

2/09/2010 FPIE MW'S

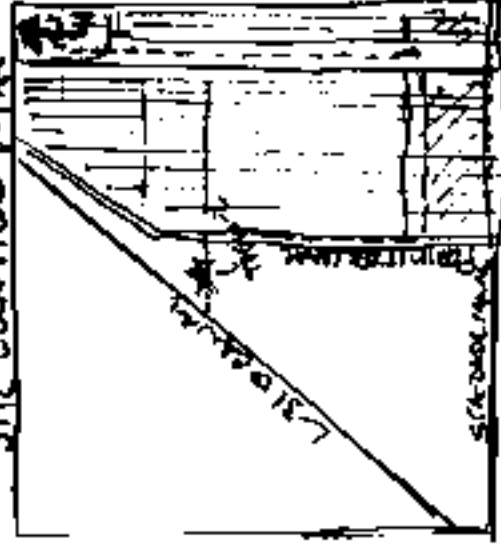
SITE #2

Background Conductivity = 1275 us/cm
or below background.

- Transcribed from USGS Field Book -
M1100. Arrive on 3/12 @ 10:00 AM - 2

11:27 A.V. reporting to Auger H' DUB BIT
BIT LENGTH = 6'

SITE LOCATION MAP



Coordinates

25° 22' 54.2" N

80° 22' 11.5" W

11:43 Start Augering

11:54 - Check Ditch to Rte - some S' b's

11:55 Arrive 2nd 5' light Auger Stem
@ 7' b's - under sample border.
STOP @ ~ 7.5' b's.
- Auger TD 90'

Auger Hole Diagram



W. @ 3' b's.

10' SCH 40 PVC CASING TO 7' b's.

12:24 - SURFACE CASING SET @ 7' (cut off
~ 6" of casing) - cut pipe length = 6'

12:34 - BY - OUTSIDE 10" PVC

12:41 - PICKING UP CORE STONE

2/9/10 TPGW-2 CORING

12:57 CORE Run #1
 5'-6' 10.78s 0" OF 36"
 6'-7' 27.84s 0% REC.
 7'-8' 1m 58.55sec

13:00 - END Run #1

CORE Run #2
 8-9 4m 59s 23" OF 60"
 9-10 0m 43s 38% REC.
 10-11 2m 4s U.C. = 14"
 11-12 1m 8s Rub. = 9"
 12-13 1m 3s

13:18 END CORE Run #2

13:30 CORE Run #3 10" OF 60"
 13-14 1min 0sec 17% Recovery
 14-15 0m 39sec WE = 0"
 15-16 40sec RUBS = 10"
 16-17 36sec
 17-18 40sec

13:34 END Run #3

13:40 CORE Run #4 16" OF 60"
 18-19 0m 55s 27%
 19-20 0m 37s WE = 6"
 20-21 0m 23s Rub. = 10"
 21-22 0m 39s
 22-23 4m 29s

14:11 END Run #4

14:26 CORE Run #5 16" OF 60"
 23'-24' 1m 10sec
 24'-25' 3m 29sec
 25'-26' 0m 48s WE = 0"
 26'-27' 0m 57s Rub. = 16"
 27'-28' 0m 16s

14:31 - END CORE Run #5

14:42 CORE Run #6
 28'-29' 0m 40s 32" OF 60"
 29'-30' 0m 44s 53% REC.
 30'-31' 0m 55s WE = 24"
 31'-32' 0m 20s RUBS = 8"
 32'-33' 7m 35s
 14:58 - CORE Run #6 END

15:06 CORE Run #7

33'-34' 6m 22s 60" OF 60"
 34'-35' 3m 32s 100% Recovery
 35'-36' 3m 52s WE = 55"
 36'-37' 6m 15s RUBS = 5"
 37'-38' 5m 29s
 15:31 - END CORE Run #7

2/19/10 TPGW-2 CORING

13:53 Core Run #4 Delayed.

- CORE TAPERED NOT DRIPPING

! LOOKING NO PACE.

- B.V. MIXING "TIGER MUD"

- NOTE: TOP OF Q.S. V-HAND (AS PER MILEW)

~1' 465' OF GROUND RUN.

14:52 - REACHED 32' BUS. - V-SLOW RUN RATE.

2/10/10 FPIE TPGW-2, CORING
07:45- ARRIVE @ LAND USE BLDG.
08:30- ARRIVE @ WELL SITE

ON SITE: JOHN (SFUND)

Mike W. JEFF (USGS)

J.A. J.F. (JLA)

Type: M.H. (BV)

Jackie (FPIE)

Jim (JLA)

8:57 BV, cleaning out core hole.

8:58- Loading S - Core pipe.

9:03h. Core Run # 8 - START

38-39', 7m 54s 60" of 60"

39-40', 4m 18s 100% recovery

40-41', 4m 5s WE = 59"

41-42', 3m 13s 26" I

42-43', 4m 31s

9:28h END CORE RUN #8

9:08- mix in "tiger mud" to mudpan

NOTE: STRATIGRAPHY ~ 37' 10" BUS.

@ 1m et @ exactly 38'

9:24- Dull, smooth, mod. fine sand.

@ ~ 38' 4" - exactly assembly bisect

Wobble.

@ 4m 30s et @ 58.5' 61s

Driller in high gear (Dum-thud) ~ 1:40pm

2/10/10 April, TREN-2 Cee.

~35' 8" - End chiller - very little

9:14 39' 4" - Run in scraping & growth

02:05:55 at 0 - 39.5' 4"

34' 10" - 39.6' 4" - 39.7' 4"

01:01 - 2m 0.5' 4" - 0.5' 4" - 0.5' 4"

01:14 01:14 01:14

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Core run 1st series 042.5' 4"

1m 10.5' 4" 0 42.10' 4"

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2/09/2010 FPIE MW'S

SITZ #2

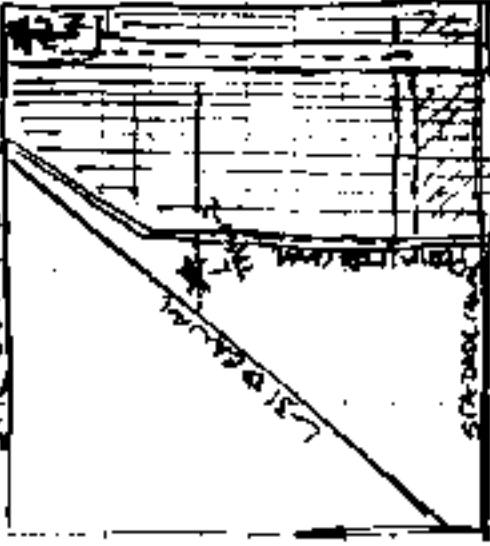
Background Conductivity = 1275 us/cm
or below background

- Translated from USGS Field Book -
APRINE on SITZ #2

11:27 S.V. Preparing to Auger H' DIA BIT

BIT LENGTH = 8'

SITZ LOCATION MAP



COORDINATES

25° 22' 54.2" N

80° 22' 11.5" W

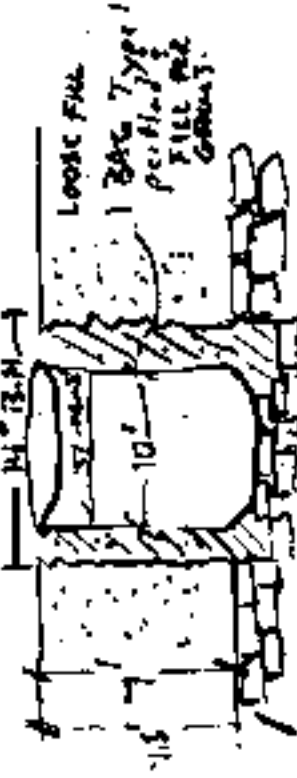
START AUGERING

11:54- Check Depth to Bx - soffit 5' b/s

11:55- Attach 2' 5' high Auger Stem
2' 7' b/s - hand sample bottom
STOP @ ~7.5' b/s.

- Auger TD 90"

Auger 12 Hole Diagram



WL @ 3' DIA.

10' SCH 40 PVC CASING TO 7' BLS.

12:24 - SURFACE CASING SET @ 7' (CUT OFF)

~6" OF STICK UP - cut pipe length = 8"

12:34- BY-CUTTING 10" PVC

12:44- PICKING UP CASE STONE

2/9/10 TPCW-2 CORING

12:57 CORE RUN #1
 5'-6' 10.78s 0" OF 30"
 6'-7' 27.84s 0% REC.
 7'-8' 1m 58.55sec

13:00- END RUN #1
 CORE RUN #2
 8-9 4m 59s 23" OF 60"
 9-10 0m 43s 38% REC.
 10-11 2m 4s 0.2" 14"
 11-12 1m 8s 0.2" 9"
 12-13 1m 5s

13:18 END CORE RUN #2
 13:30 CORE RUN #3
 13-14 1min 0sec 17% Recovery
 14-15 0m 39sec 0"
 15-16 40sec 0"
 16-17 36sec
 17-18 40sec

13:34 END RUN #3
 13:40 CORE RUN #4
 18-19 0m 55s 16" OF 60"
 19-20 0m 57s 27%
 20-21 0m 53s 0.2" 6"
 21-22 0m 56s 0.1" 10"
 22-23 4m 29s

4# END QW3 1:41

14:26 CORE RUN #5
 23'-24' 1m 10sec 16" OF 60"
 24'-25' 3m 29s 25% REC.
 25'-26' 0m 48s 0.2" 0"
 26'-27' 0m 57s 0.2" 16"
 27'-28' 0m 16s

14:30- END CORE RUN #5
 14:42 CORE RUN #6
 28'-29' 0m 40s 32" OF 60"
 29'-30' 44s 53% REC.
 30'-31' 55s 0.2" 24"
 31'-32' 6m 20s 0.2" 8"
 32'-33' 7m 35s

14:58- CORE RUN #6 END

15:06 CORE RUN #7
 33'-34' 6m 22s 60" OF 60"
 34'-35' 3m 32s 100% Recovery
 35'-36' 3m 52s 0.2" 55"
 36'-37' 6m 15s 0.2" 5"
 37'-38' 5m 29s
 15:13- END CORE RUN #7

2/2/10 TPGW-2 CORING

13:53 Core Run #4 Delayed.

- CORE BITTER NOT DEEPER

! LOCKER IN PLACE.

- B.V. MIXING "TIGER MUD"

- NOTE: TOP OF Q3 V-HARD (AS PER MILEW)

~1' HGS' OF HOUSE RM.

14:52 - WIDE 32' BUS. - V-SLOW PER RATE.

2/10/10 FPI-L TPGW-2, CORING

07:45- ARRIVE @ LAND USE BLDG.

08:30- ARRIVE WELL SITE

CADITZ: JOHN (SEWARD)

Mike V. Jiff (ASGS)

J.A. J.F. (JLA)

Type: Mike? (3V)

Jackie (FPI-L)

Jim (LIL)

8:57 BV, cleaning out borehole.

8:58- Loading S - Core pipe.

9:03h. Core Run # 8 - START

38-39', 7m SLS 60" OF 60"

39-40', 4m SLS 100% recovery

40-41', 4m SLS WE 58"

41-42', 3m SLS 24" I

42-43', 4m SLS

9:26h END CORERUN #8

9:01- mix in "tiger mud" to mud on

NOTE: STARTING @ ~34' 10" BUS.

@ 1 min @ empty 38'

9:24- Drilling smooth, mud pen rate.

@ ~38' 9" core assembly has lift

wobble.

@ 4m SLS @ 38.5' 6/2

Drill in 4yd. press (Dum-thrust) - escape

2/10/10 FPI, TPGW-2 Core.

~38' 8" - Surf duff - very little

9:11 39' 43" - random scraping & ground

8Zmoss at ~ 39.5' bl.

34' 10" - 37G47 - some

9:17 - 40.5' - 8Zm 105m at

9:19 @ 41' bl

9:21 41.5' bl @ ~ 1 min ET.

9:23 @ 42' 43" - briefly gale up & back.

NOTE: TOP HEAD DRIVE HYDRAULIC

PRESS / ROTATION SPEED HAS

BEEN USED STADY FOR

WHILE 5' CORE RUN

41'-42' - summary RESTATE AND RATE

9:26 42.5' - Driller run by 2. pm

9:28 STOP 42' - 8"

9:34 - Core Run #9 - Condition: Hld.

9:54.	START	RUN	#	DOES
43-44	5m	36sec	62"	OF 60"
44-45	5m	31 sec	103"	86 Runway
45-46	5m	2 sec	62"	WC = 62"
46-47	4m	57 sec	25"	0
47-48	4m	41 sec		
10:01	END	2003	2003	8

9:53a - Finish Condition: hole ready

Core run for START @ 42.5' bl.

1m 10 sec ET. @ 42' 10" bls

9:58L EZm 8. T @ 43' bl

43' 4" bl duff

9:58L 4m 25 sec at 43.5' bls

10:01 44' bls... some, several is sandy

& leaning.

9:44' 4" - Driller pulled up by hand?

back down

~ 10:01L EZm 46 sec at ~ 44.5' bls.

Slightly more unstable in ~~core~~

START...

45' bls.

~ 10:05L Zm 40 sec 45.5' bl.

- slightly less stable

10:11L, 46' bls... some.

46' 4" - smaller less sign.

40 @ 1 min 10 sec et.

10:14L, Zm 32 sec at 46.5' bls.

10:16 47' bls... some.

3m 4 sec at 47.5' bls

10:21 STOP @ 47' 8" bls

10:31 - moving "T" test rig.

2/10/10 FPL TPGW-2. Core

DEPTH	MIN	SEC	NOTES
58-59	6	58	26" of 60"
59-60	6	32	60% RECOVER
60-61	6	51	
61-62	9	20	WE = 27"
62-63	1	15	RUB = 9"

11:57L END CORE RUN #12

11:41L START CR #12 @ 58' 10"

59.54 FT @ 58' 8.5"

~58' 4" - Firmer, PWS RECOVER

58' 10" - BY DENVER PICKING

59' 2" - 100% DEN. THINER PWS.

59' 4" - 100% DEN. THINER PWS.

59' 6" - 100% DEN. THINER PWS.

59' 8" - 100% DEN. THINER PWS.

59' 10" - 100% DEN. THINER PWS.

11:54 60' 6.5"

60' 4" - 30 FT. SMOOTH

60' 2" - 100% DEN. THINER PWS.

62' 4" - 100% DEN. THINER PWS.

11:57L END CR #12 @ 62' 8" TD CR #12.

- OUT OF WATER -

WATER TRENCH NOT

2. WATER

13.44 Trans. Fwd. H₂O - 3 min. EV. NEW

Mixed "FIRE" mud

14.16 Core Run #13 START

DEPTH MIN SEC NOTES

63-64 2 10 60" of 60"

64-65 2 26 100% RECOVER

65-66 5 14

66-67 1 45 WE = 40"

67-68 0 36 RB = 20"

14:28 END CR #13

14:18 64.5' 6.5 42.54 FT. - Slight Sump

65' 5" 6.5 - 1.144 ch. 1.144

14:22 65' 6" 6.5 2.00 9.5 sec. ch.

65' 8" 6.5 - softer, 4 min. 4 min.

65' 10" 6.5 - 1.144 ch. 1.144

14:27 66' 5" 6.5 2.00 9.5 sec. ch.

14:28 67' 10" 10" TD CR #13

2/10/10 TPG-2, Core

TIME	Core Run #14	NOTES
14:40	68'-69' 3m 40s	41" or 60"
	69'-70' 6" 1m 34s	68 9% Recovery
70'-71'	71'-72' 3m 30s	W.C. = 22"
72-73	2m 35s	RUB. = 19"
14:52	- End Core #14 -	
14:40	START 2-67-19 8s	
14:41	41 54' at 68'	
	68' 5" 1m 24sec ch	
	- same ch as 11g.	
	- GOOD PEN. SO FIBR.	
	68' 10" 1m 24sec ch	
14:45	70' 7" - FIBRE APPROX.	
	2m 31s at, 71' 6" -	
	END CR #14 12' 10" 6s	
5:06	START C.R. #15	
	DEPTH MIN SIC NOTES	
73-74'	1 16	82" or 60"
74-75'	0 53	83 9% Recovery
75-76'	2 29	
76-77'	1 7	W.C. = 38"
77-78'	2 2	RUB. = 12"
15:14	END CR #15	

~75' 4" - little foam.
52 sec E.T. 76.5' 6s

15:10 - MILL W. (USGS) OFF SITE
15:14 - STOP CORE RUN #15 @ 77' 8"
15:46 - Finish Conditioning the Sample.
- MIXED VISCER. MUD.
- READY TO CORE!

TIME	Core Run #16 START	NOTES
16:03	78-79' 4m 12s	58" or 60"
	79-80' 3m 48s	97 9% Recovery
80-81'	81-82' 2m 28s	W.C. = 45"
81-82'	82-83' 2m 20s	RUB. = 13"
15:14	END C.R. #16	
16:04	45 sec E.T. @ 78' 8s	

~75' 2" - GRINDING/CHATTER
HARD, SLOW PEN.

3:06 73' 6" 3m 8s E.T.
78' 8s - Pen Int. Recovery
SPEED INC.
16:04 78.5' 1m 26sec E.T.

2/10/10 FPL, TPG-2, Core has
79'10" - Rig some changes
- Core string & sensor
- Slower pull; Calibrate

~80'4" - Drilling fairly smooth
still kind of slow, light
knocking - Deep!

1617L ⁸¹ 15' Zn Bsc Ct.

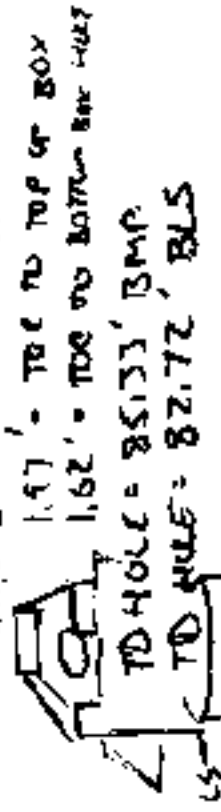
17000' out

direction

SD = 1000 m/sec, VS = 1000 m/sec
D = 4500 m/sec VS = 4507 m/sec

2/11/10 FPL TPG-2, Core
07:35 @ FPL AND USE BLOC.

1.97' - TOE TO TOP OF BOX
1.62' - TOE TO BOTTOM BOX
1.97' - TOE TO TOP OF BOX
1.62' - TOE TO BOTTOM BOX
1.97' - TOE TO TOP OF BOX
1.62' - TOE TO BOTTOM BOX



8:15 - BN. Condition, Hole.

8:15 - BN. Condition, Hole.

DEPTH	MIN	SEC	NOTES
83'-84'	1	59	51" of 60'
84'-85'	2	5	85% Density
85'-86'	2	13	
86'-87'	2	6	WE = 27"
87'-88'	3	38	Red = 15"
9113 END RUN #17			400 g.

26 sec at to 83

- Good pull to 84' -

9104 min 1 sec to 84.5'

- 4-1/2" diameter from 84' to 85.5'

1 in 32 sec at to 85.5'

2/11/10 CPL. PEGUZZ, CORINNE.

9:02h. 86.5' BUS @ 1:04 ET.

- SPIN SAME, LITE CHATTER,
- MOD POW PART

87'2" - LITTLE FIRMER IN TAIL.

9:15 87' 8" BUS. - TD CR. #17

NOTE: E UNDER OFF-PAV

- JEFF (WGS) ON 316
- Jodie (APL) " "
- Jodi. Janssen (SANDY) " "
- Tye (Duller, BU) " "
- Mike? (HOLBY, BU) " "

- HIT STUFF - 9"

- RIVIERE FLOREMBRE, WILL NOT WORK

9:29 Core Run #18 - START

Depth	TIME	SEE	NOTES
88-89	1	19	10' OF 60"
89-90	0	19	23 90 Recovery
90-91	6	39	
91-92	5	25	20' 0"
92-93	5	58	24' 14"
9:51	END CR #18		

FROM 88' - SMOOTH QUICK

DETECT

- 89' - DZ

- 90' - bit wellie - GREEN

- 90' 6" - POW SHUT DOWN

- like 14 ft.

90' 10" - 5:06 ET - SMOOTH

LESS REG MARK.

- STILL FIRM

91' 14" - slightly better from rate. now.

92' - BUS, - heavy grinding.

- NOTE: DRIVER HAS BEEN

PICKED UP & DROPPED OUT

TO TAPED FORMATION

BEFORE 91' 8" & 92' 8"

91' 2" - lots of knocking a noisy

head drive.

9:46 - NOTICED THE GIGER MUD IS

GONE, DETECTED w/ 100% H₂O.

9:51 92' 8" TD CR #18

- HAD TO BOTTOM OF CR #18

2/11/10, FPI-L, TPCW-2 CORING

11:09 CR #21 START

DEPTH	MIN	SEC	NOTES
103-104	-	-	0 "of 60"
104-105	1	6	0 % recovery
105-106	0	15	we: 0"
106-107	0	24	pas: 0"
107-108	0	47	sub: 0"

11:11 END CR #21

11:11- END CR #21 - SEVERAL WATERS
WATER END @ 107' 8" TD

NOTE: AS PER MINER. - FROSTED.
ON 564 WATER IS OVER 15 MILES
OF THERMISTERS FROM
- FROSTED TUBE INDICATES BURNED BLOOM.
NOTE: - NO RECOVERY FOR CR #21

11:27 B.N. STILL CONTINUING THE B.N.
- MIXED MORE STIGEE WIND

11:18- START CR #22

CR = 255 @ 108' 6"

11:48 Core Run #22 Start

Depth	Min	Sec	Notes
108-109	1	5	37 "of 60"
109-110	1	15	62 % recovery
110-111	2	30	WE = 0"
111-112	0	43	pas 5"
112-113	1	17	sub 34"

11:56- END CR #22

* 110' ~ 10" per min
* 111' 6" clay
11:56 END CR. @ 112' 10" B.N.
12:15 - br. mixing "Tig" mud
12:15-20 START

12:16 START CR #23

DEPTH	MIN	SEC	NOTES
113-114	0	25	31 "of 60"
114-115	0	10	52 % recovery
115-116	0	41	we: 2"
116-117	0	14	pas: 0"
117-118	0	12	sub: 29"

12:18 END CR #23

2/11/10 TPGW-Z, CORING

NOTE:

- LD CR# 22 WAS ALL FIRST
- SUGGESTED SUGGEST FROM
- ~115' TO ~116' 2"
- V-FIRST FROM ~116' 2" TO
- ~117' 10" TO OF CR# 22.
- MIX UP TIGER BRAND.

12135- SUGGEST CR# 24

DEPTH	MIN	SFG	NOTES
118-119	0	31	SLT OF 60"
119-120	0	13	96 RECENT
120-121	0	56	WE = 0"
121-122	1	11	PAU = 5"
122-123	1	48	SAND = 26"
123-124	1	CR# 24	

- ~120.5' - FIRMER SO SOE 17.
- ~122.6' - STILL FIRMER
- STILL MORE GOOD FIRM.
- 122' ~ 125' - SOE FIRM.

12140. END CR# 24, HOLE IS T.D.D.

2X - VERY 32 T. AMMUM FIRM.
SAND MAY BE PINCEPES SAND

~15" 15-Zubli, a end 5 cm

~1375. STONE MASON ROSE STONE

14105. DETERMINED ~12.

14115. ZACHAROW

- 1028 us/cm @ SURFACE AND

REMOVED.

- 1036 us/cm ~ BOTTOM

~ 5' OFF BANK.

~ 1030 - (Coring bit not stable)

~ 1010' 1737 @ 3/cm

300

10105. -

1st blockage @ 36' BTOC.

~ 14135. - Inductance OF TPGW-Z

- @ SURFACE, 878 us/cm

- @ ~ 10' Depth 1032 us/cm.