

Subject: Report for Sites E and F

Date: Mon, 04 Nov 2002 15:10:30 -0500

From: Howard Ehmke <ehmke@sfwmd.gov>

Organization: South Florida Water Management District

To: Steven Krupa <skrupa@sfwmd.gov>, Chris Carlson <ccarlso@sfwmd.gov>,
Elvie Ebanks <eebanks@sfwmd.gov>

Chris and Steve,

Pursuant to your request for site benchmark and well verification on Sites E and F, I offer the following.

Site E

Field Date: 11-Oct-2002

Personnel: Howard Ehmke

Elvie Ebanks

Process:

A level line was run from NGS BM Z460 1997 to NGS KR 1559 GPS 1994 for verification of Elevations.

A level loop was run from KR 1559 GPS 1994 to Site E Far and Site E Near.

The results:

Existing Site Data Elevations:

Site E far

	Site Data	District Check
KREFFM	57.75	57.74
KREFFD	57.91	57.92
KREFFS	57.89	57.90

Site E Near

F

	Site Info	District Check
Site BM	None	
KRENNM2	54.48	54.46
KRENND	54.28	54.26
KRENNC	54.27	54.27

ALL ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929

(NGVD 29)

Site F

Field Date: 16-Oct-2002

Personnel: Ned Strickland

Crew

Process:

A level line was run from NGS F63 to NGS POL1 for varification of Elevations.

A level loop was run from NGS POL 1 to Site F Far and Site F Near.

The results:

Site F Near

	Site Info	District Check
KRFNS	54.90	54.83
KRFNND	54.62	54.56
KRFNNC	54.67	54.61
KRFNNM	54.68	54.62
KRFNNS	54.64	54.57

Site F Far

	Site Info	District Check
KRFFFD	55.41	55.36
KRFFFM	55.41	55.35
KRFFFS	55.41	55.36

The mark shot was the "X" cut

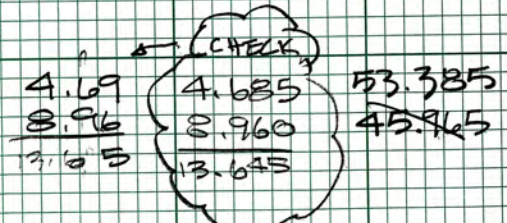
ALL ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929

(NGVD 29)

LEVELS TO VERIFY THE CONTRACTORS
BEAM MANU EL @ SITE B

200' SIGHTS
GUM-TOPCON AT-61 STAMP # E37667

STA	+	-	ELEV
BM			53.93 NAVD 83
	544 <u>8.21</u> 13.65	59.37	
TBM			55.32
	4.345 <u>9.305</u> 13.650	59.665	
KR1559 GPS 1994			54.36
			54.36
	5.305 <u>8.340</u> 13.645		
	3.71 <u>9.94</u> 13.65	58.07 50.65	
TBM			53.385
			45.965
			51.62
	3.83 <u>9.77</u> 13.65	57.265	
			51.62
			51.62
			51.62



25 31/31

EHMICE
EBANKS

FOUND Z 460 AS
DESCRIBED

HAND HELD GPS
27°-44'-56.1"
81°-11'-02.1"

STAMPED Z 460 1997
A STAINLESS STEEL ROD
WITH AN ACCESS COVER,
A METAL POST AND A CARSONITE POST 1' W/4
35' I W/4 OF E OF DIRT ROAD, STATION
IN OPEN GRASS AREA

FOUND KR 1559 GPS 1994 54.36 PUBLISHED

A CORPS OF ENGINEERS BRASS DISK
STAMPED KR-1559 GPS "1994" IN A 6" PVC
PIPE WITH CONCRETE, A CARSONITE SIGN
3' EAST A METAL STAMPED METAL SIGN
1.5' EAST ON THE EAST SIDE OF THE
ROAD 16' EAST OF E

LEVELS CONTINUED TO SITE E PAR

STA	+	HI	-	ELEV
TBM				51.62

3.83	55.45
<u>7.82</u>	
13.65	

TBM #A		3.70	51.750	ADJ
		<u>9.955</u>		51.7425
		13.655		

6.465	58.215
<u>7.180</u>	
13.645	

WELL KREFFM		1.695	56.52
		<u>11.955</u>	
		13.650	

WELL KREFFD		1.520	56.695
		<u>2.130</u>	
		13.650	

WELL KREFFS		1.540	56.675
		<u>12.110</u>	
		13.650	

TBM SITE		6.135	52.00
TOP 2" PVC PIPE		<u>7.515</u>	
<u>NO CAP</u>		13.650	

EXHIBIT
BANKS

57.75 ELEVATION ON WELL

1.22' DIFF IN DATUMS

57.91 ELEVATION ON WELL

57.89 ELEVATION ON WELL

53.30 "29" VALUE

RETURNED 2WD FROM SITE & FARE TO
K12 1559 GPS

STA	+	HI	-	ELEV
TBM A				51.750

4.505	56.255
<u>9.145</u>	
13.650	

4.990
<u>9.155</u>
13.645

TBM				51.765
-----	--	--	--	--------

5.50	57.265
<u>8.15</u>	
13.65	

TBM			←	53.355
-----	--	--	---	--------

5.00	58.355
<u>5.50</u>	
8.65	

3.91
<u>9.74</u>
13.65

K12 1559
GPS
(1994)

3	4.98	54.375
	<u>9.67</u>	
	13.65	54.36
		<u>0.015</u>

□ ELEV
⊕ SPANKS

K12 1559 GPS 74 SEE PAGE 63

66

KISS LAKES FB 65

LEVEL RUN TO
SITE E NEAR
STARTED RUN AROUND NOON
HEAT WAVES

STA + HI - ELEV

TBM "E" FAR 52.08

$$\begin{array}{r} 6.25 \\ 7.40 \\ \hline 13.65 \end{array} \quad 58.33$$

(WITH CAP) →

$$\begin{array}{r} 6.18 \\ 7.47 \\ \hline 13.65 \end{array}$$

TBM 56.085

$$\begin{array}{r} 7.14 \\ 6.51 \\ \hline 13.65 \end{array} \quad 63.225$$

$$\begin{array}{r} 2.245 \\ 11.400 \\ \hline 13.645 \end{array}$$

TBM 58.695

$$\begin{array}{r} 4.53 \\ 9.12 \\ \hline 13.65 \end{array}$$

$$\begin{array}{r} 1.485 \\ 12.18 \\ \hline 13.665 \end{array} \quad 60.17$$

TBM 51.425

$$\begin{array}{r} 8.745 \\ 10.900 \\ \hline 19.645 \end{array}$$

KISS LAKES FB 65

10-11-02. (66)

ETHMKE
EBANKS

TBM TOP 2" PVC PIPE (NO CAP) @ SITE "E" FAR
SEE PAGE 64

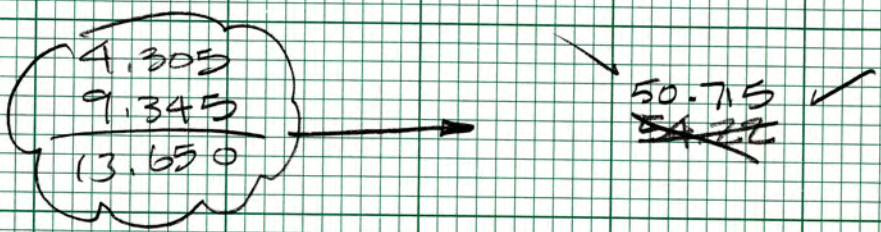
WELLS @ SITE ELEVATION

STA	+	#	-	ELEV
TBM				51.425
	2.28			53.705
	<u>11.4737</u>			
	13.75			
	65			
TBM B				48.345
	5.36			
	<u>8.725</u>			
	8.275			
	13.635			
	5.27			53.615
	<u>8.38</u>			
	13.65			
WELL KRENNM2	0.38			53.235
KRENN D	0.58			53.035
KRENN C	0.57			53.045
KRENN B				
2" PIPE/CAP TOP	2.90			50.715
	<u>10.755</u>			
	13.655			

10-11-02
E HMKC
BANKS

51.48 ELEVATION WRITTEN ON WELL
 (51.455) NGVD 29
 51.28 ELEVATION WRITTEN ON WELL
 51.27
 TBM ESTE NEXT

STA	+	HI	-	ELEV
	4.305	55.02		50.715
	<u>7.345</u>			
	13.650			
KREXUS			2.045	52.975
KREUNM1			1.96	53.06
KREUS*			1.435	53.585



10-11-02
 REEHWKE
 & EBANKS

54.22 ELEVATION WRITTEN ON PLATFORM

54.29

54.82 WRITTEN

TOP
 TBM 2" PIPE WITH CAP @ SITE "E" NEAR

RETURN) RUN SITE E NEAR TO SITE E FAR

STA	T	HT	-	ELEV
TBM "A" NEAR	TBM "B"			50.715 48.345
	5.765 <u>7.880</u> 13.645	54.11 50.430		
TBM			2.74 <u>10.91</u> 13.65	51.37 53.79
	9.946 <u>9.668</u> 16.64	61.33 63.700		
TBM			1.85 <u>11.80</u> 13.65	59.48 61.85
	2.116 <u>11.48</u> 13.64	61.64 63.21		
			6.465 <u>7.175</u> 13.640	55.175 57.545
	2.64 <u>11.01</u> 13.65	57.815 60.185		
			5.74 <u>7.91</u> 13.65	54.445 52.075

2.37

10-11-02
AD ERMICE
Φ EBANKS

~~TBM E SITE NEAR TBM "B"~~

TBM SITE E FAR TOP 2" PVC PIPE NO CAP
PAGE 64 NO ADJUSTMENT



The NGS Data Sheet

See file [dsdata.txt](#) for more

DATABASE = Sybase ,PROGRAM
1 National Geodetic

AH8768 *****
 AH8768 DESIGNATION - Z 460
 AH8768 PID - AH8768
 AH8768 STATE/COUNTY- FL/POLK
 AH8768 USGS QUAD - FORT KISSIMMEE NW (1972)

*CURRENT SURVEY CONTROL

AH8768*	NAD 83(1986)-	27 44 56.	(N)	081 11 01.	(W)	SCALED
AH8768*	NAVD 88	- 16.438	(meters)	53.93	(feet)	ADJUSTED
AH8768	GEOID HEIGHT-	-26.64	(meters)			GEOID03
AH8768	DYNAMIC HT -	16.413	(meters)	53.85	(feet)	COMP
AH8768	MODELED GRAV-	979,157.5	(mgal)			NAVD 88

AH8768 VERT ORDER - SECOND CLASS I

AH8768 The horizontal coordinates were scaled from a topographic map and have
 AH8768 an estimated accuracy of +/- 6 seconds.

AH8768 The orthometric height was determined by differential leveling
 AH8768 and adjusted in July 1999.

AH8768 The geoid height was determined by GEOID03.

AH8768 The dynamic height is computed by dividing the NAVD 88
 AH8768 geopotential number by the normal gravity value computed on the
 AH8768 Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AH8768 degrees latitude (g = 980.6199 gals.).

AH8768 The modeled gravity was interpolated from observed gravity values.

AH8768;		North	East	Units	Estimated Accuracy
AH8768;SPC FL W	-	378,650.	280,480.	MT	(+/- 180 meters Scaled)

SUPERSEDED SURVEY CONTROL

No superseded survey control is available for this station.

AH8768 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML819694(NAD 83)
 AH8768_MARKER: F = FLANGE-ENCASED ROD
 AH8768_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 AH8768_STAMPING: Z 460 1997
 AH8768_MARK LOGO: NGS
 AH8768_PROJECTION: FLUSH
 AH8768_MAGNETIC: N = NO MAGNETIC MATERIAL
 AH8768_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 AH8768_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AH8768+SATELLITE: SATELLITE OBSERVATIONS - 1997
 AH8768_ROD/PIPE-DEPTH: 12.3 meters

AH8768	HISTORY	- Date	Condition	Report By
AH8768	HISTORY	- 1997	MONUMENTED	FLDEP

STATION DESCRIPTION

AH8768 DESCRIBED BY FL DEPT OF ENV PRO 1997 (JLM)
 AH8768 THE MARK IS ABOUT 30.0 MI (48.3 KM) SOUTHEAST OF LAKE WALES, 0.6 MI
 AH8768 (1.0 KM) WEST OF THE KISSIMMEE RIVER ON KICCO ROAD IN SECTION 25,
 AH8768 TOWNSHIP 31 SOUTH, RANGE 31 EAST. TO REACH THE MARK FROM THE
 AH8768 INTERSECTION OF STATE ROAD 27 UNDERPASS AND STATE ROAD 60 IN LAKE
 AH8768 WALES, GO EAST-SOUTHEAST ON STATE ROAD 60 FOR 25.7 MI (41.4 KM) TO THE
 AH8768 JUNCTION OF RIVER RANCH BOULEVARD ON THE RIGHT, TURN RIGHT ON RIVER
 AH8768 RANCH BOULEVARD AND GO SOUTHEAST FOR 2.55 MI (4.10 KM) TO THE GUARD
 AH8768 HOUSE AT THE ENTRANCE TO RIVER RANCH, CONTINUE SOUTH ON RIVER RANCH
 AH8768 BOULEVARD FOR 0.3 MI (0.5 KM) TO THE JUNCTION OF KICCO ROAD ON THE
 AH8768 RIGHT, TURN RIGHT ON KICCO ROAD AND GO SOUTHEAST FOR 0.2 MI (0.3 KM)

DATASHEETS

AH8768' TO FOUR SETS OF DOUBLE UNLOCKED GATES, CONTINUE SOUTH ON KICCO ROAD
AH8768' FOR 0.5 MI (0.8 KM) TO ANOTHER UNLOCKED METAL GATE, CONTINUE SOUTHEAST
AH8768' ON KICCO ROAD FOR 0.2 MI (0.3 KM) TO THE JUNCTION OF ROAD ON THE LEFT,
AH8768' CONTINUE SOUTH-SOUTHEAST ON KICCO ROAD FOR 0.8 MI (1.3 KM) TO THE MARK
AH8768' ON THE RIGHT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A DEPTH OF
AH8768' 40.3 FT (12.3 M) WITH A LOGO CAP FLUSH WITH THE GROUND AND LEVEL WITH
AH8768' KICCO ROAD, THE DATUM POINT IS RECESSED 0.4 FT (12.2 CM) BELOW THE
AH8768' LEVEL OF THE LOGO CAP. LOCATED 37.5 FT (11.4 M) SOUTHWEST OF THE
AH8768' APPROXIMATE CENTERLINE OF KICCO ROAD AND 1.0 FT (0.3 M) NORTHWEST OF A
AH8768' CARSONITE WITNESS POST. NOTE ACCESS TO DATUM POINT IS HAD THROUGH A
AH8768' 5-INCH LOGO CAP. FOR KEY CONTACT SOUTH FLORIDA WATER MANAGEMENT
AH8768' DISTRICT AT 561-686-8800.

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



South Florida Water Management District Benchmark Database

Report run on: February 25, 2008 6:56 AM

Designation: Z460	Latitude: 274456.000	Scaled values only
County: POLK	Longitude: 811101.000	
USGS Quad: FT.KISSIMMEE NW	Monument By: FL DEPT OF ENVIR PROT	
Project: LKBA2B WELL SITE	Year: 1997	
Sec: 25 Twp: 31 Rge: 31	Type: V	
Status: GOOD	Stamping: Z 460 1997	
NAD 1927 Coordinates:	Party Chief:	
N =	Field Book	
E =	Page:	
Adjustment:	NGVD 1929	
NAD 1983 Coordinates:	Elevation: 55.114	
X =	Order: 2	
Y =	Class: I	
Adjustment:	NAVD 1988	
Order:	Elevation: 53.930	
Class:	Order: 2	
	Class: I	

Description:

OLD NGVD 1929 ELEVATION = 55.15
 ***** RECOVERY NOTE *****
 3/6/2007 RAGER NICK MILLER INC FIELDBOOK19 PAGE 53 BM Z460
 5/6/1999 PURPERA OF 3001 INC., A CONTRACTOR FOR THE CORPS OF ENGINEERS,
 FIELD BOOK #1 99-133, PAGE 16, Z 460 (1997) EL. 55.24 NGVD 29, A
 STAINLESS STEEL ROD WITH ACCESS CAP STAMPED "Z 460 1997"

THE NGS DATA SHEET
 DATABASE = SYBASE ,PROGRAM = DATASHEET, VERSION = 6.20
 STARTING DATASHEET RETRIEVAL...
 1 NATIONAL GEODETIC SURVEY, RETRIEVAL DATE = MAY 24, 2000
 AH8768 *****
 AH8768 DESIGNATION - Z 460
 AH8768 PID - AH8768
 AH8768 STATE/COUNTY- FL/POLK
 AH8768 USGS QUAD - FORT KISSIMMEE NW (1973)
 AH8768
 AH8768 *CURRENT SURVEY CONTROL
 AH8768
 AH8768* NAD 83(1986)- 27 44 56. (N) 081 11 01. (W) SCALED
 AH8768* NAVD 88 - 16.438 (METERS) 53.93 (FEET) ADJUSTED
 AH8768
 AH8768 GEOID HEIGHT- -26.67 (METERS) GEOID99
 AH8768 DYNAMIC HT - 16.413 (METERS) 53.85 (FEET) COMP
 AH8768 MODELED GRAV- 979,157.5 (MGAL) NAVD 88
 AH8768
 AH8768 VERT ORDER - SECOND CLASS I
 AH8768
 AH8768.THE HORIZONTAL COORDINATES WERE SCALED FROM A TOPOGRAPHIC MAP AND HAVE
 AH8768.AN ESTIMATED ACCURACY OF +/- 6 SECONDS.
 AH8768
 AH8768.THE ORTHOMETRIC HEIGHT WAS DETERMINED BY DIFFERENTIAL LEVELING
 AH8768.AND ADJUSTED BY THE NATIONAL GEODETIC SURVEY IN JULY 1999.



South Florida Water Management District Benchmark Database

Report run on: February 25, 2008 6:56 AM

AH8768
 AH8768.THE GEOID HEIGHT WAS DETERMINED BY GEOID99.
 AH8768
 AH8768.THE DYNAMIC HEIGHT IS COMPUTED BY DIVIDING THE NAVD 88
 AH8768.GEOPOTENTIAL NUMBER BY THE NORMAL GRAVITY VALUE COMPUTED ON THE
 AH8768.GEODETIC REFERENCE SYSTEM OF 1980 (GRS 80) ELLIPSOID AT 45
 AH8768.DEGREES LATITUDE (G = 980.6199 GALS.).
 AH8768
 AH8768.THE MODELED GRAVITY WAS INTERPOLATED FROM OBSERVED GRAVITY VALUES.
 AH8768
 AH8768; NORTH EAST UNITS ESTIMATED ACCURACY
 AH8768;SPC FL W - 378,650. 280,480. MT (+/- 180 METERS SCALED)
 AH8768
 AH8768 SUPERSEDED SURVEY CONTROL
 AH8768
 AH8768.NO SUPERSEDED SURVEY CONTROL IS AVAILABLE FOR THIS STATION.
 AH8768
 AH8768_MARKER: F = FLANGE-ENCASED ROD
 AH8768_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
 AH8768_STAMPING: Z 460 1997
 AH8768_PROJECTION: FLUSH
 AH8768_MAGNETIC: N = NO MAGNETIC MATERIAL
 AH8768_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 AH8768_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AH8768+SATELLITE: SATELLITE OBSERVATIONS - 1997
 AH8768_ROD/PIPE-DEPTH: 12.3 METERS
 AH8768
 AH8768 HISTORY - DATE CONDITION RECOV. BY
 AH8768 HISTORY - 1997 MONUMENTED FLDEP
 AH8768
 AH8768 STATION DESCRIPTION
 AH8768
 AH8768'DESCRIBED BY FL DEPT OF ENV PRO 1997 (JLM)
 AH8768'THE MARK IS ABOUT 30.0 MI (48.3 KM) SOUTHEAST OF LAKE WALES, 0.6 MI
 AH8768'(1.0 KM) WEST OF THE KISSIMMEE RIVER ON KICCO ROAD IN SECTION 25,
 AH8768'TOWNSHIP 31 SOUTH, RANGE 31 EAST. TO REACH THE MARK FROM THE
 AH8768'INTERSECTION OF STATE ROAD 27 UNDERPASS AND STATE ROAD 60 IN LAKE
 AH8768'WALES, GO EAST-SOUTHEAST ON STATE ROAD 60 FOR 25.7 MI (41.4 KM) TO THE
 AH8768'JUNCTION OF RIVER RANCH BOULEVARD ON THE RIGHT, TURN RIGHT ON RIVER
 AH8768'RANCH BOULEVARD AND GO SOUTHEAST FOR 2.55 MI (4.10 KM) TO THE GUARD
 AH8768'HOUSE AT THE ENTRANCE TO RIVER RANCH, CONTINUE SOUTH ON RIVER RANCH
 AH8768'BOULEVARD FOR 0.3 MI (0.5 KM) TO THE JUNCTION OF KICCO ROAD ON THE
 AH8768'RIGHT, TURN RIGHT ON KICCO ROAD AND GO SOUTHEAST FOR 0.2 MI (0.3 KM)
 AH8768'TO FOUR SETS OF DOUBLE UNLOCKED GATES, CONTINUE SOUTH ON KICCO ROAD
 AH8768'FOR 0.5 MI (0.8 KM) TO ANOTHER UNLOCKED METAL GATE, CONTINUE SOUTHEAST
 AH8768'ON KICCO ROAD FOR 0.2 MI (0.3 KM) TO THE JUNCTION OF ROAD ON THE LEFT,
 AH8768'CONTINUE SOUTH-SOUTHEAST ON KICCO ROAD FOR 0.8 MI (1.3 KM) TO THE MARK
 AH8768'ON THE RIGHT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A DEPTH OF
 AH8768'40.3 FT (12.3 M) WITH A LOGO CAP FLUSH WITH THE GROUND AND LEVEL WITH
 AH8768'KICCO ROAD, THE DATUM POINT IS RECESSED 0.4 FT (12.2 CM) BELOW THE
 AH8768'LEVEL OF THE LOGO CAP. LOCATED 37.5 FT (11.4 M) SOUTHWEST OF THE
 AH8768'APPROXIMATE CENTERLINE OF KICCO ROAD AND 1.0 FT (0.3 M) NORTHWEST OF A
 AH8768'CARSONITE WITNESS POST. NOTE ACCESS TO DATUM POINT IS HAD THROUGH A
 AH8768'5-INCH LOGO CAP. FOR KEY CONTACT SOUTH FLORIDA WATER MANAGEMENT
 AH8768'DISTRICT AT 561-686-8800.
 ELAPSED TIME = 00:00:02

The NGS Data Sheet

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



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PROGRAM = datasheet95, VERSION = 8.8
1      National Geodetic Survey,  Retrieval Date =
AH8769 *****
AH8769 DESIGNATION - KR 1559
AH8769 PID - AH8769
AH8769 STATE/COUNTY- FL/POLK
AH8769 COUNTRY - US
AH8769 USGS QUAD - FORT KISSIMMEE NW (1972)
AH8769
AH8769 *CURRENT SURVEY CONTROL
AH8769
AH8769* NAD 83(1986) POSITION- 27 44 51. (N) 081 10 59. (W) SCALED
AH8769* NAVD 88 ORTHO HEIGHT - 16.568 (meters) 54.36 (feet) ADJUSTED
AH8769
AH8769 GEOID HEIGHT - -26.670 (meters) GEOID12B
AH8769 DYNAMIC HEIGHT - 16.543 (meters) 54.27 (feet) COMP
AH8769 MODELED GRAVITY - 979,157.6 (mgal) NAVD 88
AH8769
AH8769 VERT ORDER - SECOND CLASS I
AH8769
AH8769.The horizontal coordinates were scaled from a topographic map and have
AH8769.an estimated accuracy of +/- 6 seconds.
AH8769.
AH8769.The orthometric height was determined by differential leveling and
AH8769.adjusted by the NATIONAL GEODETIC SURVEY
AH8769.in July 1999.
AH8769
AH8769.Significant digits in the geoid height do not necessarily reflect accuracy.
AH8769.GEOID12B height accuracy estimate available here.
AH8769
AH8769.The dynamic height is computed by dividing the NAVD 88
AH8769.geopotential number by the normal gravity value computed on the
AH8769.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AH8769.degrees latitude (g = 980.6199 gals.).
AH8769
AH8769.The modeled gravity was interpolated from observed gravity values.
AH8769
AH8769;
AH8769;SPC FL W - 378,500. 280,540. MT (+/- 180 meters Scaled)
AH8769
AH8769 SUPERSEDED SURVEY CONTROL
AH8769
AH8769.No superseded survey control is available for this station.
AH8769
AH8769_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML819692(NAD 83)
AH8769
AH8769_MARKER: DD = SURVEY DISK
AH8769_SETTING: 9 = SET IN PREFABRICATED CONCRETE POST IMBEDDED IN GROUND
AH8769_STAMPING: KR-1559 GPS 1994 JAX. FLA.
AH8769_MARK LOGO: USE
AH8769_MAGNETIC: N = NO MAGNETIC MATERIAL
AH8769_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
AH8769_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AH8769+SATELLITE: SATELLITE OBSERVATIONS - May 06, 2008
AH8769
AH8769 HISTORY - Date Condition Report By
AH8769 HISTORY - 1994 MONUMENTED USE

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AH8769 HISTORY - 19970710 GOOD FLDEP
AH8769 HISTORY - 20080506 GOOD PICKET

AH8769

AH8769 STATION DESCRIPTION

AH8769

AH8769'DESCRIBED BY FL DEPT OF ENV PRO 1997 (JLM)

AH8769'THE MARK IS ABOUT 30.0 MI (48.3 KM) SOUTHEAST OF LAKE WALES, 0.5 MI
AH8769'(0.8 KM) WEST OF THE KISSIMMEE RIVER ON KICCO ROAD IN SECTION 25,
AH8769'TOWNSHIP 31 SOUTH, RANGE 31 EAST. TO REACH THE MARK FROM THE
AH8769'INTERSECTION OF STATE ROAD 27 UNDERPASS AND STATE ROAD 60 IN LAKE
AH8769'WALES, GO EAST-SOUTHEAST ON STATE ROAD 60 FOR 25.7 MI (41.4 KM) TO THE
AH8769'JUNCTION OF RIVER RANCH BOULEVARD ON THE RIGHT, TURN RIGHT ON RIVER
AH8769'RANCH BOULEVARD AND GO SOUTHEAST FOR 2.55 MI (4.10 KM) TO THE GUARD
AH8769'HOUSE AT THE ENTRANCE TO RIVER RANCH, CONTINUE SOUTH ON RIVER RANCH
AH8769'BOULEVARD FOR 0.3 MI (0.5 KM) TO THE JUNCTION OF KICCO ROAD ON THE
AH8769'RIGHT, TURN RIGHT ON KICCO ROAD AND GO SOUTHEAST FOR 0.2 MI (0.3 KM)
AH8769'TO FOUR SETS OF DOUBLE UNLOCKED GATES, CONTINUE SOUTH ON KICCO ROAD
AH8769'FOR 0.5 MI (0.8 KM) TO ANOTHER UNLOCKED METAL GATE, CONTINUE SOUTHEAST
AH8769'ON KICCO ROAD FOR 0.05 MI (0.08 KM) TO A LOCKED METAL GATE, THE
AH8769'ENTRANCE TO PROPERTY OWNED BY THE SOUTH FLORIDA WATER MANAGEMENT
AH8769'DISTRICT, CONTINUE SOUTHEAST ON A SHELL ROAD (KICCO ROAD) FOR 0.2 MI
AH8769'(0.3 KM) TO THE JUNCTION OF A ROAD ON THE LEFT, CONTINUE
AH8769'SOUTH-SOUTHEAST ON THE SHELL ROAD (KICCO ROAD) FOR 0.95 MI (1.53 KM)
AH8769'TO THE MARK ON THE LEFT, A STANDARD CORP OF ENGINEERS BRASS DISK SET
AH8769'IN CONCRETE INSIDE OF A 6-INCH PVC PIPE INBEDDED IN THE GROUND,
AH8769'PROJECTING 0.2 FT (6.1 CM) ABOVE THE LEVEL OF THE GROUND AND 0.6 FT
AH8769'(18.3 CM) BELOW THE LEVEL OF THE SHELL ROAD. LOCATED 200.0 FT (61.0 M)
AH8769'SOUTH OF AN 18-INCH CULVERT UNDER THE SHELL ROAD (KICCO ROAD) , 17.7
AH8769'FT (5.4 M) EAST-SOUTHEAST OF THE APPROXIMATE CENTERLINE OF THE SHELL
AH8769'ROAD (KICCO ROAD) , 2.0 FT (0.6 M) WEST-NORTHWEST OF A METAL WITNESS
AH8769'POST AND 0.75 FT (22.86 CM) NORTHWEST OF A CARSONITE WITNESS POST.
AH8769'NOTE FOR ACCESS AND KEY CONTACT SOUTH FLORIDA WATER MANAGEMENT
AH8769'DISTRICT AT 561-686-8800.

AH8769

AH8769 STATION RECOVERY (2008)

AH8769

AH8769'RECOVERY NOTE BY PICKETT AND ASSOCIATES 2008 (JS)

AH8769'RECOVERED IN GOOD CONDITION.

*** retrieval complete.

Elapsed Time = 00:00:03



GW2
KRE-FM
(KRREFM)

GW3
KRE-FD
(KRREFD)

GW1
KRREFS

KRREFD



10/26/2004

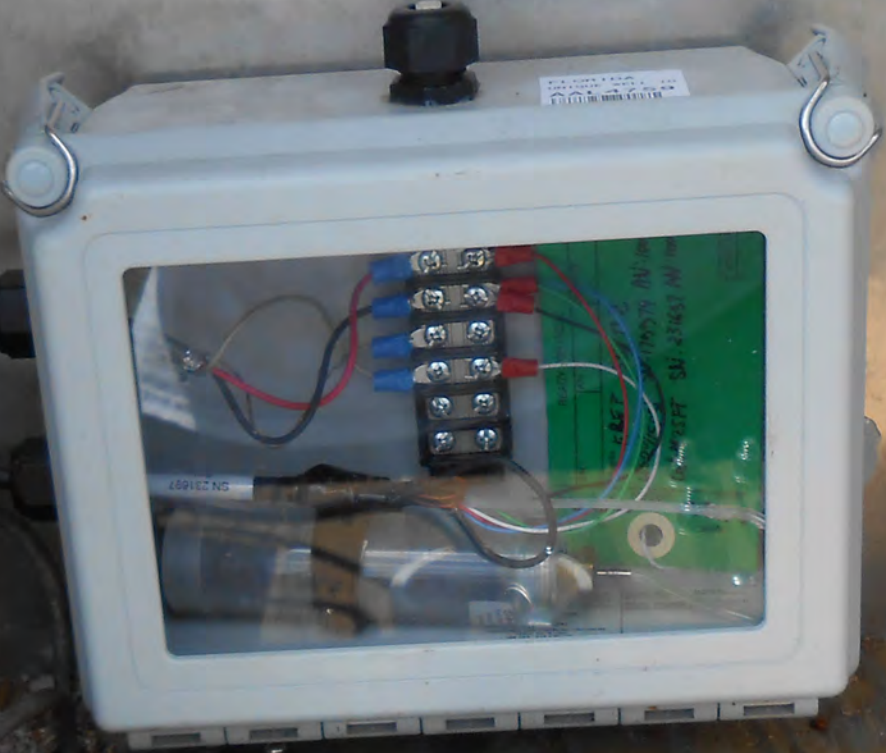


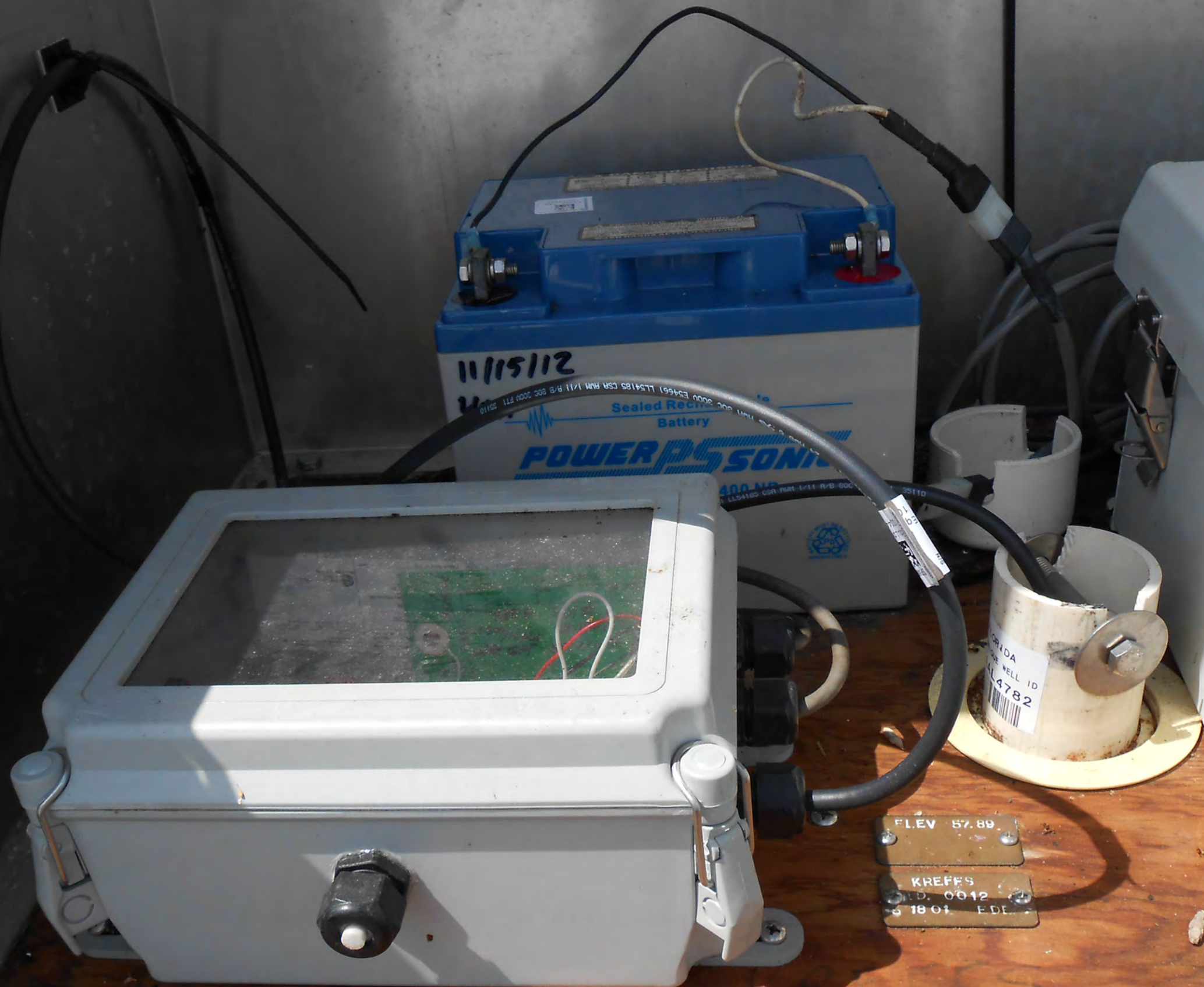
LEV 57.75

KREFFM
ID. 0011
5 18 01 EDE

FLORIDA UNIQUE WELL ID
AAL4759

FOR INFORMATION CALL FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION AT (888) 245-2891





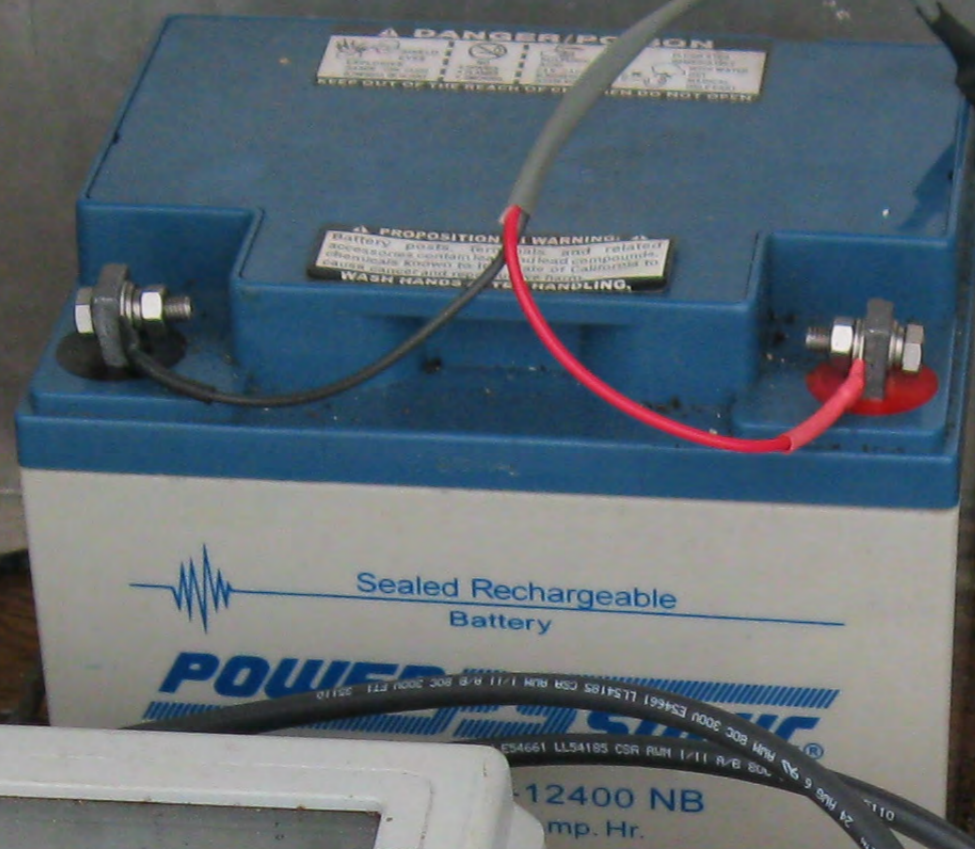
1115112

Sealed Rechargeable
Battery
POWER SONIC

CANADA
WELL ID
4782

FLEV 57.89

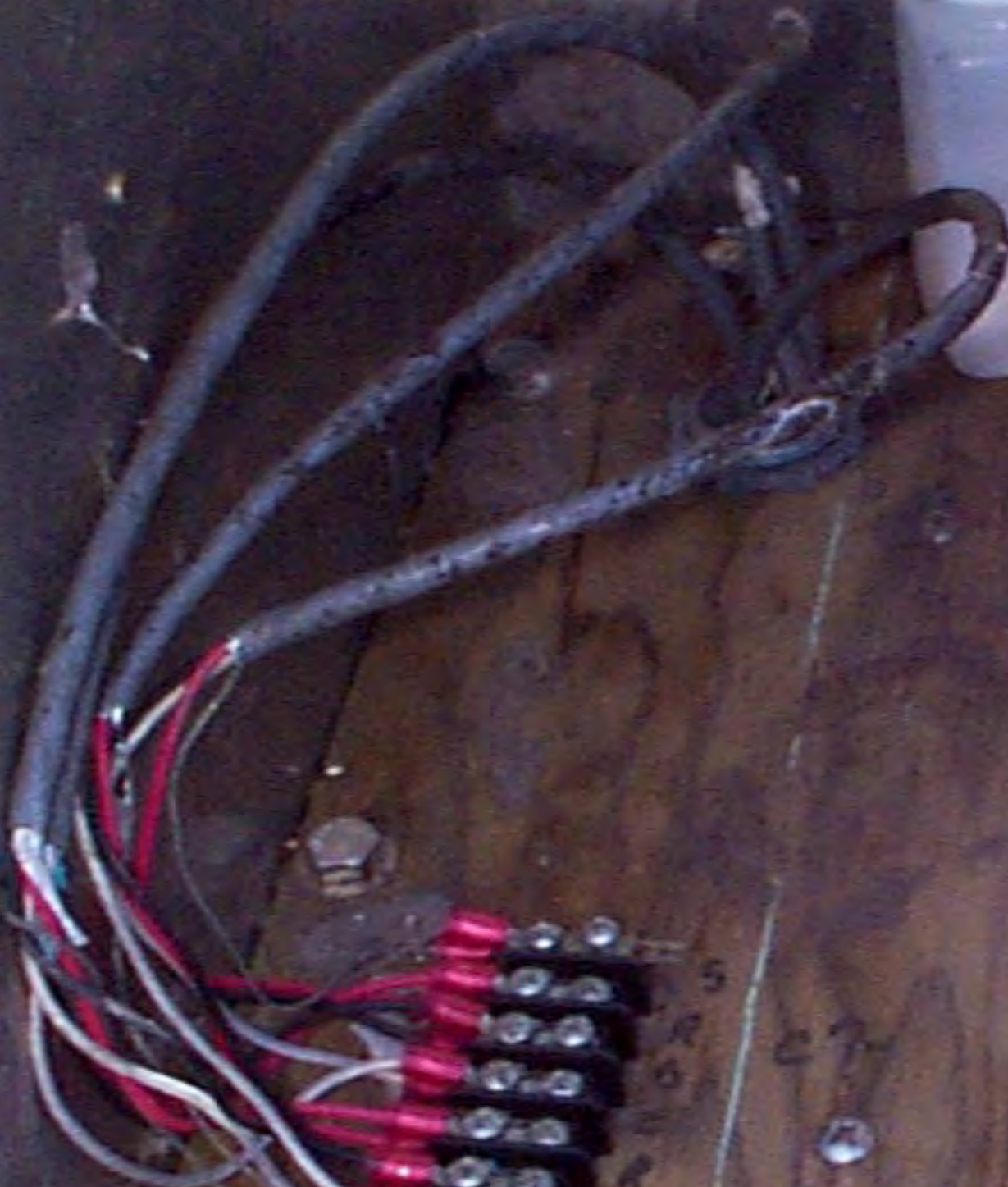
KREFFS
D. 0012
1801 EDE



FLEV 57.89
KREFFS
NO. 0012
1801 FDE



04/29/2011 16:20



C7
C6
C3
C5



KREFFD



KREFFM

C2

C3

R

3

3

GENERAL SITE INFORMATION	
STATION ACRONYM	KREF
LATITUDE/ LONGITUDE	N27 44 56.4 W81 10 51.3

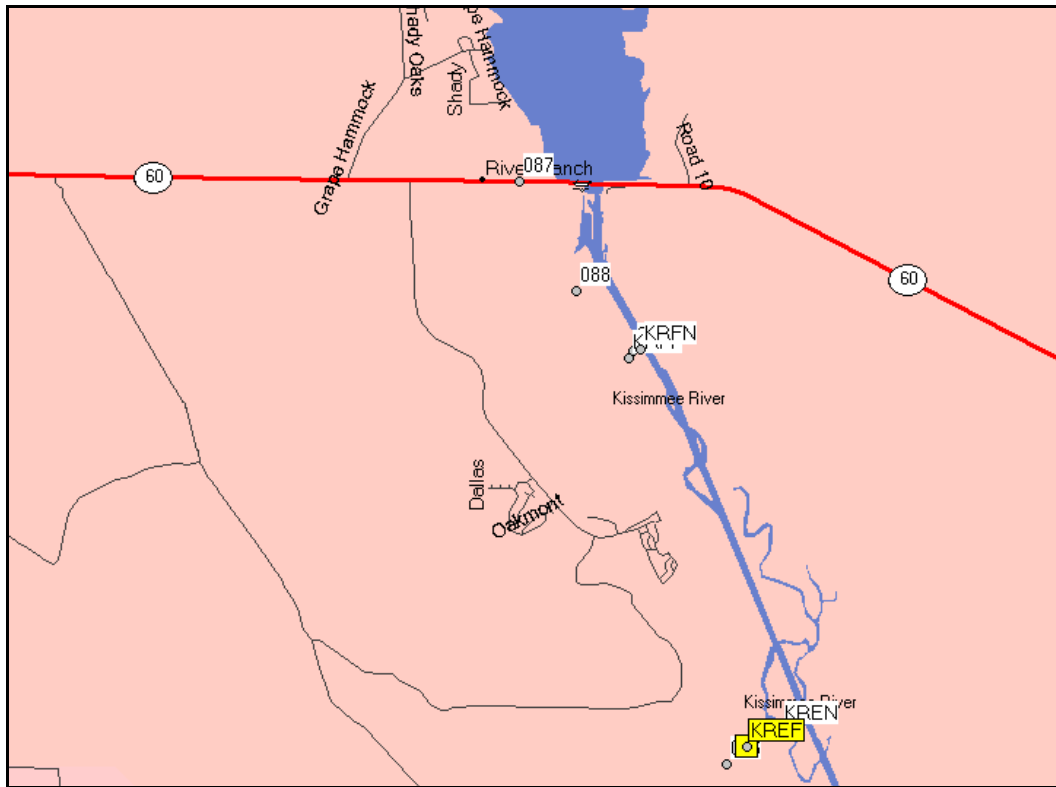


SITE SPECIFIC REPORTING REQUIREMENTS	
SITE TYPE	Water
STATION ACCESS TYPE	A
REPORTING TYPE	RA
DATA COLLECTION TYPE	Radio Frequency Communication

Station Access Type	SB	Small Boat = Remote
	B	Boat = Water
	A	Airboat = Water
	L	Land = Land
	R	Remote = Remote

Reporting Type	Description	Due Dates
QT	Quarterly Report	2/15, 5/15, 8/15, 11/15
EA	EAA Conditions Report	5/6, 10/6
RA	CR 10 Rainfall Report	15 th of each month
QE	Quarterly Report & EAA Conditions Report	2/15, 5/5, 8/15, 10/6, 11/15
QR	Quarterly Report & CR 10 Rainfall Report	15 th of each month

VICINITY MAP

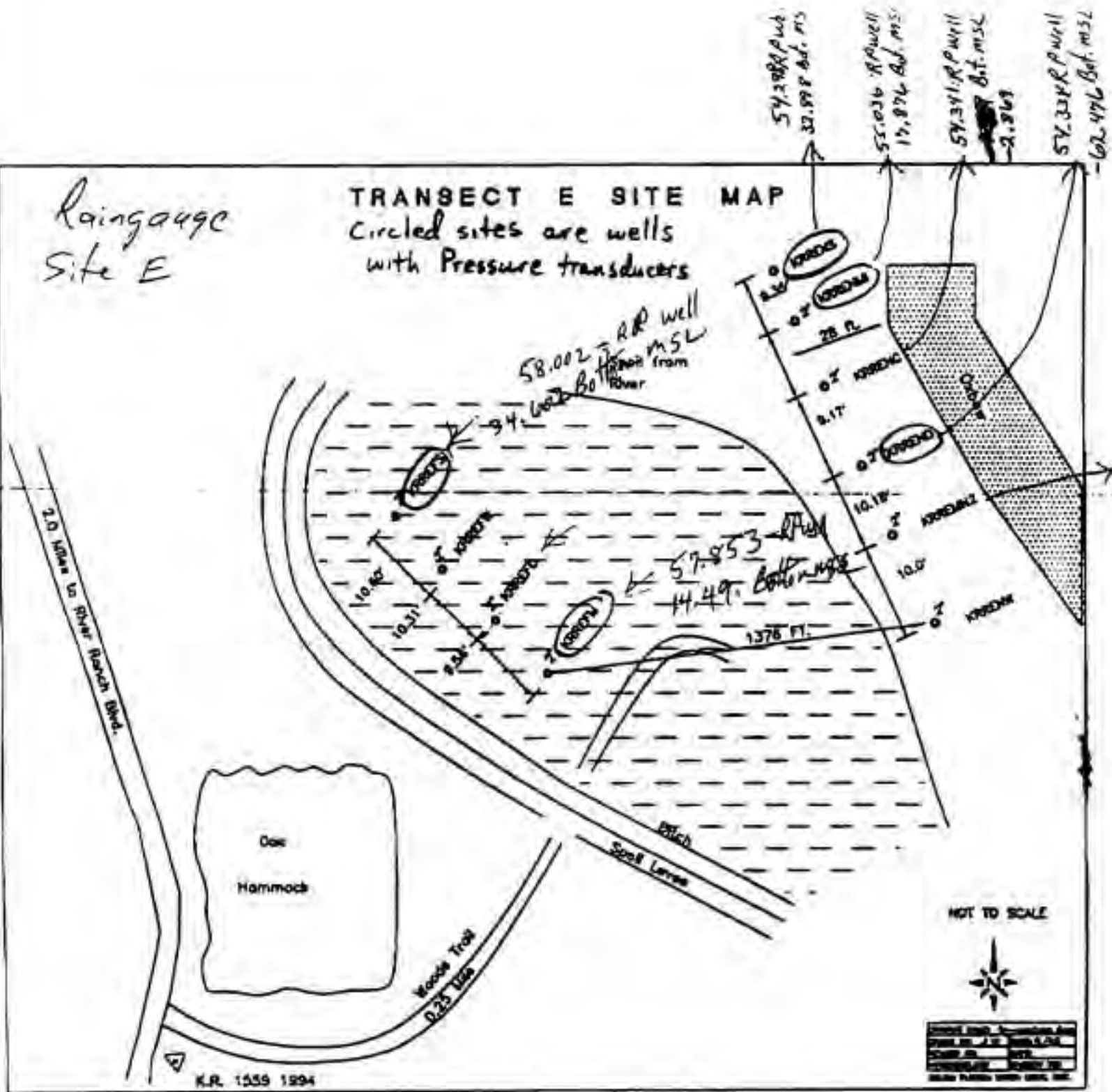


DIRECTIONS TO LOCATION

From Hwy 60, take River Ranch Blvd, follow road to the end to West Gate River Ranch, go through check-in station and turn right (south) at KICCO Management Rd (dirt road), follow dirt road past gates, the road meanders to a closed gate with a green Pavilion (KICCO Management Area sign), continue past Gate 8 and veer to the left through another gate, continue on dirt road to Way Point 86 (N27 44 50.1 W81 10 59.4), head northeast ~980 feet through oak trees to culvert crossing at (N27 44 53.8 W81 10 53.3), continue east~100' to site.

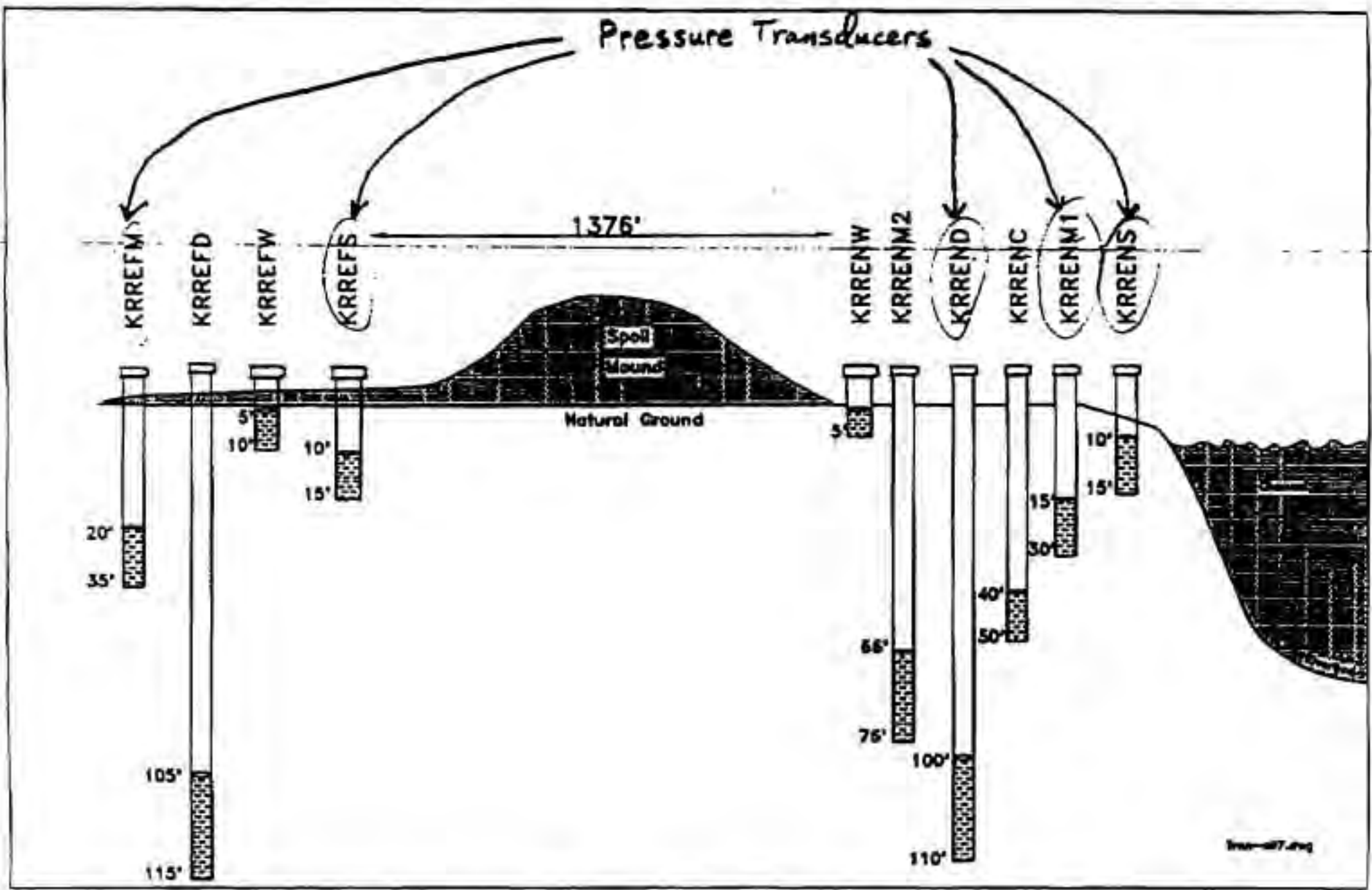
Rain gauge
Site E

TRANSECT E SITE MAP
Circled sites are wells
with Pressure transducers



20'
below
Orig.
TOW
54.54 R.P. well
-28.5 Bot. MSL

Well #2
119.93
.35
120.28



Well Layout and Construction Details for Transect E, West Bank of River Channel (Pool A)

4/3/97

KRR - SITE E
FAR WELLS
F.S.

RP ON 2" WEL

53.420

B.S.

H.I.

4.821

58.241

0.239

F-16 WELL

0.234

58.002

0.388

CR10 WELL

58.007

SHAWON WELL

57.853

CHECK LEVEL

0.490

58.343

4.921

53.422

CLOSURE = .002

GENERAL SITE INFORMATION

STATION ACRONYM	KREN
LATITUDE/ LONGITUDE	N27 45 02.6 W81 10 37.9



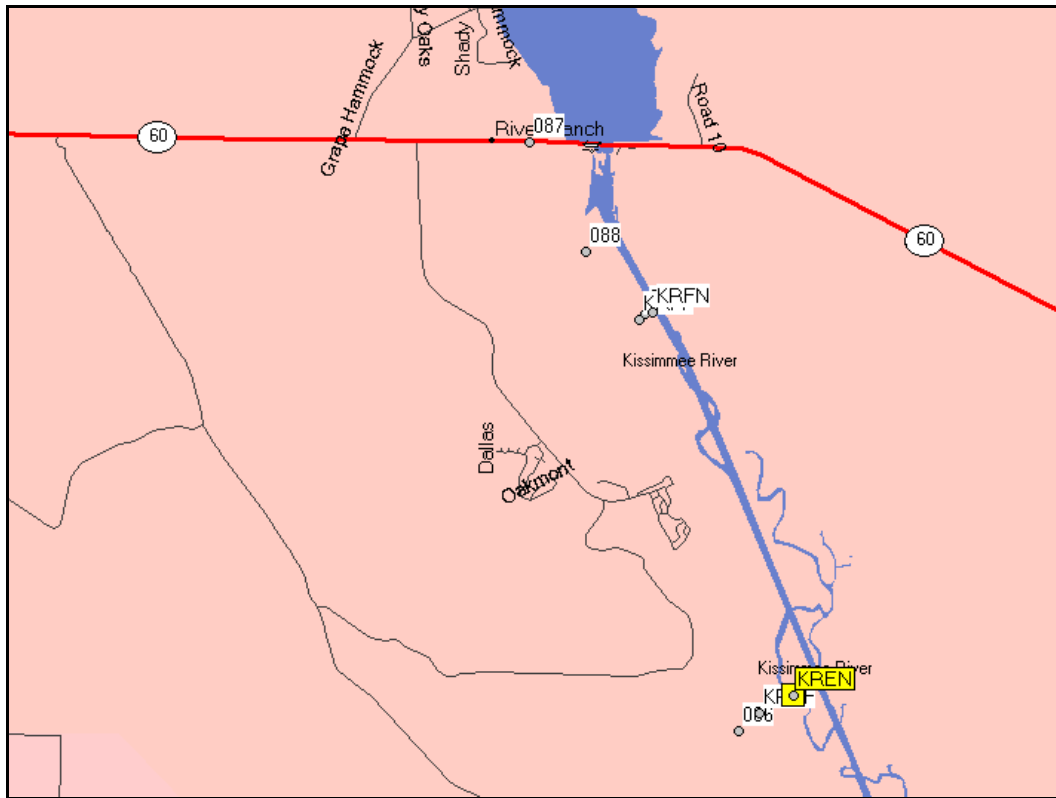
SITE SPECIFIC REPORTING REQUIREMENTS

SITE TYPE	Water
STATION ACCESS TYPE	A
REPORTING TYPE	Not Mandated
DATA COLLECTION TYPE	Radio Frequency Communication

Station Access Type	SB	Small Boat = Remote
	B	Boat = Water
	A	Airboat = Water
	L	Land = Land
	R	Remote = Remote

<u>Reporting Type</u>	<u>Description</u>	<u>Due Dates</u>
QT	Quarterly Report	2/15, 5/15, 8/15, 11/15
EA	EAA Conditions Report	5/6, 10/6
RA	CR 10 Rainfall Report	15 th of each month
QE	Quarterly Report & EAA Conditions Report	2/15, 5/5, 8/15, 10/6, 11/15
QR	Quarterly Report & CR 10 Rainfall Report	15 th of each month

VICINITY MAP



DIRECTIONS TO LOCATION

From Hwy 60, take River Ranch Blvd, follow road to the end to West Gate River Ranch, go through check-in station and turn right (south) at KICCO Management Rd (dirt road), follow dirt road past gates, the road meanders to a closed gate with a green Pavilion (KICCO Management Area sign), continue past Gate 8 and veer to the left through another gate, continue on dirt road to Way Point 86 (N27 44 50.1 W81 10 59.4), head northeast ~980 feet through oak trees to culvert crossing at (N27 44 53.8 W81 10 53.3), go past site KREF (N27 44 56.4 W81 10 51.3) and continue heading northeast for ~0.255 miles over hill to site.



KREN

ELEV 5422

KRENN'S
ID. 0018
5 18 01 EDE



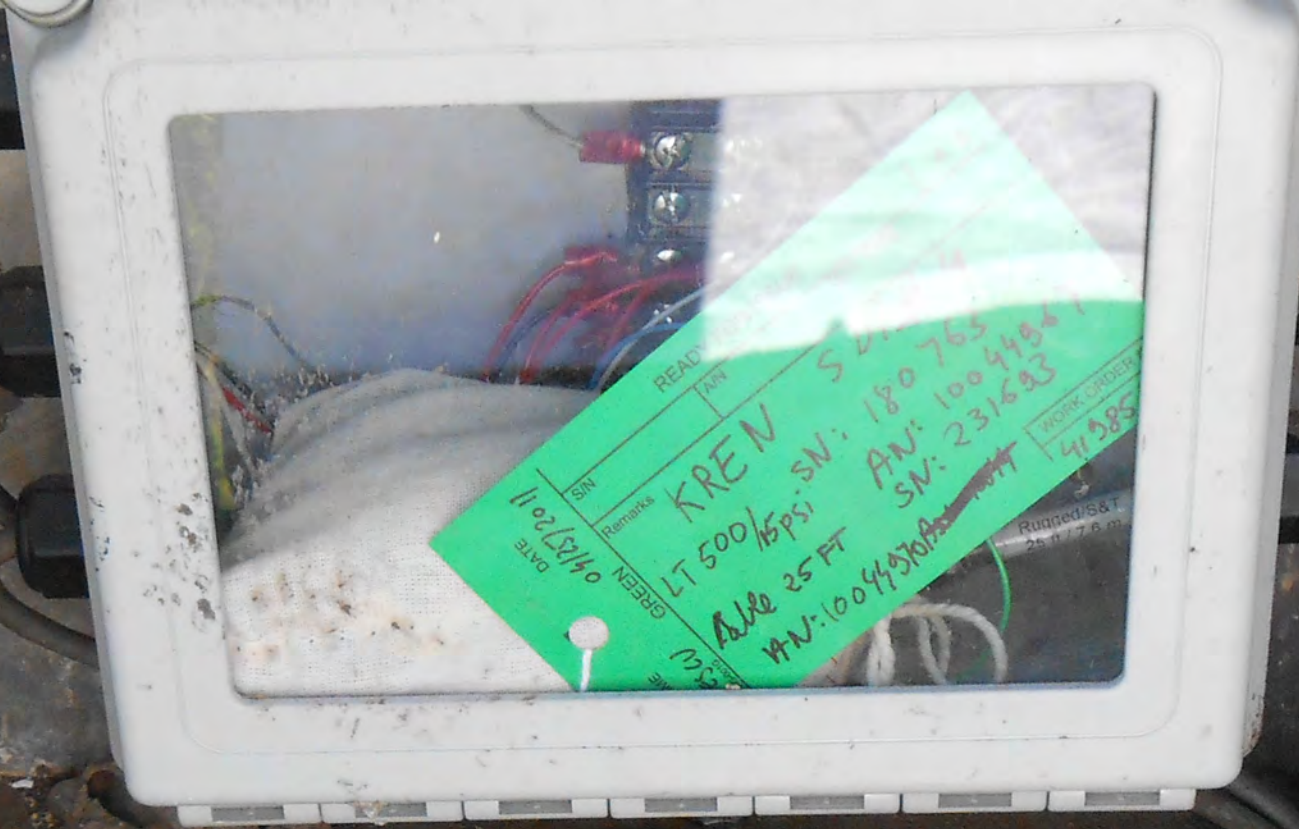
ELEV 54 29

KRENNM1
ID 0016
5 18 01 IDE



1.5

Handwritten markings on the wood, including "KRENNM1" and "LAPMO-T".



26
KRE





ELEV 54.28

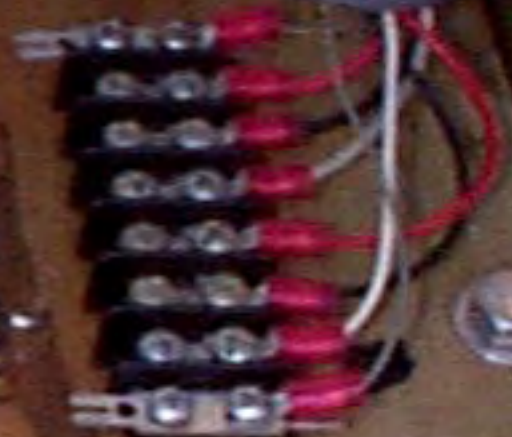
KRENND
ID. 0015
5 18 01 EDE



20

10

10



C3
S



KRE - NM2

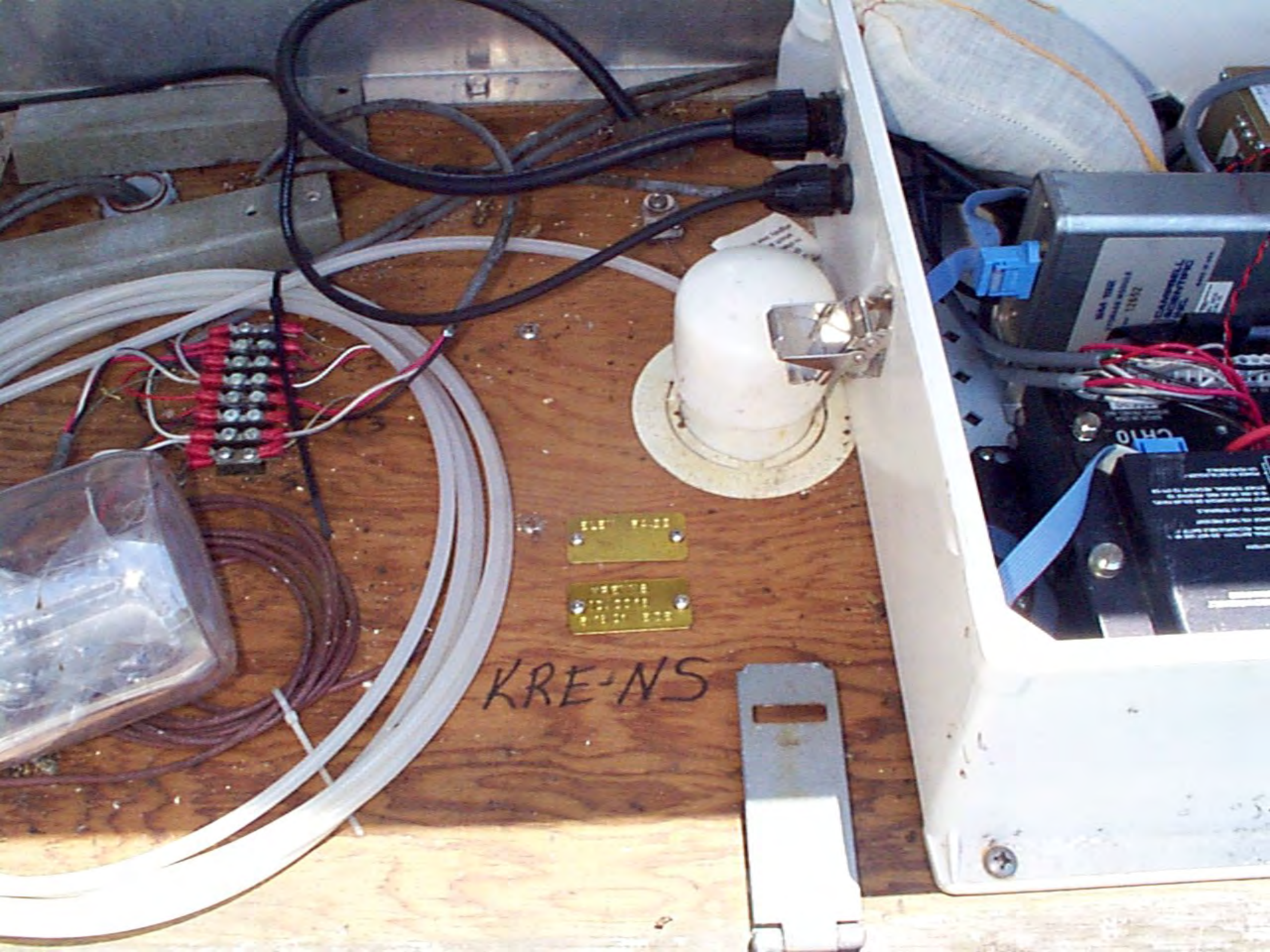




KRE-NC

REV 1.0
KRE-NC

12V
10V
9V
8V
7V
6V
5V
4V
3V
2V
1V

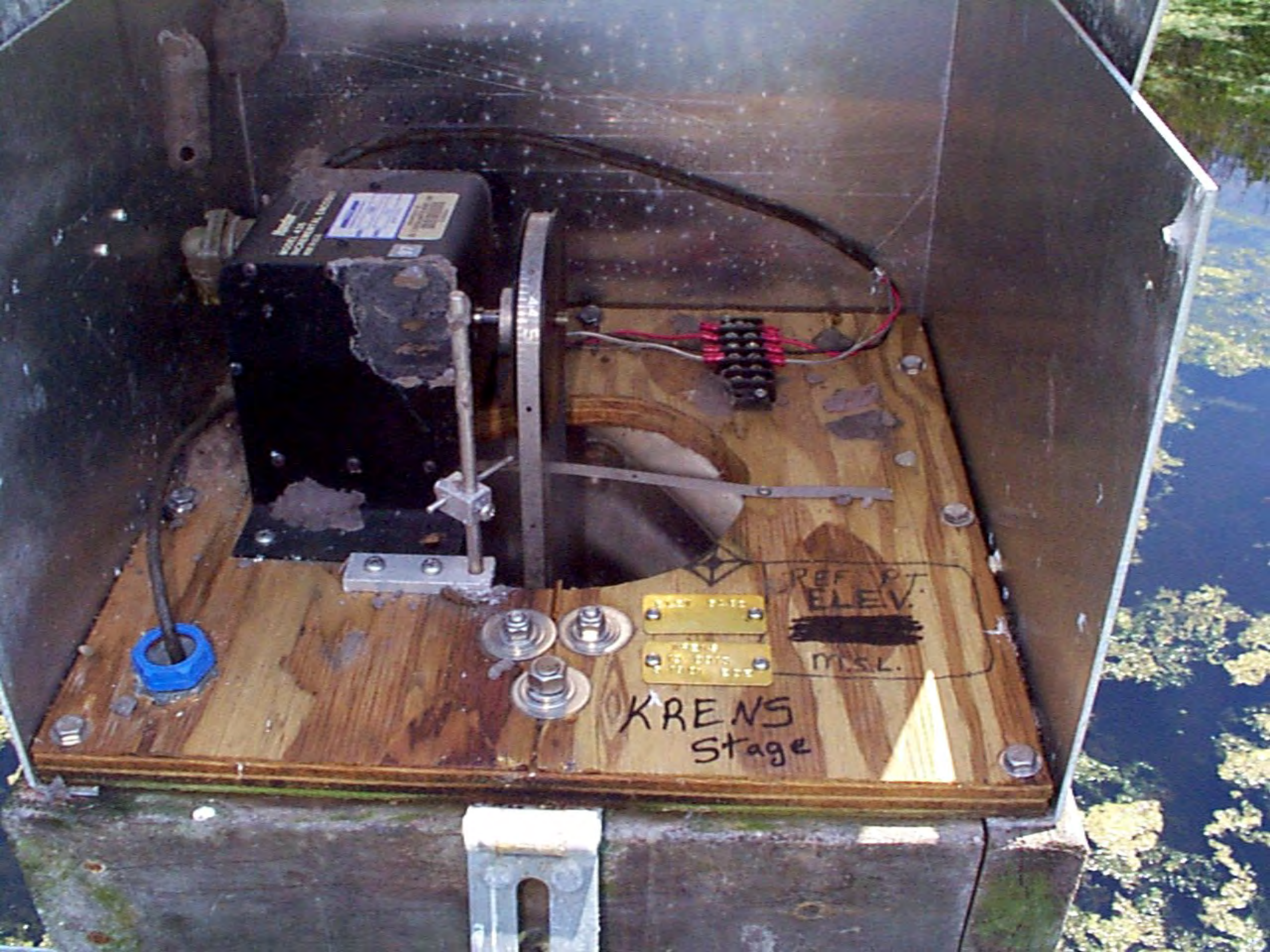


KRE-NS

115V AC
100W

115V AC
100W
115V AC
100W

CH10



Motor
MODEL 435
CONCRETE ENGINE

4444

REF. PT.
ELEV.
~~XXXXXXXXXX~~
M.S.L.

KRENS
Stage

REF. PT.
ELEV.
XXXXXXXXXX