, TURN RIGHT ON NORTHWEST 31ST

DL2220'AVENUE AND GO NORTH FOR 0.5 MI TO THE NORTH END OF BRIDGE NUMBER

DL2220'860200 THAT SPANS CANAL C-13 AND THE MARK ON THE LEFT, SET FLUSH IN

DL2220'THE TOP OF THE NORTHWEST SIDEWALK ABOUT 0.7 FT ABOVE THE LEVEL OF

DL2220'NORTHWEST 31ST AVENUE.

DL2220'

DL2220'LOCATED 32.0 FT WEST OF THE APPROXIMATE CENTERLINE OF NORTHWEST 31ST

DL2220'AVENUE SOUTHBOUND LANES, 4.0 FT WEST OF THE EAST END OF THE SIDEWALK,

DL2220'2.8 FT SOUTHEAST OF THE NORTH END OF THE SIDEWALK AND 1.0 FT EAST OF

DL2220'THE EAST FACE OF THE SIDEWALK BRIDGERAIL.

*** retrieval complete.

Elapsed Time = 00:00:02