

Mobile Drill
Log # 3

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12/94/5-95



LIETZ

SINCE 1882

W. HOMESTEAD (E)

LEVEL BOOK

LITTLE RIVER

PINELLAS CO

No. 8152-55

A-W-E-4
A-W-E-4 (one)

17166
AC-DD-1

17167
AC-DD-2

17168
AC-DD-3

17208
AC-DD-4

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12-1-94

KC + FR -

A-WK-4 NEWPORT FIRE Tower
wireline coring (NQ) test hole

Lat 30°11'51" Lon 84°10'29" pdop 4.9

0-2.5' push spl - blk rgy sand

2.5-5' push spl - pushed easy - gray sd
at top - gl. gy clay sd at btm

5-7.2' pushed sample - easy -

refusal 5" short of 30" run

7.1'-7.5" two short runs - splr plugs
with ls - soft crumbly - no more middle

7.5-~11' attempt coring - most spl
washing out, bit plugging etc

- most prob need pos displacement
pump

- drill head alignment not correct -
tearing up threads - pump 3 bags
portland to plug hole -

bk to T2K for addl. work

12-7-94 / 12-8-94

KC FR + John Morrill return to
Newport tower drill A WK-4A
wire line coring test TD 24.25'
in L.

place 2 1/2 bags portland cement

DIRECTIONS to Toney Drilling -
Hwy 27 S to Hwy B26N - will
curve to east - take 27th Ave
EXIT - go south to 135th St.
go left (E) to NW 19th Ave,
go Left to end of street

1-800-432-6193

(305) 685-2453

1-9-95 - KC, R.G. + FR to Homestead
for drilling - stop off at Toney Drilling - per
parts - ARR Homestead 700 pm

KC, RG - 730 - 700 FR 800 - 700

core bbl
NQ sub
T 575
R 40E 5 9aa
W 17166

7:45 AM - 6:45 PM
work
XC-230-10000
take side to Mini

17167

0-2' fill
T 575 R 40E
SEC 16 CC

1-10-95 25°27.328' 80°20.806' 1 3

Am spent getting utilities clearance
all four L-31E sites clear.

Drill site 4 AC-DD-1 W17166

LAT 25°29.219.2 Lon 80°20'48.4"

0-1.5 spoil from canal
then muck

1s below - sandy, vuggy -

poor cond. - finish day at 23.75
with bbl. Plugged
1-11-95

1st AM - Atty. clear hole - no go
to 23.75 - hole collapsed/bridged at
- 11', tendonite to - 7.5' -

Next cement grout to LSD

7:45 AM - 6:45 PM

AC-DD-2 fromsted site 7

L 31E .1 mi N of CANAL DR

LAT 25°27.84' 80°20'77"

0-2' CANAL fill.

2' appears to be top of natural rock
based on rock exp in canal bank

JOHN W 1-00-24

434°06'08

241°05'25

CORE ran 2-5' hard rock then
peat. black - ~ 9" recovery of each
is 18"/30" run

5-7' - muck/peat - sticky -

No resistance to feed - pushed
at top to recover - no peat recovered
- clayey ls below

7-19.5' runs average ~ 2' recovery/5'

19.5-24.5' - no return core - but
have approx 4' recovery in 5'

24.5-29.5' ~ 4' recovery

29.5-34.5' ~ 4' recovery
34.5' TD

place 1/2 bag bentonite in btr of hole

stop. clay proves zone

- pump 5 bags portland cement

7:30 AM - 7:00 PM

1-12-95

Scotties run

4" pvc

4" pvc slip coupling

1-4" 90° EL

grease - cartridges

1/2" poly rope

1 qt oil

Brake Fluid

1-12-95

AC-DD-3 Homestead site 12a

LAT

Lon

T S85, R 39E

SEC 3500a

drill site is on dike

0-5' fill

5-5.5' soft material - no recovery

6.5-6.5' soft - somewhat driven to 7.1'

6.5-19.5' interbedded soft + hard

zones - no return flow at all

- angle drive making rocket -
shut down to have it checked
out

12^h
5.5
6 W17168

NOTE:
 Meet Jimmy (no cuts) W 17208
 8:30 AM Fri
 CARD sd. rd + W 1
 Toney Dr. PO
 552-944
 EST

6
 left surface csg in place
 plugged with bentonite chys

3-13-95

Pu. rig at Toney drilling - head
 to side 10A - AC-DD-4 W 17208

LAT 25°22.83' LON 80°22.28'

T SBS, R 40E, SEC 18 b6c

collect push core opposite knee
 from drill site - ~2' peat +
 MARL over rock

0-2' fill

2-~5' ~~ss~~ fill + soft material

NO recovery

5-10 soft rock in upper
 + harder at base - poor

recovery

10-15 - 2 runs - poor recovery

- hole seems tight - NO

recovery

8AM - 700PM - TC to
 HD for parts

3-14-95

15-20 - hole washing out
ahead of bit

20-25 same as above

25-30 soft as above -

No recovery

28-30 hard rubble - poor recovery

30-32.5 hard - then soft - back to

hard bed at bottom - ~ 1' recovery

32.5 - 35' interbedded hard + soft beds

- poor recovery

35-37.5 hard - good recovery

37.5-40

40-42.5 - interbedded hard + soft

beds - some of soft in grt sand -

most soft material not recovered

42.5-45' - hard thin bedded

sandy ls.

TD 45.0'

800 - 6:30 pm wk day

✓1
45
49
54.75
41.75
19.3
45

W17209

T. 58S, R 39E, Sec 196

3-15-95

AC-DD-5

- site 9

W17209

8

W side of C-109 ~ 1000 ft. S of
road to DADE Co work center

~~E~~ LAT 25°22.28' Lon 80°27.98'

Elev ~ 5'

0-4.5' fill - canal spoil

4.5-6' soft silt - no recovery

SEE PC-23 (from natural

grad. on outside edge of levee

6-9.5' LS almost full recovery

9.5-11.5' LS ~ 75% recovery

11.5-14.5' ~ 60% recovery

14.5-18.5' - approx 2' soft sd

interbedded w hard - # almost

no recovery

18.5-19.5' - ~ 4" recovered - upper part

lower part in soft - no recovery

19.5-22' - rubble at top - harder

below ~ 2' recovery - v porous

POSITION

2-00-2

89.55° 08' 16" N
155.55° 20' 30" E

12
2' 8"
9' 8"

W17235

TS95, R 39E, Sec 18a

54.7
14
40

3-16-95 →

+D 49.0'

move to site 11

AC-DD-6

W 17235

LAT 25° 17.84' Lon 80° 28.62'

0 - ~2.5' fill

~2.5 - 8' peat AND ? more

V soft. - only a little 86 more

peat captured - prob from top.

~8' - 9.7' LS

9.7 - 10' LS

10 - 11.25 soft - no recovery

11.25 - 14.7 ls.

8AM - 7PM

END DAY

14.7 - 17.2' ls good more

17.2 - 19.7

mordic - next.

19.7 - 24.7 - mordic ls. 5' more

~95% recovery

24.7' - 29.7' recrystallized faciel
mudic, gbt sandy ls - v good
recovery

29.7 - 32.7

soft zone ~ 30.5 - 31.5

several thin soft zones in upper
2 1/2' of interval

32.7 - 34.7 - hard - gbs 2d/ ls/b/b/b -
100% recovery

34.7 - 39.7 v hard - soft zone
~ 36' (2-3 inches) - softer below
- v soft last 4-6" (~39-39.7)

39.7 - 44.7 soft zone at 41.7 -
42.5, rubble/cinders (small)
last 1 foot - approx 4' recovery

44.7 - 49.2 ~ 1.5' soft 45.7 - 47.2
also in bottom part

49.2 - 51.7 - some soft material
in bot. - stopped run to hopefully
catch next run.

51.7 - 54.7 TO

mostly soft w thin sand
stringers

W17236

T 59S, R39E, SEC 28 a/b ctr

Side B AC-DD-7 W17236

E side C-III at S end

LAT $25^{\circ} 16.19'$ $80^{\circ} 26.26'$

0-3.5' Fill

probe in mangrove stands
6' of peat + MARL

3.5-7' soft no recovery - prob
peat + marl.

7 - $\sim 9\frac{3}{4}$ ls - soft rubblely - poor
recovery

9.75 - 14.75 - rubblely - hard toward
bottom $\sim 4'$ uneven

14.75 - 19.75 rubblely ls $\sim 3'$ uneven

19.75 - 22.25 friable gray mudcl. ls

22.25 - 24.75 " "

24.75 - 29.75 rubblely ls as above
thru more dense (less mudcl. +

frable at base

29.75' - 34.75'

34.75 - 37.75 rubbly ls - hd syls
at base

37.75 - 39.75 - hwd ls:

39.75 - 41.25

41.25 - 44.75' TD

END DAY 7:15 pm

3-17-95 - Meet with Roy
Sawshen - USGS Miami,
then retN TALLAHASSEE

3-27-95 KC + FR to Miami¹³
+ ~~from~~ ~~head~~ 7 AM - 730 PM
USGS Miami

Federal Reserve Bldg
9100 NW 36th ~~th~~ St.

3-27-95 - call to Jim Harris
(USGS Denver) (305) 477-8118

3-28 - Drop off DNR 2943
for Brake work at Flamingo
Ford

- Start drill site 2

T 575, R 38E sec 15cb b
LAT $25^{\circ}28.43'$ LONG $80^{\circ}30.81'$
on south side of canal at
end.

0 - ~ 2' fill

~ 2 - 3.5' soft - prob nat. sed
surface

~ 3.5 top of nat. rock

3.5 - 5' - rock - red/reds at top

W 17237

AC-DD-8 →

T 575, R 38E, sec 15 b

5-10' rock - intermittent silt zone
only 2' recovered - bottom part
probably lost - joined inner
tbl.

10-12.5 - ^{~2'} better heavy

12.5-15 - ~2' heavy

15-17.5 - ~2' heavy - some v hard
zones - black chert?

17.5-20' - hard then soft - only
~6" recovered - prob top 6"

20-22.5 - hard - ~8" recovered

22.5-25.0 essentially 1' heavy

25.0-27.5 " full "

27.5-30 ~1.5' recovered

30-32.5

32.5-35

35.5-37.5 - Dramatic litho chg at

37.5-40' + D ~35.25'

pump 4 bags portland - still
subsiding - will top off in own

Kevin

access

794-7626

904-895-0014

W 17238

7AM - 630pm

meet with Jim Herring, Deb
Welland + Chuck Holmes (USGS)
~ 1.5 hr - disc Everglades prairie
& sugar swamps

3-29-95

SITE 5A AC-DD-9 W 17238

TSBS R38E Sec 7 aac

LAT 25°23.71' LON 80°34.38'

approx 3.5' fill relative to other
side of canal

~ 5' to top of rock

0-5'

5-8
soft to 6' - seems like rock at ~6'
harder at 6.75'

8-10 - soft drilling

10 - 12.5

- 12.5 - 30' ± 2 1/2' runs.
mostly good recovery

$$\begin{array}{r}
 14.3 \\
 3.5 \overline{) 50.0} \\
 \underline{35} \\
 150 \\
 \underline{140} \\
 10
 \end{array}$$

W 17239
 149143
 cable has been
 marked
 FPL +
 5 Bell

30-35' - soft zone at 33-34'¹⁶
 not recovered (~3' missing)
 hard gy ls last foot
 35-38.5' - fdgy ls then calc
 mud - ~100% recovery
 38.5-40' - pass some calc mud then
 harder rock
 40' TD
 plug with 2 1/2 bags bentonite
 chips

AC-DD-10 W 17239
 T391 R38E S 686C
 LAT 25°19.20' Lon 80°33.95'
 drill site only ~ 8-12'
 above rock level in core
 0-~15' rock + rubble + then soft
 last circulation after 1st 6"

17
appears to be more solid rock at
~ 3.5'

3.5 - 5 - soft no recovery

5 - 7.5' gravel - rubble ls ~ 2' sec.

7.5 - 10' rubble ls then more coherent
bottom hard 1'.

10 - 12.5 - soft + rubble - thin
hard stringer at bot.

12.5 - 32.5 - 2 1/2 runs - generally
good recovery

32.5 - 35 - red ls then soft -

SAND - lost bottom 8-12"

35 - 40' - SAND - no recovery
to ~ 38.5' then rock to 40'

40' TD

only 8"-1' mark over
rock adj. to site - collected
~ 5" push core.

pt washed in 2 1/2 bags
Bentonite

7AM - 7PM - KC

7AM - 600 PM FR

3-30

tape measure

SAND

CEMENT

HAND DEANER

EXACTO blades

AC-DD-11 -

W 17240

T 37S R 39E SEC 5 C

LAT 25°29.87' LONG 80°27.58'

on north side of Mowry canal
 at outside of bend - 600' E
 of Tennessee Rd.

appears to be ~1' "soil"
 above top of rock

1941-1942 - 1943
1944-1945 - 1946

3-30

1947-1948

1949-1950

1951-1952

1953-1954

1955-1956

1957-1958

1959-1960

1961-1962

1963-1964

1965-1966

1967-1968

1969-1970

0-.5' fill

.5-~1.5' fill?

~1.5-3.25' soft plastic carbonate

3.25-5' crumbly ls

5-7.5 in crumbly oolitic miami

7.5-10' burrow moldic miami ls

10-12.5' miami ls

12.5-15 "

15-17.5' soft zone at btm

no recovery ~ bottom 1 foot

17.5-20' - soft top soft then

interbedded soft + rubble zones

9px 1' recovery

20-22.5

22.5-23.5 HARD

23.5-25'

25-27.5

27.5-TD

place 1 cu ft sand in
bottom of hole - plug upward
with bentonite chips washed
in

3-30-95-PM

- Conf. call w DALE Toney
+ MBL Drill Engineering

- RAD does get enough
splash back for top spindle
brg. - temp. rise NOT apparent
(tests to 260-270° F)

Drill AC-DD-12 W 17241

T 575 R 37E S 24.000

L 31 W CANAL - ON east side
of canal. Appx 3-3.5' of
fill over natural grad
LAT 25° 27.73' Lon 80° 35.40'

0-3' fill NOT RECOVERED

3-5 soft sed - NOT RECOVERED

5-7.5' burrowed is

7.5-10 - poor recovery - inner bbl
miss/atch

10-12.5 porous ls
 12.5-15' hard burrowed ls.
 more friable in lower part
 15-17.5' lower 1.5' soft - no
 recovery

17.5-20 - upper soft soft -
 then back soft but soft -
 poor recovery - none of soft
 20-22.5' upper 1.5' soft then
 hard ls.

22.5-25 - ls - good recovery
 25-27.5' good recovery - competent
 ls

27.5-30 good recovery
 30-35 - soft in middle + lower
 portion - poor recovery
 35-38 - inner bbl worst
 unlatch - pull both -
 inner bbl shoe unthreaded
 - bottom 1/2 of run soft - no
 recovery.
 30-38'

fill botm of hole w ~~to~~ ²² 1.5 ft³
sand then to surface w
bentonite washed in.
- complete plugging at 815 PM
on work day 7 AM - 845 PM

★ Bruce / F.P.C.

~~FAX 813-969-4122~~

~~= Drive Key Side~~

~~Need better info~~

~~Sax map to his new Am.~~

3-31-95 - rebn 4/4 -

Drop off angu ry at USGS
coastal ctr - sd. pte -

6AM - 800pm work day

23
★ - FAX ngr for beater
see prev. page

3-27-95 / 3-31-95
4-195 - match to
FC-115

433.59 repair to DNR 2943
KC travel 309.96
PR travel 237.50
rein strength haul 124.91

Maldill - BLDE - 1144

Evenhomer - Airport exit
E. sent home
- Clearwater - Rt. Lane

to Hillsborough
U turn - come back
4750 (S bd side)
- blue + white

actual hole loc is
20' north and 10' w of
GPS loc
19.5

5.5
4
6
14.5

KL
Jim Zabulie
PTCM

24
Pess - A. Grille, 4 Apr 1995
A-PI-1 (P6)
30' w of sidewalk, 45' N of jetty access rd.
STR T32S, R16E, sec 19cb
LAT/LOGB 27°41.018 82°44.294
27°40.998 82°44.276

Push samples 0 - 39"; sand
Auger sample began at 30"
down to 60" - no recovery.
Adjust sampler nose +4".
Send wet @ 60" - drill to
8 3/4' - pull spec - no recovery
Dead pressure > rotation - expect
sample running out - insert flap
valve / pump spec from 8 1/2' - 8 3/4'
8.75 - 9.75' - pumped sample
9.75 - 10.5' flap valve spec -
15 of sand in tube - pump.
10.5 - 12' - pumped spec - v shelly sd
12 - 13.25' pumped spec v shelly sd

13.25 - ~~14.75~~ 15 pumped sample ²⁵
as above - v shelly fine sand
with add of coarse organics
- mica? in matrix - poss shell
Nacreosa layer material.

15.0 - 17.0': pumped sample as
above, although not quite as coarse
This material was easier to
penetrate.

17 - 18.75' - pumped sample - fine
gtz sand, shelly, some finer
organic material - soft pencil.

18.75 - 20.75 - ^{pumped sample} soft fine sand, shelly
(fine) some fine organics

20.75 - 22.25 - as above - pumped sample
22.25 - 23.5' - pumped sample - as
above

200 pm
- hydraulic hose - front jack
blows -

back side of valve

top trace

bottom trace

23.5-25.5' wireline sample

"1.5' measured - coarse shelly sand - abd sand & shell flowing in btm of stem when splr pulled.

25.5-29.5' pupped sample

29.5-31' wireline sample

"1' measured - shelly sand -

med-co, minor shells -

31-32.5 - NOSM

32.5-34.5' "1.5' measured -

shoe had dk gy calcareous sand on end - ie apparent contact at 34.5' upper part has very little shell - none at base

39.6

3.8

35.8

39.6

3.43

, 2

34.5 - ~~ok~~ grey silty sand
retrieved while trying to
get sampler locked in.

34.5 - 35.5 - 50' as above

35.5 - stiffer - harder -

- no penetration past 35.8'

35.8 - 36.2' - hard drill

- prob plugged bbl. - hard gw -
phos surface - hard dolomite?

change over to wireline
rod - drill to 38.5' - no recovery
- skid down the night

new metal 845 p

7 AM START

~~4-5-95~~

38.5 - 40.5 - tight rotation -
moderate feed pressure - plugged
circulation - approx 1' sand
+ shell recovered.

pull wireline rod-
 auger down to 38.5 - pump
 to clear pipe
 WZ sample to 41.5 - fine sand -
 minor fine shell trash
 41.5 - 43.75 - ext. nose 2"
 WZ spl to 43.75 -
 43.75 - 45.75 - spler went so -
 drill + pump sample - sparse.
 pumped spl - spler went so
 but bailed ~ 1' spl - bedding
 (graded) is artificial!!
 45.75 - 47.75 - pumped spl -
 sandy, shelly, - not as silty
 as above
 47.75 - 49' - pumped spl - shelly sand
 gray -
 49 - 51.5' - pumped spl - shelly sand.
 51.5 - 54.0 pumped spl - fine sand,
 shelly, - small coral fragments
 fine organic

56 1/2
 1.6
 72 1/2
 - 3 1/2

 68

28' 2"
 18' 2"
 56' 6"

 82 10
 -
 83
 3.5
 79.5'

34- 56.5' - wash spc from boiler 29
 run - noon

56.5 - 58.5 same as above

58.5 - 60.5 pumped spc - same as above

~~60.5~~ drilling down 58-60.5' interval
 stiffer -

60.5 - 62' - wash sample -
 lower part get calc mud -
 milky fluid - buck sample
 looks the same as above

62-66' - shelly sand, milky matrix
 shell coarser than above

66-69' - pumped spc - grey
 muddy sand, shelly -
 calcareous? (other than shell)

clay matrix - blue green clay blebs

69.0 - 70.5 clay sd and shell - as
 above

70.5 - 72' washed sample - clayey
 sand, shelly

A-M-1
 17258
 A-PT-3
 17259
 A-PT-2
 17259

72-73.5 washed sample

73.5-76 } washed - no significant
76-79 } recovery - some sample
recovered from auger flights

hole collapsed as auger
pulled - no continuous breache

6:30 AM - 7:45 PM

4-6-95

~~Anderson~~ - Howlitz -
Park Blvd - ~~Chapin~~
→ 499.

A-Pi-2 - North end mullit kg
S 6ca T 335 R 16E

LAT 27°38'39" LON 82°44'21"

elev ~ 3' top

push samples.

0-1.8' Hgy sand - y sl. shell - trace
organics - light brown
1.8-3.5 - sand - white - softer

water table
appears to be
~ 2'

9.75
1.25
8.5

165975 GTE no conduct
L 50'W of 22 Ave

toward bottom - ~ 1' weathers - 31

prob. lost bottom part

3.5 - 5.25 - SAND soft penetration
upper part - lost 6" hard -

gray + bn - minor shell some manganese
oxidation.

5.25 - 6.2' - SAND, shelly - saturated

6.2 - 7' - ~ 6" SPL - sl shelly sd

7-8.5 - SLAP VALVE - NO recovery

8.5 - 9' pyped sample - fine
silty, sl. shelly sand

9-10.75 - pyped sample - fine
sand.

10.75 - 14' pyped sample - fine
clean sand

14-14.5 - pyped sample - fine sd

14.5 - 18' pyped sample - fine sl. shelly
sd sl shelly

? only pypis fine? - coarse
lags but does core up.

- washing down here cause

A-M-1
Against key

A-PE-3

1725B
Little River

17259
Quitt 24

- SW 3

lag in hole

18-18.5' washed spec - shelly
sand

18.5-21' - fine sand + NO SM

21-22.5 - no recovery - pulled

& auger back 20.5' - pumped
sample

22.5-23 - pumped spec

23-25.5 - wet spec - sampler

sand locked - poor recovery -

sample prob washed out while

getting sampler free - pump to
~2 1/2' of material in tube -

either spec or sucked in

from 25.5-26' area

25.5-28' - pulled spec nose
back 2" - expander with
plastic to help keep spec in
- pump spec

28-30.5 - flap valve - back in
- pull up hand when retr spec

[The page contains faint, illegible handwriting, likely bleed-through from the reverse side.]

A.H.L.-1
Egmont Key

A-PI-3

17258
Little River
Cass

17259
vucity 24

352

attempt drive split spoon spec
- no better

- prep spec 35-38' - fine shelly sd
~~38-40.5' - fine shelly sd - 99% clay matrix~~
38-40.5' - fine shelly sd - 99% clay matrix
40.5-43.5 - softer drilling - prep spec

43.5-45.7 - easy rotation + penetration

- prep spec - black organic rich
clay matrix - of bulk spec still
sand w shell

45.7 - 48.5' - as above - upper
part - last 15-18" stiff rotation

+ penetration - prob. clay

- black lagoonal clay pulled off
of auger flights starting ~
46' - ~1.5' ~ 1' even stiffer
clay at base

TD 48.5'

hole collapsed on pulling auger
fukes w cuttings - no
continuous breach.

2943

36410 - Wilcox stand²⁵
retu tch

- New pump - 3HP
- Fix pump
- 1 1/4" suction hose [20' long]
- Extended shoe head
- Replace auger retriever springs
- ~~3 NGWL x 10'~~
- ~~1 can pipe lubricant~~
- 2" PVC screen + cap
- NWJ box x NQ pin - 5" ^{add} shoulder/sh.

2 1/2
10 5
2 5
2 6
3 2 6
3 0 5
3 2 5
1 0 2

4-17

4-17-95 - KC + J.B. - to ³⁶
St. Pete

call to Jim Terry re Anting
craft - calls to Skip Davis
and Dave

To USGS St. Pete - set up
new plot; core bbt with
extended shore EE

4-18

4-18 7AM Meet Bob Gattin - M.V.

Tortuga for trip to Egmont Key
put in at Ranger station dock to
unload rig. - determine that
only permission requested was for
N end of island - NO request
thru Fed GFC - unload
rig - get permission to utilize
FEG GFC area - attempt to
drive rig - won't go - FWD
won't work - sticks - reload
rig - to S end of island

LAT $27^{\circ}34.78'$

CON $82^{\circ}45.55'$

T 335, R 15E, Sec 26

& unload - start setup approx

12 N

^{Baker}
Bob Baker - E.P.S. Park Mgr
v helpful as is Bob Gatlin
& crew.

A-HL-1 Egmont Key

0-30" - push spl; approx

1.5 ft recovered; slightly
shelly sand; sand white to
light gray, iron-staining
is from sample barrel

2.5-3.7': push sample; coarser &
more shelly than above

3.7-4.0': shelly sand

4.0-5.0': shelly sand; approx 4" to
5" recovered

5.0-9.0': wire-line core sample w/
extended shoe; only 1 (core)
ft recovered.

9.0-10.0': wire-line sample; no return
circulation & no penetration

A-HL-1
Egmont Key

A-PI-3
Egmont Key

Little River

7259
Unit 24

SW 3

installed 10 $\frac{1}{2}$ " auger flights³⁸
as temp. casing; collected
one ft of sample; upper
portion somewhat washed;
fine shelly sand.

10.0-11.0': washed sample, light
grey sand, small shell frags.

11.0-12.5': fine light-grey sand;
washed auger sample.

12.5-15.5': washed auger sand;
light-grey fine sand to
medium shell frags.

6:30 PM shut down - walk to
pilot station for ride back to
Ft. Desoto. - arr motel 8:00 PM

4-19-95 MEED DAVE UFWAR at
Ft. Desoto Post Camp. ^{7AM} ck w Capt.
Bob Gablin - Tortuga re loading
fin - then to island.
ARRIVE 8:10 AM

54
49
25
79

LAT 27° 34.78' Lon 82° 45.55'

Washed sampler

15.5 - 18.75', 18.75 - 25.5 -

18.75 - 25.5' interval: per first

clay - dk gy wash shield

clay interbeds - mostly thin
silt slates, minor organic mat.

25.5 - 28.5 - wash spl - fine

silty? clayey? - shelly sand.

28.5 - 32.25' - clayish, sd as chert

upper part - lower part - creamy
white clay? matrix

32 - 34.5 - pulled up ~ 1' to expose
drilled out - no sed in tube.

hole stayed open...: somewhat
cohesive

34.5 - 37' same as above - also

small barrock frags in shell
fraction

37-39.5 - top 3/4-1 ft drilled as above
bottom 1.5' soft, sticky - sand drilling, clay?
much more matrix material than
spu above

39.5-42' - soft drilling, grey fine
sand with fine shell frags. creamy
white matrix

42-44.5 - AS above - bore stayed
open when pulled up 1 ft.

44.5'-47' - same chg in drilling
feel - shuddering - bottom 1' v soft.
- CANT wash sample - appears to be
clay.

47'-48.5' chg over to wireline core
w extended shoe - pink + white
ext. shoe to 48.5' - more
resistance to penetr. - coarse
shell lag. - lithified sandstone

$$\begin{array}{r} 66\frac{1}{2} \\ + 3 \\ \hline 75\frac{1}{2} \\ - 38 \\ \hline 37 \end{array}$$

$$\begin{array}{r} 75.5 \\ - 23 \\ \hline 52.5 \end{array}$$

15 hrs. 9 hrs. sd, clays

phos pbl., rhyolite
fine druse bot.

72 $\frac{2}{4}$

43 $\frac{1}{4}$

68 $\frac{1}{4}$

60.75 - 62.5 spl lost in rod⁹²
paved spl - cros/gum glz... 1/2 hrs.
phos sd.

62.5 - 64.5 - ext. shoe - pushed

- good recovery - phos clay sd

64.5 - 69' - no recovery - rubble

drilling feet - expected soft rock

67 - 68 $\frac{1}{4}$ ' - rubble drilling -

inner bbl latch sanding up.

- drilled last $\frac{1}{4}$ foot plugged.

68 $\frac{1}{4}$ ' to - phos sd, fine-med,

sandy ls., clayey

load on barge 645-230 unload

~ 815 - netw motel 915pm

4-20

4-20-95

AC, Jim Balsillie, Dave
UFMAR - Fort Desoto Park

Fort Desoto site south end

Mullet Key
A-Pi-3-

LAT $27^{\circ}36.83'$ Lon $82^{\circ}44.09'$

T 335, R 16E, & 18C

ELEV 5'

0-30" - push ~~best~~ sample

30-46 pub. sp. - 89. sdw
shell

46-60 push spec - SL. shells
sq. platy

0-1.9' White sand - minor organic
at top.

9-1.2' - dark organic rich layer - dark tan/bk

L. Z - 46" - white sand.

46-60' fine white sand, sc shelly

5' - 9.5' white fine sand, v slightly shelly

$$\begin{array}{r} 609 \\ \times 60 \\ \hline 36540 \end{array}$$

9.5-12' - pumped sample - white⁴⁴
fine sand, slightly shelly.

12-14.5' pumped sample - white gty
sand, slightly shelly, ~~soft gty gty~~
~~clay blebs~~ some dk gty shell
debris

14.5-17 shelly quartz sand white
to lt. gy

- generally shellier below 12'

17-19.5 - softer penetration
this run - shelly gty sand,
minor clay/silt content

19.5-22' - fine sl. shelly sand
sl. clayey.

22-24.5 - fine shelly sand
gygy matrix -

24.5-27' fine greyish gty sand
sl. shelly, greenish clay matrix
some clay blebs

27-29.5' - clayey sand - ^{greyish} greenish
~~grey~~ cohesive, still ^{sl} shelly

32.5
5.25
27.25

45
29.5 - change over to wireline
with extended shoe -
29.5-32.5 push ext. shoe - no
water - ~100 % full recovery
greenish gray clayey, shelly
sand

32.5' - 33.5' - pushed w ext. shoe
- no recovery - Pushed same as
above thru tight at 33.5' -
KC F.U. - core bld not latched in
33.5 - 36' pushed ext. shoe - no
rotation AND MIN WATER flow
shelly clayey - sl. phos(?) gtz sd
at top (~8" recovered) - mainly
white to lt gr shelly, sl clay?
gtz sand

36 - 37.5 - shelly, fine gtz sd.
37.5 - sand running into wt rot
- mix mud - still plugging bit
- drill down 10 more feet of
HSA - 39.5'
37.5 - 39.5' NO SM

17260
A-Su-3A

17258
Little Rube
J. Rube

17259
Rube 24

- Su 3

39.5 - 41.5 - puped sp. lime clear
sand & mirror shell

41.5 - 44.5 - puped sample - slightly
shelly granby sand

- pup HSA full of benthic
mud
7:30 AM start
END day - 8:15 pm

42145

421-95 630AM start

- pump mud from hole -
drill 44.5 - 47' - NO recovery -
pump won't lift because most
water flowing down into fm.
47' - 50' - puped sp. - gtz sd.
abundant benthic drilling
mud in sample - prob little
or no silt + clay in orig
sed. shelly

67.5
6.5
61.0

calcite cemented ss +
shell, phosphatic,
s.s.
rubbly, calcite cemented ss
+ shell, s.s. phosphatic
clasts in muddy matrix
interbedded,
calcite cemented ss, sh
+ phosphatic shelly

47
50-52' - softer - HSA essentially
push in: lt. gray calc sand
+ gtz sand. - 0.8 shell frag.

52-54.5 - soft penetration but
rough - rubbly rotation feel "shudder"
clay with rock frag? - still ~1' ssd
in HSA - want pump for surface
change over to gravel w/ ext
shoe - cohesive prob clay

54.5-55' - rubbly - then soft -
sandy, rubbly ls. or fine ss.

55-56.5 - rubbly rock + soft
clay or sand - red at 56'
- calc cemented gtz ss - shelly,
minor calcite rock, v. fine phos

56.5-60' - rubbly ledge - shelly
lower most 3' soft - clay?

60-61.25 - rubbly rock + soft zones
repsal at 61.25 -

61.25-65' - soft. - rubbly at
very top. then crumbly clayey

17260
A-SW-3A

17258
Little River
Sano

17259
Quitt 24

SW 3

some ls. - gtz sdg, phosphatic
 shell and die - TPA? - beach rock
 - grades to greenish gy phosph,
 gtz sd - slightly clayey -
 ~ 62.25 + blow lost -
 picked up ~ 2' addl. w core
 bbl + sample basket

- Ol. gn phosphatic sand, ~~slightly~~
 clayey - grey clay matrix at
 bottom F.M. gr.

- ~ 6' sed in outer bbl.

- ~~will~~ use inner bbl to
 bail.

65 - 68.0 - greenish grey
 rubble ls + gtz sand. Abundant
 greenish brown clay matrix
 (~ 1 foot?)

- below coarse plus sd +
 gravel, gtz sand + weathered
 dolomite - A/A₂ deposit

flows into hole.

- want pump - bbl plugged
want pump from top

~68 - ~69' - drilled w/o
inner bbl - plugged bbl + bit
recovered ~8" buff + grey clay
fine sand + silt

TD-69'

hole filled back in on
mud - flights were pulled

to USGS COASTAL CTR
to pu. cores for Bob Hakey

17260
A-Sw-3A

17258
Little River
Swamp

17259
Quitt 24

Sw 3

28000-83388-00782

Maint. Air Cleaner

clean ck + adj brakes

rebuild upack whl. bgs

refinish front fubs

chg fluids in diff's

chg hyd filter

do p.m.

rewire starter

tarp gage

4WD

- transfer case (inter)

check all joints

- ck tires - BAL, out of round,

DAMAGE ?

weld bail on AW plug

engine kill switches

handice auger bit

Move spare tire

17260
A-Sw-3A

17258
Little Rock
Maine

17259
Quincy 24

-Sw 3

SRWMD pot# - permits
53700 - 532396

Little River Project

SITE 1

Little River Springs site

LAT $29^{\circ}59.787'$ LON $82^{\circ}57.985'$

T 6S, R 13E sec 1 irrr NE, NE
ON EAST side of spring pool.

Elev $\sim 25'$ 44.5' TD 24.5' csg
completed - 5.5.95

SITE 2 - 3 well cluster

ON W side of 101st in edge
of planted pines $\sim 40'$ from
edge of road, 0.15 mi N of
C-248.

LAT $30^{\circ}00.109'$ LON $82^{\circ}57.195'$

Site 3 - 3-well cluster - ^{Eddie} ROBERTS

0.2 mi E of 101st, 0.3 mi N of 234th
need to break 234th on topo or
get RTCM GPS loc

1.8 mi N of
248

967

899

118

Site 4 1 well

LAT $30^{\circ}00.17'$ Lon $82^{\circ}58.09'$

TSS, R 13E, SEC 36 NW, SE

- get RTCM GPS loc

Sunshine ticket # 216964 - Ltr Rwpk
216.016 planted
pines

USGS g.c. Tallahassee 942-9500

MARION x 3015

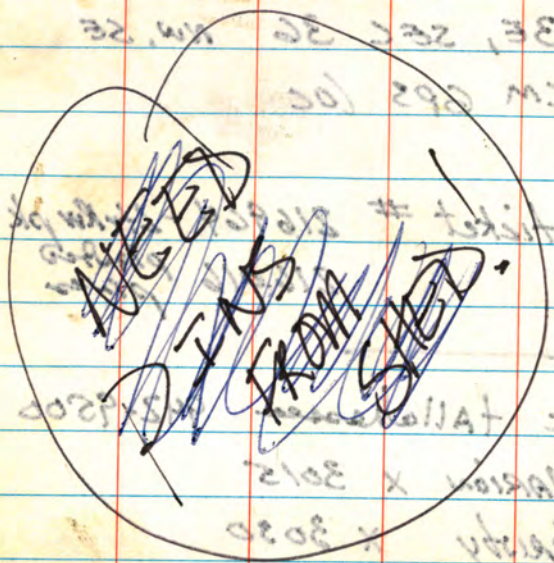
CHRISTY x 3030

ED x 3017

USGS MBL # (904) 841-0257

Carroll Hall (Pruitt caretaker)

904 - 935-1303



STAND PLANE LAT LON
 $29^{\circ}59.81'$ $82^{\circ}57.945'$

5-3-95

KC, FR & VB to Little
 River springs drill site -
 stop off at WMB - pick up
 well permit - meet USGS
 crew on site:

Ed Oakesford, Christy Crowell
 John Pittman, ~~John~~ Josh Richlin

W 17258

A-Su-1 Little River Spgs
 TGS R13E S1 (irr) NE, NE
 LAT $29^{\circ}59.79'$ LON $82^{\circ}57.99'$

0-30" - push sample
 30-60 "
 5'-6' push spl
 0-11' is bn gy sd - gray + bn
 clay + clsd below.
 6-8.5' - sl ch sd
 8.5-11' - sl ch sd

20-8-2

11-13.5' clayey sand / clay

- hit sand last ~ 3"

13.5-16' sand - se rust iron oxide

stained at top of run

16-17.2' - sand at top - then rubble

feeling - run out of penetration at

17.2' ~ .3' rock - ls in btm

of run - white clayey ls.

17.2-18.5 pull spec box back

2" sand - y. or - + ls fragments

18.5-21' soft ls - ss sed

running into pipe - spec work

go - ~~bank~~ bailed some

sample - then drilled down

to ~ 23 1/4' - soft rock

- Confab w/ Ed, Christy + John

- drill to 25.0 - # set csg.

drill long open hole to set

pressure transducer.

19.5

2.3

17.2

11-13.5' clayey sand / clay

- hit sand last ~ 3"

13.5-16' sand - se rust iron oxide
stained at top of run16-17.2' - sand at top - then rubble
feeling - run out of penetration at17.2' ~ .3' rock - ls in btm
of run - white clayey ls.17.2-18.5 pull spec box back
2" sand - y. or - + ls fragments18.5-21' soft ls - ss sed
running into pipe - spec work
go - ~~bank~~ bailed somesample - then drilled down
to ~ 23 1/4' - soft rock- Confab w/ Ed, Christy + John
- drill to 25.0 - # set csg.drill long open hole to set
pressure transducer.

- pump bentonite mud
+ pull auger to try set csg.

- Attempt to set casing -
could only get 20' -
pulled out - mudded up hole
+ blocked w auger.

- need 6 5/8 hsa

- Auger bit from o/c

- cement

- small pins

- 6 5/8 Auger drive head

+ Auger plate

- tape measure

- 7AM start 9pm mtn

5-4-95

8AM start - KC, RR, + Break
drill to $\pm$ 24.5' w 6 5/8 hsa
set casing thru hsa
pump 9 bags portland to

22.

1. *Chrysomelidae* (Colorado potato beetle)
2. *Curculionidae* (Colorado potato beetle)

- gives the 2 types
 - as the 2nd
 the 2nd type. The 2nd
 - gives the 2nd

[illegible]
$$\begin{array}{r} 32' \\ 4.5 \\ \hline 27.5 \end{array}$$

the 3rd time

2-7-92
 Bill & I took the car to the shop - K&N's 100 miles
 and we will have it back by 2-28-92

56

set csg. flush csg w
12 gal drl. mud + light
head seal.

7 PM netw

5-5=95 - Flat tire on
2943 - chg + get tire plugged
~ 6' cement in casing - & drill
out

25-275'

27.5 - 29.5

25.5-31

31 - 34.5

34.5-37

37-39.5

39.5-42 - soft zone

no recovery

42-44.5' TD - ~ 2' more

no refn circ

pumped 9 bags portland cement -
tight head method - # to set
casing - mixed + poured 2 bags
portland to set protective casing

in pss hole . pss hole
 1/2" + 1/2" hole . 1/2" hole
 1/2" hole . 1/2" hole

1/2" hole

1/2" hole . 1/2" hole
 1/2" hole . 1/2" hole
 1/2" hole . 1/2" hole

W17259

Pumped hole ~ 1/2 hr at
 ~ 25 gpm - lots of red clay
 from bottom when agitating -
 - prob no recovery zone
 (39.5-42) must be cavity
 with clay fill

completed 5-5-95
 W.L. 17.1' below top of CS9 (~ 2' ALSO)

A-SW2

W17259

5-8-95 KC + FRR - to BRANFORD
 start usgs site #4 - Pruitt
 T 55, R 13E sec 36 NW, SE
 LAT LONG

0-2.5' push spl - ltgy to lt
 yf. gy gtz sd. v little clay or
 organics

2.5 - 5.0 push spl - gtz sand
 as above to ~ 3.5' - then pr
 no clay, sand - firm

5-6' grayish red clayey

sand

6-8' reddish gray to lt. y. w.
clayey sand.

8-10.5' - reddish sl. clayey sand
- clay decreasing with depth.

bottom foot white qtz sd

10.5-13 - white quartz sand

13-15.5

15.5-18

only about 50% recovered

bottom 4" recovered in br clayey
sand.

extend spec note 1.5"

18-20.5' - v tight - lowermost 1 sub

18-18.5 - gray clay + ls. top of rock
at ~18.25' - bottom half of
interval first saturated sed.

20.6-23' ls. - soft towards
bottom

12.0 - 12.5 - very soft - clay?
 cavity? - bottom is at 27' 1"
 minimum 4' 4" IG at top of run
 ∴ V. soft, plastic - prob cavity fill
 25.5 - 28 cavity to 26' - rock
 for 3-4" then soft. - only 3-4"
 of soft ~~etc~~ ls. sand retained -
 static wc at 20' bld
 appears to have bottom at 28'
 28 - 30 - soft clayey ls + light dy
 - v. rotation pressure
 30 - ^{30.5'} hit hard rock - poor spec
 full of soft dy + rock fragments
 etc.
 - pull 3 1/4" HSA - ~~start~~
 Drill down 20' 6 5/8 HSA
 shut down for day 5:00 pm

12.0 - 12.5 - very soft - clay?
 cavity? - bottom is at 27' 1"
 minimum 4' 4" IG at top of run
 ∴ V. soft, plastic - prob cavity fill
 25.5 - 28 cavity to 26' - rock
 for 3-4" then soft. - only 3-4"
 of soft ~~etc~~ ls. sand retained -
 static wc at 20' bld
 appears to have bottom at 28'
 28 - 30 - soft clayey ls + light dy
 - v. rotation pressure
 30 - ^{30.5'} hit hard rock - poor spec
 full of soft dy + rock fragments
 etc.
 - pull 3 1/4" HSA - ~~start~~
 Drill down 20' 6 5/8 HSA
 shut down for day 5:00 pm

5-11-95 K2, A.H + J Balsille⁶¹
with A-SW-2

grout level at 20.5' bwsd
water level in CSG 16.5' bwsd
- pour 2 bags bentonite to bridge
any remaining cavity - bentonite
to 18.5' bwsd

+ 6 bags 20-30 sand to 15' bwsd
bottom of casing at 29.5'
change over to wire line coring.
drill ~ 8" cement then ~
1' hard moldic ls. - next
interval soft - no recovery
drilled to ~ 34.5' ~ 8" rock frag.
recovered - all covered with
cement - ? part of cavity or
rubble from bottom of hole
pumped 5 bags portland -
brought grout to ~ - 2' but
settled some
quite dry - thunder storms

S-15-95 - retn A-Sk 2

HC, FRR, A-H

hole at 34', cement around

csg needed to -6'

drilled (pushed core bbl to
25' - 5' of open hole,

no retn water, no recovery

- pos. miss latch - ck bit + outer
bbl.

pumped hole for ~ 1 hr at ± 12
gpm. - pumping lots of solids

- rock chips, fossils + red

clayey sand bbls. ~ 2.5' of

open hole filled in -

open hole contains some cavity

mixed 4.5 bags portland to
set protective casing

84 Coker US 90W
154

Discount building mat.

US 129 J

364-7000

A-SW-3
Add.

5-16-95

A-SW-3 63

move to side 3

A-SW-3 - first of 3 well
cluster

T 5S R 14E S 31dc

LAT > LON

30° 00.11' 82° 57.20'

0-2.5' push spl

2.5-5.0 " "

5.0-6.4' " "

6.4-8.75' approx 60% recovery
extend spur nose 2"

8.75-11.25

11.25-13.5

shut down for day

5-17-95

KC, PRR, AH

drill 13.5-16' sand, white

16-18.5 - only 1' recovered - prob plugged
bbl - white wet sand

18.5-21 soft - easy rotation
and penetration - grey olive
clay + clayey sand

A-SW-3A

17260

A-SW-3

21 - 23.5' SAND - white thin

of gy cohesive clay sd - poor
recovery - prob. plugged split

23.5' - 26 - soft penetration + rotation
- mostly pushed split

23.5 - 26' bn sh. clay sd and of.
gn clay. - mostly pushed split

26 - 28.5' - soft penetration, mostly
pushed

28.5 - 31' clayey sand + clay.
lowest part some very
weathered ls?

31 - ~~32.5~~ 33.25 - refusal
at 33.25 in LS - weathered.

33.25 - 33.5 - LS -

33.5 - 35 - limestone fragments, black
mud. - harder at top than
soft. - poor recovery.

35 - 36.5' - soft - firmer
to 37.5 - cavity fill

37.5 - 40' - still soft. push only

40-42.5 - upper part push only
last 1 foot - rotate also -
pass rock?

42.5 - rock - shorten sampler 2"

42.5-43.6 rock - soft - no recovery
HSA bore getting real sandy - can't
hardly get spurs in.

43.5-46' drill down 2.5' - WD sampler
soft below ~ 1' of soft rock

~~43.5-46'~~

46 - ~ 48.5' - soft rock + soft sed
bottom 1' appears to be harder. -
pulled Auger flights to examine
sediment on last 10' of flights -
+ clayey sand + some calc.
matrix sand. - no rock to
set casing on
pull auger - hole collapsed to
- 16' - prep 5 bags
portland to plug.

5-17-95

A-SW-3A 66

KE & AH - mbr to A-SW-3

- pour 2 bags portland - still draining
down hole - fill most of remaining
hole w cuttings.

START A-SW-3A W 17260

T55, R14E, Sec 31 d/c

LAT 30° 00.11' Lon 82° 57.20'

0-2.5' pushed - sand - grey,
~~2.5-5.0~~ becoming whiter w
depth.

2.5-5' pushed spec white sd

5-6' - w/c spec - white + grey

sd - bottom 3" y.l. or clay sd

6-8.5' cm, y.l. + orange clayey sand

8.5-11' - y.l. or g clay sd - top

3" then white sand - bottom

~4" gy y.l. clay sd

11-13.5 - softer rotation + feed
below 1st foot - prob plugged

17260
A-SW-3A

sample - ~ 1' recovered - yellow br
+ white gtz sand

13.5-16 - soft rotation + pressure-
proof clay

~ 13.5-14' grey + br clayey sand
then 14-16' creamy calcitic ls.
soft - rubbery

16-18.5 - soft rubbery, adhesive feeling
(drilling) - soft calcitic ls.

no lg fossils evident

18.5-21' - drill as before - harder
or lighter lowermost 1 foot

- v poor recovery - clean gtz sand
w calcitic matrix - some
open pores

21-23.5' - drilled v soft - sand
or above - poor recovery -
extend spec near 2"

23.5-26' drilled or above -
refusal at 26' - quartz sand
white - ~ 3" grey clay at bottom

From WITSE for Friday

2" trays

box liners

2" blocks

sand paper

~ day core bit taps + bottoms

2 1/2" wood plugs

A-SW-3A / 68
~~26-28.5~~ - then 1 metre
" 2 "

26 - ~ 26.75' in 23 = 3 short runs
Ocala ls (CR)

26.75 - 28.5' drill down w/o
sampler for socket in rock
- bottom is soft -

STATIC WC approx 20.5' bLSD
(1st 3 clay samples (26.8 - 28.5)
collected from auger flight.

drilled thru limestone into
Black clay - same as A-SW-3
- drilled down Auger flights
w/o sampler to top of rock at
~ 40'

shut down for day

at 30.5' bn gtz sd, sl. clayey,

min. ls. dr. w.

at 35.6' bn gtz sd, sl. clay, w.

min. ls. dr.

at 38' same as above

38-40' Limestone, white,
mod ind. - rubble - Deal. ls.

40-42 Dolomite, hard, brown,

42-43.25 Cavity

43.25-45 - cavity fill +
dolomite ls. rubble. hard

18
35
45
15'

5-19-95

KC, FRR, J Branch, 7AM START
RDN to A-SW-3A

top of rock at ~40' - v hard
cut ~4" w 3 1/4" h SA

- pull flights to collect spec
of 28.5-40' interval + drill
in 6 5/8 h SA's

drilled down 6 5/8 h SA's to
~40 1/4' rock + roll on
hard rock - hole deviating.

- ~6' sediment inside -
want pump clean

problem - bolts missing?

- plate out of bit?

- surge flight off?

pull h SA to find out.

- knock out plate - came loose,
twisted chain off + jammed
in throat of bit - took
to JB welding for repair

PO HE-WL-A

DATE MAY 1995

HE-WL-A

A-SW-3A
STATIC W 125' bsd
6" 1995

~~W 17261~~

7AM-6:15 PM
KC, FAR, AH

A-SW-3A, 3B 70

5-22-95 KC, AH, FAR

7AM start - stop off at WET.
FARM side - TALK w JM
to site - drill back to
bottom (last 1 job) - knock
out plate install 39'3"
csg (top just below 1st.
- pump 11 bags portland
- won't rise past 17' bsd
- brace csg in pump position
to let cement set. move
rig to next well in cluster.

5-22-95 start drilling in 3/4

ASA's A-SW-3B ~~W 17261~~

0-11' sand + clay
11' hit rock - in place? ~ 12.5
- boulder? - push boulder -
deviated hole to rt. - pulled
rig forward 3' + reset up

[illegible]

STATIC WL before WZ
~18' below

0 - 19.75 SAND + clay
19.75 - appears to be reddish
rock - collect 3rd sample
to 26'

S-23-95 7Am start, 630 netw
KC, FBR, AH

Pump 17 days work and cement
to fill top 17' of hole

A-SW36 - drilled to 28' w
3 1/4 hrs - mixed 100 gal ment
installed 28' csg, ~~to test~~
pumped 7 bags portland
followed by 15 gal clw water
to surge csg. - closed tight head
end of day mileage 40600

5-24-95 - 8:30 AM START -

KC, FRR, A-H

drill out bottom of casing A-SW-3b

28 - 30.3 NISM

30.3 - 32.5' LS - NO SM

32.5' TO

pumped clear water in to
displace cuttings in btm
of hole - could not get
pump to pump out the sludge
& does not appear to be lots
of flow or have air leak in suction
Side of pump - up. seal
set protective casing - pump
2 bags mudland

LM pumped - compressor -
completed 6-18-95

btm of 25' 2 1/2"

55

SE-WL-A

- KATAC MAOES - 20-40-2

H-A, 203, 24

SE-WL-A 21220 of water drilling

mean 2.00 - 30

mean 2.50 - 30.00

05' 2.00

It is extremely common
 into in igneous rocks
 big bubbles - also for
 shot off the gun to gun
 that it is very common
 actual shot off the gun to
 gun - shot off the gun to
 gun - shot off the gun to

A-SW-3A, 3B 73

5-26-95 KC, RG + J Branch

7AM start -

to A-SW-3A - drill out

open hole - also pump

A-SW-3B - pump ~150 gpm at ~29gpm

hard RECL LS at 40' - buff

- tub cavity or filled zone
at ~42'

42 - ~43.25 cavity? - remainder
 to 45' soft and rubbley.

poor recovery - hard rubbley
 LS/dolomite, yellow mud +
 quartz sand also chips of
 Portland cement - prob. some
 sort of vertical fracture?
 or connection to cavity in abandoned
 A-SW-3 hole (more likely?)

pumped hole at ~25 gpm for
 1.5 hrs. still producing abundant
 quantities of orange mud and sand

25
 25
 65
 125
 10
 15
 16.25
 32.5
 55
 65
 77.5
 80
 82.5
 85
 87.5
 90
 92.5
 95
 97.5
 100
 102.5
 105
 107.5
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 112.5
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 152.5
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 157.5
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 162.5
 165
 167.5
 170
 172.5
 175
 177.5
 180
 182.5
 185
 187.5
 190
 192.5
 195
 197.5
 200

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



LIETZ
SINCE 1882

