



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

SCADA RTU Station Name: MF37 GWFL1 MF37 GWFL2	DB Hydro Station Name: MF37_U MF32_L	DB Hydro Site Name: MF37	Agency: S.F.W.M.D	Dates of Field Work: 06/18/2020
Party Chief: N.Strickland	Field Book MISC FB 7G	Page(s): 62	Report Prepared by: A.SCHAUER	
Surveyors Notes:		Surveyor's Certification:		

SITE SPECIFIC DATA

Reference Elevation(s) (NAVD88): MF37_U = 24.12 feet MF37_L = 27.00 feet	Site Benchmark(s)/Elevation(s) (NAVD88): MF37 2020 = 22.40 feet	Source Benchmark(s) /Elev(s) (NAVD88): S153 1995 = 31.43 feet
Verification Port Elev(s) (NAVD88): MF37_U = 24.10 feet MF37_L = 27.03 feet	Ground Elevation (NAVD88): NE Ground = 22.08 feet SE Ground = 21.28 feet SW Ground = 21.88 feet NW Ground = 21.88 feet	Pad Elevation (NAVD88): NE Pad = 22.37 feet SE Pad = 22.38 feet SW Pad = 22.38 feet NW Pad = 22.35 feet
Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29): +1.19 feet		

GEOGRAPHIC DATA

Section 14 Township 40 South Range 37 East				
<u> </u> Well(s) <u> </u> Gate(s) <u> </u> Benchmark(s)	Latitude: MF37_U = 26°59'28.9" MF37_L = 26°59'28.9"	Longitude: MF37_U = -80°36'16.4" MF37_L = -80°36'16.3"	Northing (Y): N/A	Easting (X): N/A
Position (horizontal) Source: ESRI Pick Point & Garmin Handheld GPSMAP78				

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

Legend: SFWMD Disk = ● Well(s) = ●



Aerial of Site
Not to scale (ESRI product)

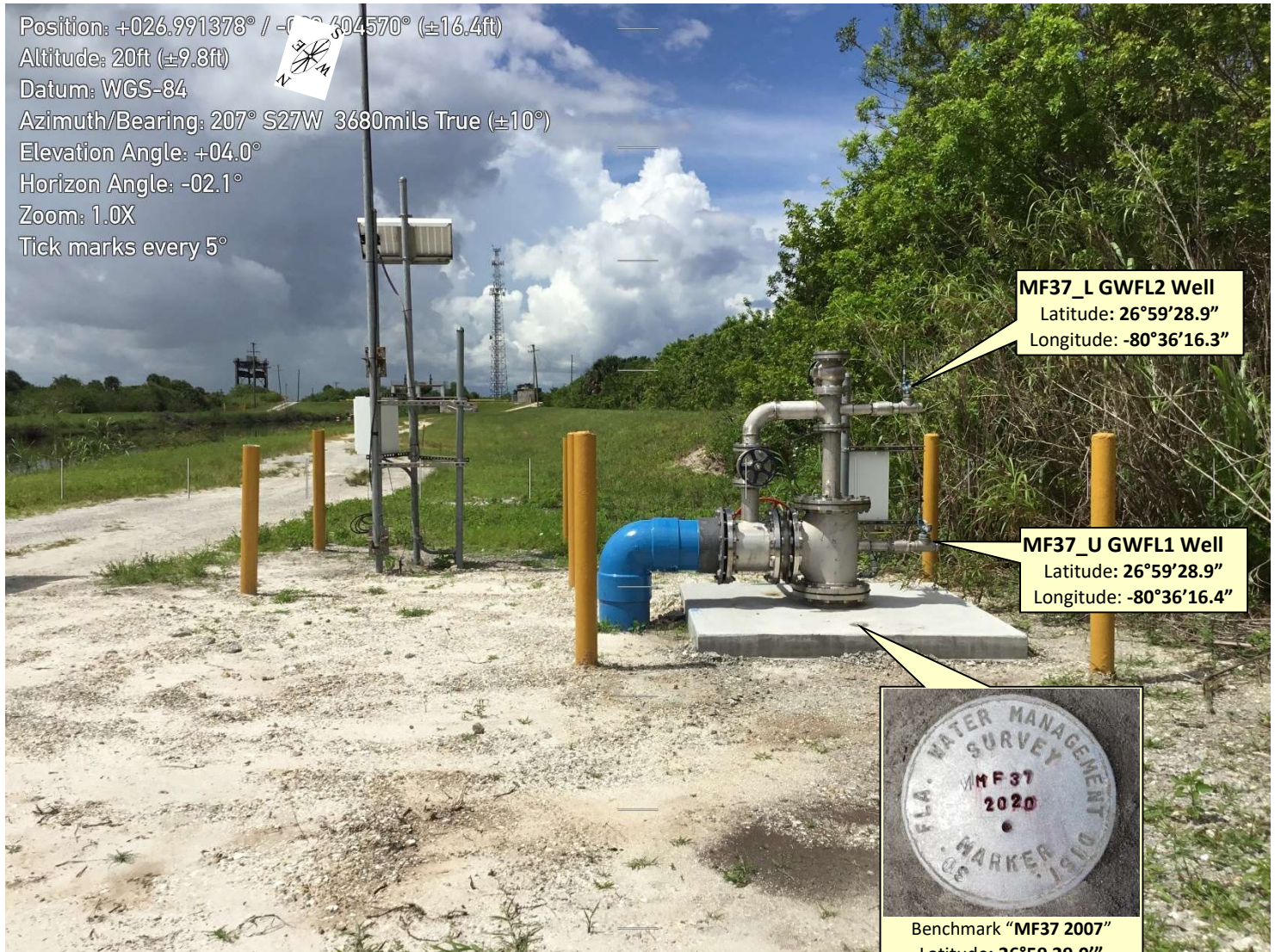


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MF37 GW Well Site

Position: +026.991378° / -80.604570° (±16.4ft)
Altitude: 20ft (±9.8ft)
Datum: WGS-84
Azimuth/Bearing: 207° S27W 3680mils True (±10°)
Elevation Angle: +04.0°
Horizon Angle: -02.1°
Zoom: 1.0X
Tick marks every 5°



MF37_L GWFL2 Well
Latitude: 26°59'28.9"
Longitude: -80°36'16.3"

MF37_U GWFL1 Well
Latitude: 26°59'28.9"
Longitude: -80°36'16.4"



Benchmark "MF37 2007"
Latitude: 26°59'29.0"
Longitude: -80°36'16.3"
El. 22.40 feet NAVD88

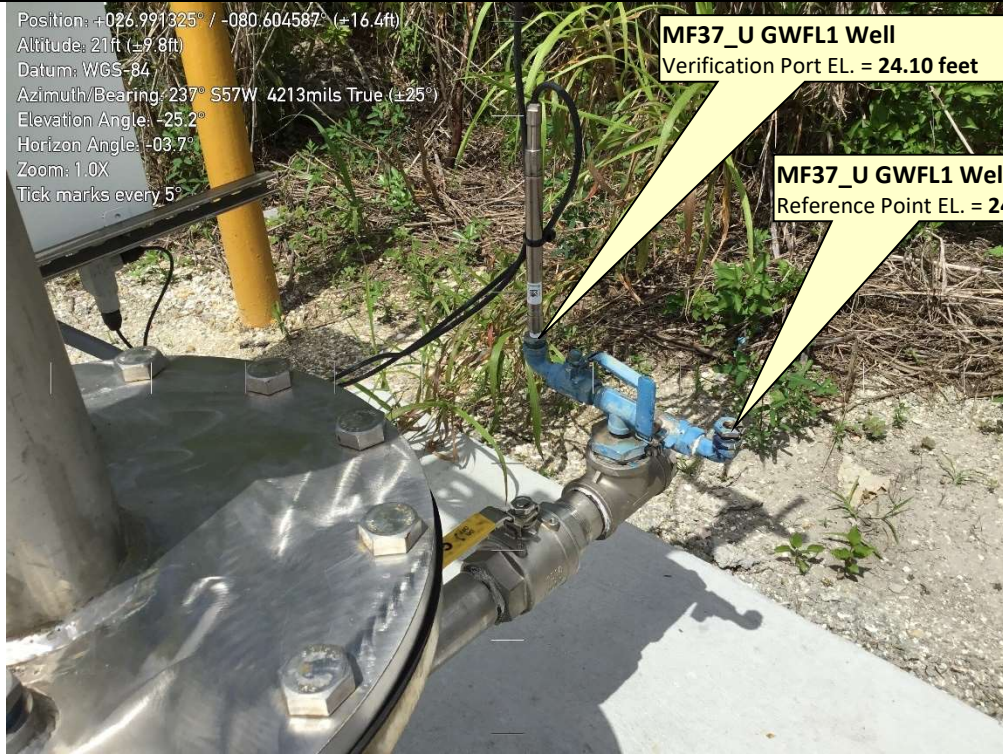


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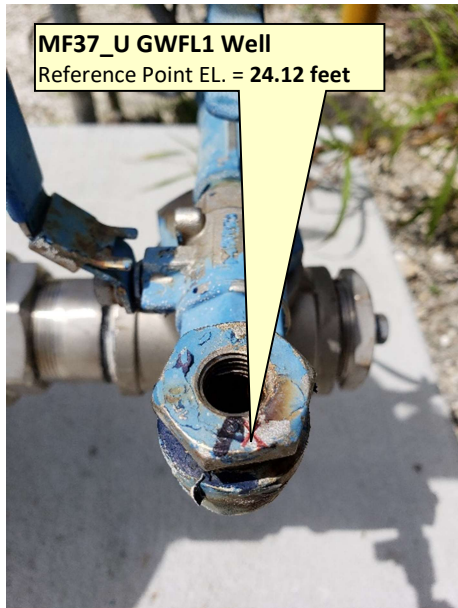
MF37 Upper Well

Position: +026.991325° / -080.604587° (±16.4ft)
Altitude: 21ft (±9.8ft)
Datum: WGS-84
Azimuth/Bearing: 237° S57W 4213mils True (±25°)
Elevation Angle: -25.2°
Horizon Angle: -03.7°
Zoom: 1.0X
Tick marks every 5°



MF37_U GWFL1 Well
Verification Port EL. = 24.10 feet

MF37_U GWFL1 Well
Reference Point EL. = 24.12 feet

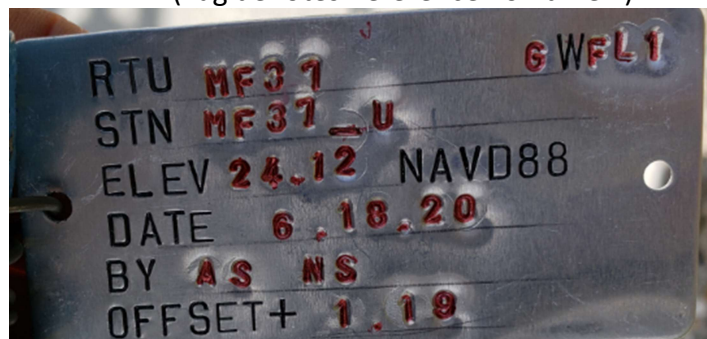


MF37_U GWFL1 Well
Reference Point EL. = 24.12 feet

MF37_U GWFL1 Well
Verification Port EL. = 24.10 feet

MF37_U GWFL1 Well
Verification Port EL. = 24.10 feet

(Tag denotes Reference Point Elev.)





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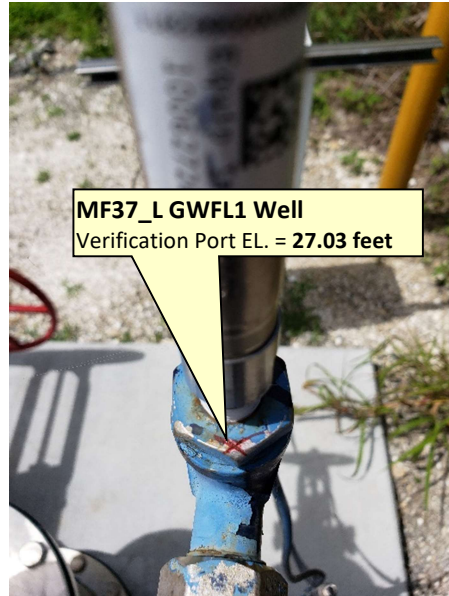
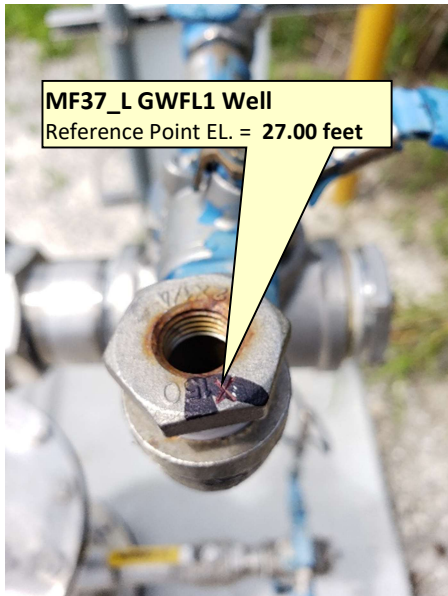
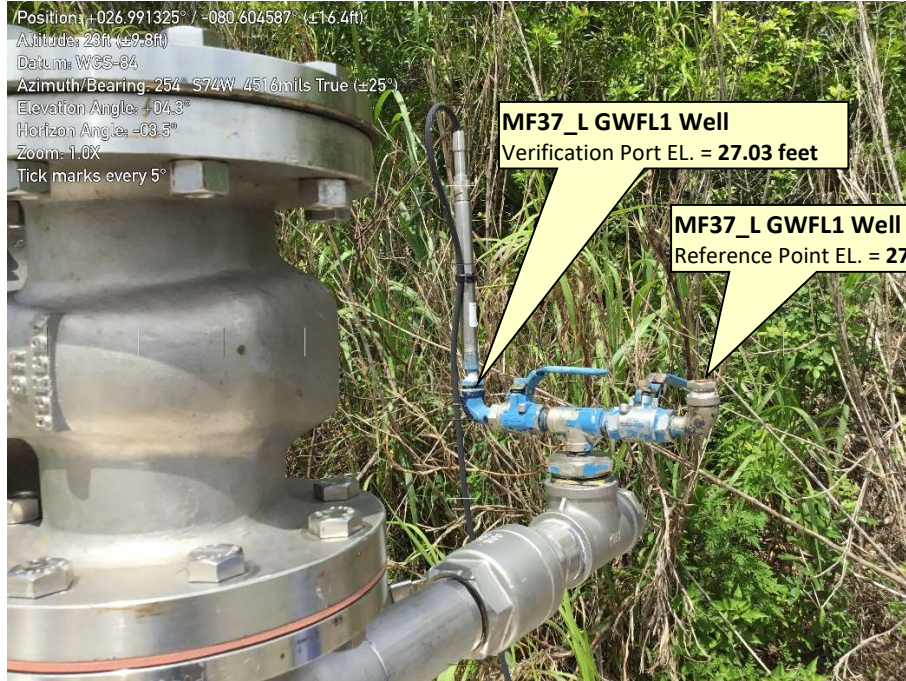




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MF37_L GW Well



(Tag denotes Reference Point Elev.)





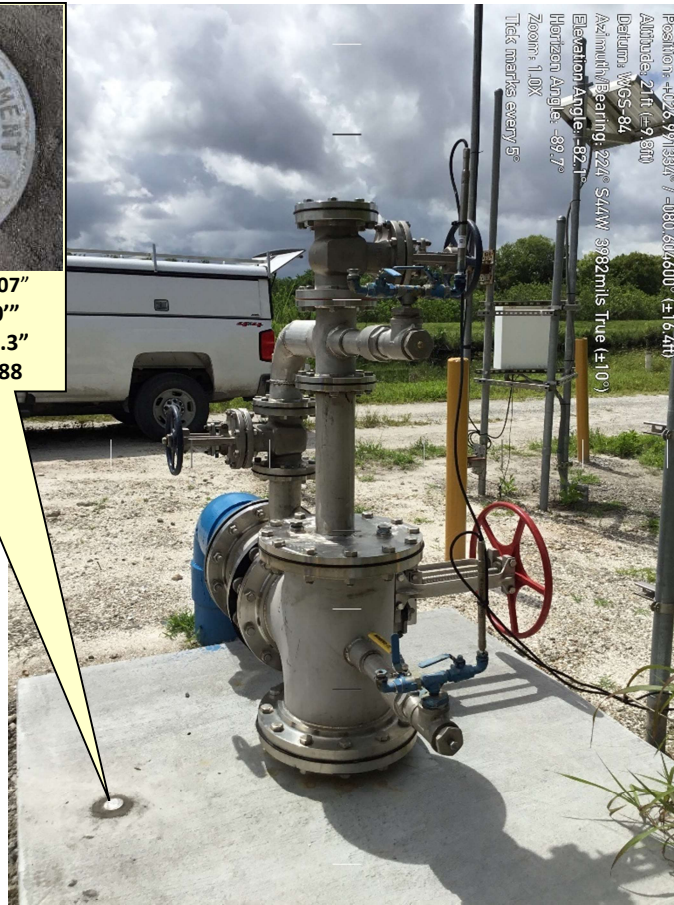
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MF37 SITE BENCHMARK "MF37 2020" El. = 22.40 feet (NAVD88)



Benchmark "MF37 2007"
Latitude: 26°59'29.0"
Longitude: -80°36'16.3"
El. 22.40 feet NAVD88



Position: -026.971384 / -080.604400 (±16.4ft)
Altitude: 21ft (-9.81)
Datum: WGS-84
Azimuth/Bearing: 324.54/W 3982mils True (±10°)
Elevation Angle: -82.1
Horizon Angle: -89.7°
Zoom: 1.0X
Tide marks every 5°





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MF37 SOURCE BENCHMARK "S153 1995"

Position: +026.988742° / -080.605068° (±16.4ft)
Altitude: 32ft (±9.8ft)
Datum: WGS-84
Azimuth/Bearing: 012° N12E 0213mils True (±10°)
Elevation Angle: +06.5°
Horizon Angle: -00.6°
Zoom: 1.0X
Tick marks every 5°



Benchmark "S153 1995"
Latitude: 26.99 (DD)
Longitude: -80.61 (DD)
El. 31.43 feet NAVD88

Position: +026.988752° / -080.605046° (±16.4ft)
Altitude: 36ft (±9.8ft)
Datum: WGS-84
Azimuth/Bearing: 017° N17E 0302mils True (±10°)
Elevation Angle: -89.6°
Horizon Angle: -11.3°
Zoom: 1.0X
Tick marks every 5°



SFWMD Vertical Control: Vertical

TYPE	Vertical
DESIGNATION	S153
BENCHMARK_STAMP	BM S153
BENCHMARK_STATUS	GOOD
NAVD_ELEV	31.43
NAVD_CLASS	
NAVD_ORDER	3rd Order
NGVD_ELEV	32.65
NGVD_CLASS	
NGVD_ORDER	3rd Order
NAD83_ADJUSTMENT_YEAR	
LONG_DD_83	-80.61
LAT_DD_83	26.99
NAD83_YCOORD	965283.08
NAD83_XCOORD	784781.64
NAD83_ORDER	
NAD27_XCOORD	
NAD27_YCOORD	
NAD27_ORDER	
FIELD_BOOK_PAGES	72
HOW_TO_REACH	Old SFWMD El. 32.65 NGVD 1929 ***** Recovery Note ***** 6/26/2008 Hollin SFWMD Fieldbook Misc 6H pages 37 & 38 BM S-153 1995 El. 32.65 NGVD 1929, El. 31.43 NAVD 1988 (26-jun-08 HJE) 12/07/2001 J.G. Maestre, Weidener Surveying and Mapping, STRIVE program, Field book M564, page 32 found 2-inch aluminum disk on the concrete step at the entrance of a CBS building, 7 feet more or less West of the upstream face of Structure 153, stamped " BM S153, SFWMD" (see book M565, page 66) El. 31.43 NAVD 1988 source bench mark Y-74 1934, El. 23.83 NAVD 1988. To verify this elevation a run was made between Y-74 and NGS PMB BM3, El. 35.59 NAVD 1988. ***** To reach: from the intersection of County Road C15-B and United States Highway 441 (U.S. 441), go South on U.S. 441 for 11.9 miles to the North exit ramp of the St. Lucie Canal bridge; continue Southerly, 0.4 of a mile along exit ramp to S-153 access road; go East along access road for 0.7 of a mile to Structure 153 and station location. Benchmark is a South Florida Water Management District (SFWMD) aluminum disk set in the concrete step, of the entrance to the upstream and downstream recorder building and is stamped "B.M. S-153 1995."
DESCRIPTION	A South Florida Water Management District (SFWMD) aluminum disk set in the concrete step, of the entrance to the upstream and downstream recorder building.
PROJECT_NAME	S-153
ESTABLISHED_BY	
RECOVERED_BY	
SURVEYOR	
ESTABLISHED_DATE	12/31/1994
STATEPLANE_ZONE	
HORIZONTAL_DATUM	NAD83
VERTICAL_DATUM	NGVD/NAVD

SEC	14	TWP	40	RGE	37
ESTABLISH BM @ RECONSTRUCTED WELL SITE					
MF 37					
STA	+	HI	-	ELEV	BM EL
BM					31.43
	3.57	35.00			NAVD 88
TP			4.57	30.43	
	0.32	30.75			
TP			8.58	22.17	
	4.62	26.79			
TP			5.12	21.67	
	5.18	26.85			
BM			4.45	22.40	22.395
					ADJ
		RETURN	LEVEL'S		
	4.48	26.88			
TP			5.21	21.67	
	5.17	26.84			
TP			4.66	22.18	
	8.65	30.83			

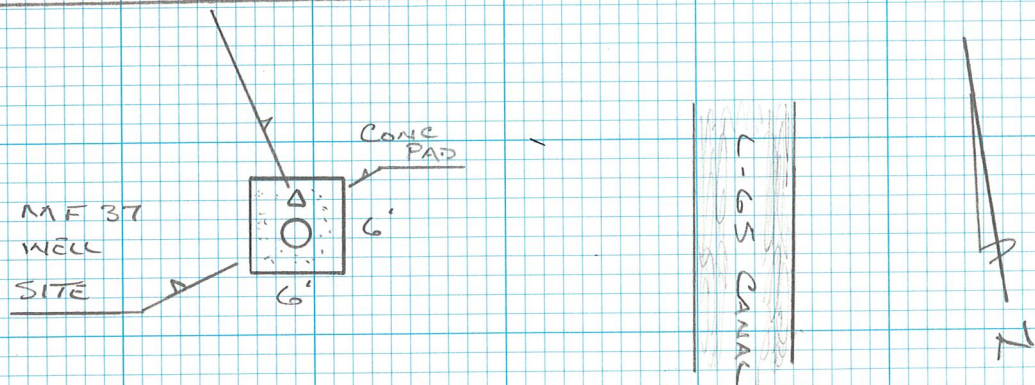
CONT'D NEXT PG

KILL STECKLAND'S
Ø SCHAUER

COMMENTS

BM S153 1995 SFWWD ALUM

BM MF 37 2020 IS A SFWWD ALUM CAP SET IN 6'x6' CONC PAD FOR MF 37 WELL. 0.8' S & NLY EDGE OF CONC PAD & +/- 3' E of NW CORNER



SEC

14

TWD

46

RCE

37

CONT'D FROM PG-62

STA

+

HI

-

ELEV

BK EL

30.83

TIP

0.34

30.49

4.51

35.00

BK

3.56

31.44

31.43

ERROR = 0.01'

NAVD 88

STRICKLAND

SCHAUER

BK S153 1995 SFINDS ALUM

SEC 14 TWP 40 RGE 37

ESTABLISH ELEV'S @ NEWLY REBUILT WELL SITE MF 37

STA	+	HI	-	ELEV	BM EL
BM	5.18	27.58		22.40	22.395 ASST NAVD 88

UPPER VERIFICATION 3.48 24.10

UPPER REF PORT 3.46 24.12

LOWER VERIFICATION 0.55 27.03

LOWER REF PORT 0.58 27.00

NE CONC 5.21 22.37

SE " 5.20 22.38

SW " 5.20 22.38

NW " 5.23 22.35

NE GROUND 5.5 22.08

SE " 6.3 21.28

SW " 5.7 21.88

NW " 5.7 21.88

BM 5.18 22.40 22.40
NAVD 88

MIJ STRICKLAND
Ø SCHAUER

COMMENTS

BM MF 37 2020 SIGN AND ALUM CAP IN CONC PAD SEE PG-62

UPPER VERIFICATION PORT "X" ATOP 1/4" REDUCER N. SIDE

UPPER REF PORT "X" " " " "

LOWER VERIFICATION PORT "X" " " " "

LOWER REF PORT "X" " " " "

NE CONC 6'x6' PAD

SE " " "

SW " " "

NW " " "

NE GROUND

SE " "

SW " "

NW " "

BM MF 37 2020 AS ABOVE