



Core Book
#3



LIETZ
SINCE 1882

LEVEL BOOK

No. 8152-55

INDEX

Property of T. Scott

FLA Geol. Survey

Address 903 W. Tennessee St

Tallahassee, FLA 32304

Telephone (904) 489-9360

This Book is manufactured of a High Grade 50% Rag Ledger Paper having a Water Resistant Surface, and is sewed with Nylon Water-proof Thread.

9/10/93

Kulhman Ramp 28 W-17000

0-274 sand

274-288 1st grv to argill. fine sand
w/ minor phos, silty, clayey

PR ish mica

Prob. reworked Becomes lighter w/ more carb in situ
at 283.5 then back to as 274
very clayey at 282

t 288 - top Arcadia

424.0 top Noellee

478' top Suwannee

580 top Ocala

863 top Bumpk

Ramp 33 W-16784 Waterbury

Top HAW/PR 37'

10K BV ish

Top Arc 163

top Tampa 329-337

top OS 539

Dolomitized
Lower Ocala
Next!!

TOP AP

Top Ocala 734 1021

TR 7-1 15166

Top of HAW in 1st box 1st sample
30'

Arcadia 30' Tampa 295 OS 433

ROMP 7 15303

Top HAW/PR 26

Top ARC 79'

Top Tampa 208

Nocatee 292

OS 439

Ocala 840 don't like Hammer
picked 820 at is
in a sandy zone

S. Venice 16814

top PR 27.5 looks reworked

top Arc 51 Tampa 254.5

top OS 670.6' has some Arc-looking
zones to 681 but I will
go with 670.6'

TR 5-1 15168

Top HAW/Arc in 1st box 1st sample

47' Tampa - 264

OS 486

Romp 25 W-17000

set top HAW 288 Arcadia
1st pg NO characteristic PR
Haw Box

ROMP 12 Prairie Creek W-16578

Top HAW 109.5

PR 109.5

ARC 274

NO Tampa?

NOC 409-602

Top Suco confusing
has very sandy (sandstone w/ forams)
Goes to 670± to 719±
then becomes slightly sandy to
sandy grainstone
top provisionally at 717-719

Romp 14 W-17001 Highlands Co
Archibald elev 145'

0-353 (approx according to Claydon's log) undif sand

353-363? appears to be some Ls in cutting
361 but does not look like P. Pu. Fin

363-373.5 clay, calc to 20%, variably sandy, phos + trace to 10%

NOTE: → This clay zone may be
Arcadia Fm as in
Carlton Reserve core and
shows The Peace River Fm

Arc³⁶³⁻⁶⁴⁵ may be absent here
crust & rubble at 432.5, 459.5 ±
and 463.5 (many others seen down more)
10th just below 432.5 looks
like carb above

A NOCATee-ish section (day)
starts at 533+

BASE ARC 645'

Top Os 645

Top 20 724'

Top Eng 1019'

361- Dino's L. Edwards
Early Mio

W10657 Σ lawlo =

Base Os 39

Top 2 39

Summavardarache Dato 18-23-5

No Sample 23.5, 25

21/aville Ls 25-39

problems w/ idling the bank between
 0_s & 0_t

10656	Elaville 24
-------	-------------

0s 21-25 cavity 25-74

W/ clay at base

44-46 - Cole Sand 4/1/2

look, washed in as part of cavity fill
Top Σ 46'

5/3/94 w/ Wingard Woodman Edwards

Phred II

start at 304

Peace River to 311'

Crown
112 + 117 ^{Calder}
217 ^{mid}

Edwards Oolite
189 Late mio

237 no younger
than Mid Mio

Bass #1

Ocala dolomite at base more calc
upward. becomes good calc
at 199 in Ellaville. Best Ocala

dolo at 208.5 - 208

Few chert nodules and ^{chert zones in ls}
more coarse grainstone in Suwannee
w/ cones variable to a fine grained
grainstone.

variable hardness and
variable grainings

5/5/94 warehouse Wingard Woodman Edwards

Bass #1 10480

Ocala TD^{208.5} - 199

Ellaville 199 - 192.5

Suwannee coarse 192.5 - 175.5

Suwannee 175.5 - 22.75

Ob. 22.75 - 0

at 51.5' and above there is
an abundance of clay in w/ very
textal ls. looks like the
rubble zone at B-ville would look
if cored.

R. gouldi, naked at 38'

Very textal Suwannee w/ some chert
in Overburden

~~Ramp 14 W/7021~~
Start at ~~512~~ in Nacales
~~to~~

3/10/95 Working in Reed Run/Lynn

Exmore Core S. to Delmarva Pen
Va - Eastern Shore Va.

Surface elev approx 30'
Starting at 1204'6" Box 83
in Chickahominy Fm upper 50
base of Chick is at 1230'
See USGS Survey 1059 pg 96

1204.5' - clay, silty, sandy (vf-c), phos 3%.
glauconitic, ^{3-5%} moll, frags, forams frag-gr mica
subhighly phos. Sand % decreases up phos disappears
very foramin rich as sand disappears
sand becomes more abundant in lower all
carbonized & pyritized woody frags
Bioturb (see 302)

Top of Chick in Box 74 at
Survey - changes from lgt gray to mud clay
gray at 1110'8" Chick/Delmarva

Delmarva/Old Church contact highly brecciated
Old Church very glauc. little forams. IS 9/3 silty
some clay few forams (leached)

Old Church/Calvert contact 124'8" some glauc.
new contact base Calv

Bare Delmarva in Box 74

Delmarva

Litho of Delmarva seems very
similar to Chick - diff's??
above. below contact 100% different but higher
more it returns to similar litho.

Old Church - sand vf-f, silty, clay
glauc, micaceous, moll. forams
med olive grn phos in zones

Missing Box 70-66 some glauc zones in lower
Calv.

Box 65 in Calvert

1005.5 ^{silt, clay to} clay, silty of sand, forams
diatoms, few moll frags varies to 10
phos or glauc onile? often feels very light
very diatomaceous zones also some foramin-
zones fossils very leached in many zones well preserved
in 302

thinly bedded w/ little bioturb
near 963 bedding planes covered
by vitreous glaze of gypsum
Bioturb varies quite a bit.

traces of organics, trace plus

Box 51 v f - f sand, clayey, silty fossiliferous

Box 52 micaceous in zone 864 - 869

micaceous sandier zone

some zone of much bioturb

thin carb lenses at base in
Calvert

contact w/ St Marys appears to
be around 506 - 507

silt to clay w/ if sand very minor shell
near base then no shell mod ^{to med grey} green grey

fine bedded, some bioturb, sulfides

w/ Fe staining same as in Newport News

Box 31 Very sandy v f - f

microfauna - forams? diatoms? small

poor cond., goes very bioturb.

Begins to have moll at 406.5'

numerous Turritellids

indurated carb beds up to several
feet thick from 359.5 up to into
Eastover fm

Top St Marys around 314'?

med yellow green sand w/ shell
indurated carb zone. small brachiopods

St. Marys to around 170 then

Quat. paleo channel fill

sand v f - c w/ pebbles (very scattered)
to silt and clay lighter colored toward
top w/ orangish oxidized zone at
top

Newport News Park 2 - Va.
core TD at 621' w/ cuttings to 1475'
1st box worked $\pm$ 42 375.1' - 368.3'
in Delmarva beds

^{1st box} olive-gray clay, silty, some sandy, some ^{grades to clayey and}
micr, abundant forams (plank & benthic)
in some zones, after bioherbs ^{some glau} phos scattered
sand v.f.-f w/ occasional coarse grains
bragyan dart at 344.5

344.8 ^{could be Old Church (upper)} into lower Mes beds (not named)

sand (m, f-c), minor clay, silt, lot to
med gray gray abundant moll (small)
phos grains common, microfossils abundant
thin sandy, phos, foss. ls beds

Sand has variable shell content

Powder has contact at 331.7 in zone of
lost core

Basal Calvert sand (m f-m more

clay/silt mix than below, phos
scattered beaded moll, micros, bioherb
finer upward. gray to red base 1st yr ^{higher}

forams better preserved in finer grained
sections but still some leading
diatoms in finer grained beds
but not as diatomaceous as in
Ex-more core

very silty, more clayey in scattered
zones, occasional wood frags

becomes more granular above 276.4
according to D. Powers late M^o
starts at 267.8' - St. Marys fm
beginns at contact

Silt to sand, f, f-m, olive green silty, phos, clayey
few moll (leached), brachiopods
varies to silt w/ sand & clay
some sulfides

moll only in few zones, ^{truncatellids common} few brachiopods

lighter colored above 273'

core has brown stain on exterior

top of St. Marys is of f sand
base of Eastover (179.3 Powers)
is same sand slight color change

to mod yellow grey green varying to mod grey green
moll. abund in 13' one foot of
Eastover then very scattered

until 164' when become common
& abundant, many truncatellids

variable clay content in
a sand of, f-f, silty, clayey
minor phos? glau? mica

varies to silt w/ of sand
above 164 moll abundance
varies from absent to abundant
all moll leached, brachiopods common

zone of abund oysters & pectens 97-98'
^{phos?} glau? becomes abund at 89.25'
in med sand that fines upward.

to a silty clay / clayey silt
glau/phos decrease upward to near
1-2% at 83.9'

Eastover to 77.3 (Powers)
then Yorktown

Yorktown

sand, m. fine, silty, plain to 100
sandy, silty fine granule, early to dry in
about shell in middle of it

bragons, above 58.5 m
in fine scattered zones
silt w/ sand in zone of abundant shell
of sand, silty above mica
more clayey above 30'

zone of calc rubble 40.5 - 38.8
then very weathered orangeish mottled
sand (m.f.-m) w/ phos
Powell has top Yorktown at 27.5
in weathered mottled

Pleist sands Fe nodules at contact
c, m-c minor clay, phos?
oxidized, weathered, white to red
brn. becomes fine sand w/ silt at
25.2' then becomes more coarse
upward. returns to fine

very
W/ zones of clayey sand
top
cont
16

Dorchester Co
Clubhouse Xroads, S.C.

TD 2599' see [6" core (very heavy)]

Cut USGS Prs Pap 1025 p59-89
surf. elev 20'

Described top down due to need to
move boxes w/ forklift
in Ashley Fm (Oligocene)

ls, sandy, phos glauc clayey
fossiliferous abundant forams in zones

bio turbs, little bedding remaining
zones of forams pack to wackestone

Bring section - all look very similar
178.3 Base of Ashley Fm bored. surf

on U.S. Parkers Ferry Fm

Parkers Ferry litho very sim to Ashley
gets finer less sand, has glauc but
little to no phos?

Base at 186 into Harleyville Fm
litho sim but finer lots of glauc in lower
part Base at 226 highly bioturb
helped worked to 231'

8/3-4/95 Cores with Rick
and Ken for STATEMAP

W-16447 0-17 Miami Ls - white
17-54 "FT" tip is very

Comments
well

Sandy Ls Base is
Sandy ls lying on
loose sand.

54- Tamiami

16448 0-30 ^{Qm} Miami Any
30-86 QFT
86- T_T

7/2/96 w/ R. G. & KC

Hot as
Hell

STATEMAP cores

Pine Glades Lake 17373

Miami Ls 0-15.75 or 16'

FT/Caloos 15.75 or 16 - 27

Tamiami? / unnamed sand with

27-TD 34.5

SNP Gate II 17356

Miami 0-15.25

FT-Caloo 15.25-26.5

Tamiami? 26.5-TD 43.5

Flamingo Wells 17359

Fill 0-4

Holocene Mud at 4'-4.75

Miami 4.75-16.5

FT/Caloos 16.5-23

Tamiami? 23-TD 33.5

7/3/96 STATE MAP

Pa-hay-okee 17355

Miami O-

contact in box
sand 2.25 Dips

FT/Calcs - 24.5

TAMiami/Unnamed Sand 24.5 - TD

W. Research Rd 17372

Miami O - 17

FT/Calcs 17 - 32.75

TAMiami/Unamed 32.75 - TD 40'

Old Ingraham Hwy 17374

Holcom Mnd Q - 4.5 0-2 fill

Miami 4.5 - 18.5

FT/Calcs 18.5 - 30.5

TAMiami 30.5 - TD 44.5

Bear Lk Tr. 17358

Mnd to 10.25 -

Miami 10.25 - 19

? FT/Calcs 19 - 23.5

TAMiami 23.5 - TD 54.75

7/15/96 w/ Lynn's Hackley

FAIR Rym Sta

0-5 fill 0-3 maybe

(3) 5 - 63± TAMiami L

63 - 111 TAMiami Sand ?

Get Lynn's Notes

111 - 161 Unnamed sand

7/16/96

Collier Seminole St Park

0-1 fill or 0-5

1-20 undif Sand

20 - ~~6~~ TAMiami

20 - 75 ^{10/18/96} Ochrpa

75 - 111 T. ss undif TAMiami moll
vf-f sand ls to ss grains etc.

becomes very calc ss

111 - 129.5 vf sand forams, etc

129.5- good break
hardground good bladed
surface

Dolomitic, moll
mudic sandy phos
grades into sand
carb, clay mss w/
retal lenses at 146

129.5 to TD 194

is not Tannian

Wood Bch seq 167-181+
qtz pebbles in coquina (mollie)

129.5 - 135 carb

equiv to 133-136
in Fak strand gate 12

129- TD has more carb
than Fak gate 12

Fak strand gate 12

W 17387 TD 227

0-6 maybe 10.25 full

10.25 - Tannian

10.25 - 40 + Ochapu

40 - 136 lagoonal sed

40 - 70-94 sand, silt clay carb
very shelly abundant broken shell
few Perna

40.5 - 136 is this Tannian?

136 - 227 TD Sand

Coarse grained

90-94 foot

90 - 133. Unwashed sand

7/17/96 10 pm GLB gne TMS Sad!

510 Pump Rd (Port of Is)

W 17361

3' fill

3 - 17' undiff sand

217'

Tan

70? - 51??

poor consol

17 - 51??

unconsol? very questionable

17 - 88' Tan L

88 - 104' Tan sand?

104 - TD

unconsol sand

170 - 196

consol

171 - 196 TD Beach dif?

7/18/96 G.B.-1 16890

Brice Wardlaw

Suzanne Wardlaw

Nancy

11 - as well

7/22/96

830 pm

5/97 compare to new cores

Collier Seminole W-17361

0-1 fill

1-5 unconsol gray sand w/ org vf-f few m-c grains

5-9.3 brn sand vf-m org unconsol

9.3 - 20 slightly clayey ^{unconsol} silty sand brn mottled

becoming ^{mottled} gray vf-f, few med

becomes f-m more clayey below

17 to 18 Ls clast at 18.5

zone of vf unconsol sand at 19.3

mottled brn to gry sand vf-f 19.5

to 20 poor consol

20 - 111 med sandy Ls good ind ^{very} fossiliferous

little phos, very med mottled 1st gry to

next to pack to greenstone

sand and phos highly variable

very sandy below 53 becomes a

calc cmt ss w/ zone of very sandy
Ls below 53 f vf-f sand

fewer
molds less carb more sand (6.5 - 68
than ss as 53-68 very moldic
variable carb content

less macro moldic and less ind
below 53

zone of macro molds & better ind
around 103' to 111' interbedded
w/ soft zones (washed out) poor rec
grade into unconformity (calc) sand

111-129.5 sand 1st grn gry, vf-f, forams
mold frags 3-5% phos

129.5-134 hard ground bored phosphatized
dolo or dolo ls very rexted packstone
sand content low at 129.5 increases
rapidly. Below about 130.5
dolo seems patchy in ls
mold molds abundant to common to 134

134-140 ^{mulstone} Ls, sandy (m f-m) becomes
poorly ind ss m (f-m) by 134.5
then varies from Ls to ss
clayey (maybe dolo also)
by 136

140-144+ dolo? sandy (m), clayey, mod ind
bioturb or brecciated, phos
grn gry to gry
3 in hard ~~g~~ dark gry dolo(?)
at 144± very mold moldic

144±-167± ^{f-c} ss, poor to mod ind, dolo(?) and
clayey (minor) phos 1-2
Some very coarse zones

1st granule size qtz at approx 156-7
widely varying grain sizes
1st discoid qtz pebbles at approx 166-7

167±- calc cmt ss mod to mod to well ind
mold molds & frags

f sand zones interbedded w/coarse
to pebble zones - fine zones have
few small nodules or frags
coarse zone abundant small nodules
and frags

becomes poorly ind to unconform
below 181-187.7 (poorly ind)
very hard zone (dols - silic clay?)

187.7-188

188-194 v.f. sand, poorly ind
mud, poor non carb

T.D. 194

see breaks several pgs prior

10/18

20. 111 10/22
called Ochopsee to 75 based
on gradation from whitish
ls to ss to brn grey / yellow
ss w/ less carb

5/97 compare to new core see notes

Old Pump Rd 17361 2 pgs prior

0-3? sand fill

3-7 dk grey sand v.f.-m poorly ind
org roots loose v.f. sand
6.5-7

7-17 sand, v.f.-f, poorly ind clay
trace phos mottled lgt grey green
to tan

very poor ind to unconform
tan sand v.f.-f 15-17

17. 17.5 thin zone of subltly ls w/
clayey sand

17.5-18.5 ls, very hard - rextal
minor sand few small nodules
dissolution vugs

18.5-20 pebbly sand - lost

20-27?? sand f v.f.-f unconform

lgt grey phos trace
dk grey to lgt grey
dolomitic? ls hard rextal at top - poor
coffer w/ depth, var sand content
few small nodules 28-29 lost

29-30 hard rectal ls dolomitic?

sandy 20-31 (ast)

31-36 1' of 5" hard ls pieces

soft zones washed out? or

vugs?

36-88 ls white-lt gry, slightly sandy, ^{trace phos} mod. moldic, mod to good ind

sand increases down hole

hard zones (dolo?) scattered

mostly greenstone-pink stone

may be
plug at
end of run

> mudstone at 72-73 very sandy

hard rectal zones appear

dolomitic

okapee

Very poor recov !!

58-111

^{f-m} ss, mod ind lt to orange gry to med

Tamiami
sand

gry, calc cont dolo? cont

mod moldic, phos trace to 3%

107.5

171 sand ^{f-m} poor ind, calc/dolo,

unwashed
sand

shell frags. Varies from vlt

to f-m from some c grains

clayey at base

SS w/ dolo cm

Sand in f-m

171-185 to Dolo, lt brw to dk gry

well ind, trace to 2% phos

mod moldic some mod frags.

softer sand zones washed out

thecoclasts

Few thin ls w/ in dolo

185-191

ls w/ zones of dolo, very sandy

to calc cont ss mod to well ind

mod moldic ^{coral} mod frags forams
in the clasts

compared to Collier-Leon

so much loss - hard to get good corr.

but appears very vuggy Tamiami

highly rectal. 17.5 - 88 and ss 88-107.5

corr w/ 20-111 in GS core

107.5-171 prob equates w/ 111-161 ^{in C-5} but

w/ out hard ground and less ls.

171-TD (196) in similar Bels deep
to 101-131 in C-5

Very little coarse sand in this hole
no distinct pebbles noted, no gravel

slightly complete to new corals
See notes 6 pp prev

Fakalofa Rgr Sta W-17393

0-5 fill

5-6 ^{white} Ls, poor consol, finely
sandy, weathered

6-63± ^{white} Ls, mod to good ind, slightly sandy,
abundant small molds, sand content
varies, more sand toward base

63±-111 Sand, Fm, lgt tan, unconsolidated
very poorly consol, little shell
phos 1%.

becomes very shelly about 76' w/
some clay in inter - grey grn
to approx 79' then on to 63'

layers of sand on 63' interbedded
w/ clayey shelly sand at 76'
to 111' some coarse grains in
sand 106.5-111

111-134 sand, ^{lgt grey} m-c ^{Just natural sand}
few shell frags, minor phos
poor consol

134-137± sand lgt grey to lgt gr, poor consol
f F-m Ls & calc to dolomite
^{slightly} clayey few shell frags, lithoclasts of sandy
carb, minor phos 1-2%

137±-149 ^{dolo}, grey brn, mod to good ind, sandy
sand m-c phos 1-3%
moll molds

149-161± Sand lgt grey unconsolidated m-c very
few shell frags, trace phos
more shell w/ depth to TD

Zone from 137± to 149 may cor
w/ 129.5-134 in Callee Sam.

Beach seq not encountered

63-111 Tamiami Sand?

111-137 unnamed sand?

137-149 carb in unnamed

149-TB in unnamed

Ochopee to 63±

7/26/96

5/97 compare to new cores
Fakahatchee Strand Guts 12

W-17389

See notes 6/94 prev

0-4 fill

4-6 fill?

6-37(40) LS, grey brown to white - poor to good
ind, sand var. from <10% to 30+%

abund small molds poor to moderate

minor phos sand f vt-f

soft carb "plugs" are artificial

due to drilling

about 40-41.75 sand lgt gry, unusual to poor
scattered shell frags

41.75-51.5 sand, lgt gry gry, poor ind calc
mtx, ^{minor clay} phos 1-3, abund shell
frags, sand varies from F-Vc

51.5-55.5 sand very poor ind to unusual
lgt gry phos 1-2, little shell

55.5-69.75 sand mod gry grn to med
ol. v. grn, poor ind, clay & calc
intr, abund shell v-f-m
less clay & calc intr below 67.5
grades into unconsolid to very poor
consol F sand 67.75

69.75-72 Sand lgt gry to gry grn, poor ind
to unconsol, f-c, phos 1-2
some shell frags
some thin zones of c-vc sand

72-76 artifact of drilling - conc.
shell debris

76-79.5 sand, lgt gry grn, f-c, zones
of v-f, unconsol, shell frags

79.5-86 - lost

86-90 sand, lgt gry grn, f-m sand c
unconsol, phos 1-2, abund shell
some zones of v-f sand

90-94 lost

94-110 sand f-m lgt gry, unconsol
phos 1-2, little shell, much
sand becomes v-f-f by 100
back to f-m by 105+

110-115 dropped core by Diller - out of
order.

sand, gry grn, poor consol
phos 1-3, more shell frags
below, little clay

115-125 sand, gry grn to lgt gry, ^{f-m} poor
consol, clay & calc intr unconsol
phos 1-3, shell frags
zones of v-f-f, w/ very little shell

125-136 sand, f-m, m-c & v-f-f zones
poor consol & unconsol
limited shell, some calc intr
carb intr zone 134-136

136-190? some f-m, m-c
f-c, lgt brn, unconsl to
poor consol. phos trace, shell near
136 then sporadic, mottled,
organics in mix? slightly clayey
in zones, well sorted m-c sand
1st discord qtz pebbles ~~177~~ 188-189

due to drilling
gravel lag approx 2" at 189?

190? - 227^{TD} sand, f-m
unconsl to poor consol brn
gry to lgt gry
zones of abund pea gravel
thin drk grn clay at 218-219
shelly m-f-m/c sand at
219 to TD 227

190-227 may con w/ Beach dep
in Collier Sect 161-181

To 136 - Tamiami ?? sand

10.25-37⁴⁰ Ochopu

Jones Grade 7/27/96
5/97 compare to new core

0-3 fill

3-5 weathered Ls & fill?

5-10 rubble - ^{hard} - hard Ls

20 moll moll Ls ^{hard} minor sand, phos trace

30-50 moll moll Ls ^{hard} sandy fuv. sandy phos

becomes moll moll ss

50-68⁺ VF-f ^{ls} sand, poor consol w/ better red
moll moll beds

60- 5, VF-f ^{f-m} phos trace sand

110-9 m-c VC ground 120

15⁺ discord qtz 120⁺

Fines below 131

clayey 131-143

carb mls 143-145

Clayey 145-150

unconsl 150-170 ^{more consol 160⁺}

clayey 170-TD 182.3 ^{m-c VF-m VF-f 170⁺}
to TD

w/ Hanley 10/2-3 5/97 comp
Picanine Strand W-17450

0-5 Sand soil, Fe stained, f, fm
organics, roots, shell frags
below 2' Chione cancellata
sand equiv. Ft Th.??

5-6 weathered Ls & sand, Ls clasts of
sandy (f-m) hard ls (FTh clasts?)
sand, carb mtrx, f, f-m shell frags

6-10 Ls rubble, some very hard pieces
w/ drill marks, finely sandy,
very rextal, moll, forams, appears
to show a surface at approx 9'

10-13 Grayish
very hard rextal ls (dolomitic?)
sandy (f, f-m), calcite lined vugs
moll molds, carb + org. material

13-25 rubble & covered 13-25
moll shell, ls clasts, Pecten
Oyster, Echinoid frags,

Possibly
Calcos.

Tamiami

partly mtrx, Anomia? pieces

25-27 as 13-25

27-28.2 gray to cream, poor coral, slightly
sandy, trace phos, Ls, wackestone
(Buckingham look) carb clasts
moll whole & frags

28.2-73 Ls, grainstone; some packstone
gray, poor and, slightly sandy to very
abund. moll frags, ^{Forams} moll molds, carb
very rubbly appearance, wacke > pack
grades into dk gray poor to v. poor
fine, minor phos. (upto $\approx 2\%$)
less sand
more moldic 40-45

more abund moll frags 45-49(?)

more sand & phos 34-45+

more moldic 50+ - 68+ with very
rubbly (broken by drilling)

very granular 68-70 little sand

hard zone 70' poor near 70-73'

after below hard ls at 70'

Tamiami

grades to 1st ol
24' 31.5-32'

73-81 Ls, white, cream, med-good ind
small molds abund. little sand
at first then more sand.
very sandy at 76' (25%+
qtz sand) 1% phos.
pellets, clasts, forams
by 51 40+% qtz sand 1-3% phos
sand well ind med grain, f-m
poor recov. - 3-81

81-91 SS ~~lt~~ yellowish gray
very poor ind (washed out)
to med ind, calc mtr, f, f-m
few small molds, frags, forams
phos 1-2%
very small moldie 85-86.5
zones of poor recov.

91-106 very poor recov 1' of 15'
v. sandy ls to ss

— — — — —

106-108 ^{yellowish gray} sand, unconsol to poor
calc mtr, m, f-c
shell frags, forams

108-119 sand, ^{yeil gray} poor consol, f f-m
calc mtr, shell frags, forams
11tho clast, mode varies f to m
f-c range

% matrix varies to more than 50%
shell content highly variable
abund. benthic & planktic forams
118-119

119-121 NC

121-146 sand, unconsol to v. poor
yell gray, minor to no calc mtr
very few fossil frags w/ except
in few thin zones.

f, v-f-m. poor recov
phos 1% grad to m f-m, ^{zones of} v-f
to coarse grains varies / very minor clay

146-151 Sand, olive gray to yellow gray, very
poor coal, clay(?) carb
m-f-~~XC~~, fines w/ depth to f, v-f-m
abund. shell frags, forams
mottled, Bioturb

1⁺
to gravel
NO
—

151-165.5 Sand, yell brn, lgt olive gray f, v-f-f
poor coal, clay-carb (very little) ~~clay~~
forams
shell frags in core box are caving,
more clayey 161-165.5
blackened surface apparent at 165.5

165.5-166 Dolostone poor recov.
appears well moldic hard
finely sandy, phos.
oysters

Discont.

166-181 Dolostone, yell gray to dk gray,
well ind, minor fine to v-f sand
trace phos. moldic (abund. molds
of moll frags.) Bryozoans, moll
Turritellid molds forams

slightly sand at 15⁺ then
non-sandy.

a dol, v-textured coquina of moll frags
forams; Bryozoans
very moldic, perm. less ind
towards 181

Discont? ^{to 1st gray}
181-188.7 Dolo, lgt gray, mottled, Bioturb
induration decreases w/ incl. of clay
well ind. few molds, <1% sand
Trace phos. root traces?
Sand increases as clay content inc.
becomes clayey sand, dol
by 185 Sandy clastic clay(?) 187'
w/ qtz pebbles

qtz
pebbles
187'

sand becomes v-c w/ pebbles
in dol matrix 188.7

188.7 Dolo, cream to white, soft, porous
sandy, pebbly 30+8 sand, phos
clayey. few traces of fossils

becomes harder w/ depth

mod ind by 192+

sand size varies from f-vc

coarser sand in barriers (?)

mod ind ss in zones

abundant discord gravel 200-20
TP201

10/3-4
Southern Strike W-17454

5/97 compare to new cores

0-7 Soil? Fill How much fill

7- 9.6 Ls, yell gr, -tan, w/ grey mottled
zone, well ind, sandy (25+%,
vf). moll mounds

Pyrazin^{sp} mold at 7.5

This looks like a Caloosahatchee
Ls.!!

Caloos

Fresh H₂O Ls at 8.5'

Fresh H₂O moll, maybe as mud
as 1.0' thick. Very irreg upper
& lower surfs.

9.6-10 weathered tan Ls no traces
Norecov. 10-13 then 1" of very
hard Ls contact?

13-16 1" hard Ls

16-21 hard well sorted, rectal Ls
poor recovery

21-26⁵ Ls 16 broken up in
partly mix from drilling

26.5-42 white, cream Ls, poor sorted
granular - pockstone, sandy
phos, moll frags forams
more moll molds 27

Oyster

Coginix ^{mold} w/ moll described

27-29

very granular Ls

very moldic 34.6-37.5

sand content varies

37.5-38 fine white Ls
soft - artifact of
Drilling?

38-51 very moldic

Common Turritellids 41-42

↙ Coginix (moldic) 42-45.7

42-45.7 Ls, lg brn gry, mod ind

little sand, Coginix of moll molds
trace phos

45.7-50.4 Ls, lg gry to yell gry, mod ind

sandy, trace phos, oysters, bivalves
forams.

50.4-55.6 Ls, yell gry, mod ind, very

granular, oyster, moll molds

cream ^{very} sandy (SS) phos 1-3%
or more

55.6-82± Ls, white, mod ind, very moldic

less granular, ^{very} sandy phos

moll molds abund. sand to more
than SS - very sandy Ls to ss 80.5

grades into sand about 80.5

82' poor recovery 80-90

AMIANI
Ochape

82[±] - 90[±] ^{5, Calc} sand, yll gry, poor ind to
unconsol (poor recovery)
f, vf-f ~~2+3~~ grains to 50+%
phas 1-2%, Forams, moll frags

91-121.5 Sand, yll gry - lgt gry, f, vf-f,
poor ind, calc whet, very minor
dolo (?), Forams, phos, few
moll frags. clay clasts, phos
one qtz schile noted at ≈ 97.5
scattered vc sand grains

121.5 - ≈ 122.5 Dolo, lgt brn - med gry well ind
sand, phos moll molds scattered
(frags) grades to sand

≈ 122.5 - 123.5 sand, med olive gry, poor ind
clay, dolo, m, f-c, mHkl

123-125.5 Clay, dk grn gry, poor - med
consol, grades into f-vf sand
w/ clay - dolo

To 127 most b.t

127-129[±] thin hard dolo bed (sandy, phos
moll frag molds) then into
sand, dk to med grn gry, poor - med
consol, vf-f, phos, clayey, dolo
foss. frags.

129[±] - 129.7 Clay dk grn gry to blk, med consol
vf sand in laminae

129.7 - 132 Sand, dk grn gry to dk yell gry
mod - consol, clayey, dolo
c, m-vc, well ind, phos > 10%
some of phos looks primary -
as if it formed in this sed
grades into shell moldic dolo

132-135 Dolo, lgt gry - yell gry, poor ind
(fragile), little sand (f.c),
abund molls of moll frags
trace phos, clay clasts, clay shrimps

135-140 hardground? blackened (phos)
dolo, sandy (f), very broken up
poor recovery, but shell molls
Dolo pieces

140-154 dolo, lgt gry, poor ind sand (f-c)
phos, moll molls (frags), clayey?
^{fz} Pebbles few qtz pebbles, more coarse
sand grains w/ depth
Qtz pebbles common by 144
very moll molls 146-152(?) poor recov
very coarse well rd sand
152-154

154-160 lost-driller says F sand

160-180 Sand, yell gry, unconsl - to poor
f, f-c, phos, trace clay dolo
coarser grains decrease w/ depth
clay content increases thin hard ¹⁶⁸ zone

180-210^{TD} Sand, grn gry, poor ind clay
phos, thin clay shrimps
bio-turb. Mica noted
zones of med grain size sand

Notes

Dolo w/ qtz pebbles (PS) ^{Pickupne Sand}
181 correlates(?) w/
(SS) Southern States at 135-140

Dolo in PS 165-181 correlates
w/ 132-135/140 SS

Pks at 164-5 in PS maybe
= 129.2-132 SS

Clayey sand 124-129 SS
= (?) 151-165 PS ???

Collier Sam (CS)

Dolo w/ qtz pebbles PS 181, SS 135-40
correlates w/ Ls w/ qtz pebbles at 171
CS

Old Pump Rd (OPR) Jones Grade (JG)
Faka Gate (2) (FG-12)

Dolo PS 165-181, SS 132-140

cor w/ CS 140-171??

OPR 171-184+

Hard ground / contact 135 SS

165.5 PS and 128 CS, OPR 171

1st qtz pebbles PS 146-151

SS 140 CS 156 FG-12 188-89

JG 89-90 W-16505 Faka Gate 164-66

Sand 106-151 PS → ? / CS 111(118)-170

OPR 111(107)-171

Need more complete description
of Jones Grade core

10/8/96 4am

5/97 compare to new cores

Jones Grade W-17394

0-3 fill or soil

3-3.5 Ls, lgt gry - cream, well ind
(caprock), sandy, few leached moll
frags, moll

3.5-5.0 Ls, lgt brn, ^{mottled} poor ind, sandy
ghosts of moll (leached) weathered
Ls

5.0-10 poor recovery Ls, lgt gry - white
well ind pieces, slightly sandy
moll mold, some original shell

10-12 Ls lgt gry mod ind, slightly sandy
very moldic, moll mold

12-12.5(?) weathered Ls, disacrust(?)
leached moll

12.5(?) - 17 Ls, lgt gry, poor to well ind
(poor recov), minor ^{vf-f} sand, trace phos
very moll moldic, Rubbly to 17

17-29 Ls (granstone), lgt olive gry to lgt gry
well ind, minor ^{vf-f} sand, trace phos
very moll moldic poor recovery
highly rextal 23-25 (at least)
Some original shell 26-27

29-50 Ls (gran to pschertone) white to yell gry
well ind, some moll mold, rextal
in zones some highly rextal, sand ^{vf-f}
increases. trace phos very poor
recovery more recovery 43-46
grades ind(?) very sandy Ls to
calc qtz sand by approx 50' corals
Bryozoans

50-68 Ls, lgt gry, poor to mod ind, very
sandy f, f-m becomes moll moldic
by 52 trace phos to 1%, forams
SS, lgt gry, poor to mod ind, very calc
phos → 1%, moll mold, forams

68-116.75 Sand, lgt gry to lgt gry brn, f, f-m
unconsol., trace phos, ^{very} few moll
frags, few coarse sand zones

1st discord
913 89-90 zone of coarse sand 89-90
913 89-90 no recov 90-100

116.75-131? Sand, lgt gry, unconsol, c, m-vc
some gravel. Discord qtz common
poor recovery, phos

131-143.5 Sand lgt gry to mod olive gry
unconsol f, vf-f, trace phos.
mica, mottled, very minor clay
grades into dolomite qtz sand
by 143.5

143.5-145.5 Sand, yell gry, poor ind, dol
mtrx, f, f-m, few coarse
grains, dol to 50% trace
phos.

145.5-150 Sand mod olive gry mottled
f f-m few coarse trace phos

150+ zone of fine to coarse sand w/
disconcl pebbles (art. fact of
drilling??)

150+ - 160 as 145.5-150 very poor
recov.

160-170 Sand, lgt gry, m, f-vc some
gravel zones phos 1-2%
thin zone of f sand olive gry
at 166-166.25, unconsol.

170-189.75 Sand, lgt olive gry to olive gry
mottled, f to m vf-c unconsol

189.75-200 Sand, cream to lgt gry, f, vf-f
TD unconsol, trace phos
coarse grains.

Notes 10/22

Using Missimer's def of Ochapei
which allows up to 80% sand

the following picks were made
sandy ls w/ mol nodules to calc sandy moll. nod.

CS - 20 - 111

PS 13 - 106

SS 9.6 - ~~82~~ 121.5

OPR 17.5 (29) - 111

FG12 10.25 - 40? Questionable Ochapei

FRS 6 - 63±

JG 5 - 68' 5-46' questionable Ochapei
maybe Golden Gate Ref. Mar

Notes 3/16/97

Beautiful day to
lay core outside
WHB in PTK in Va.

5/21/97 6:20 am, young to GLB Va
today

Bear to core W -

0 - 1.75 soil

1.75 - 74 sandy ls to calc ss
Tami

74 - 83 very little returns - sand?

83 - 124 sand f to VC bimodal ^{trace to 2%}
_{phos}

discard phls 84

VC zones 93 - 101
Longkey

minor to no clay

discard phls to 111

leached shell 110 - 112 and
below

clay increases 124

124 - clayey sand

PR has a PR appearing minor phos
biofurb

(Trace to 2%)

to non PR at 195 to TD 201 bed of
Longkey?

W-19437 Little Talbot Is

0-80 sand, fine to coarse
undist unusual to poor ind, shelly zones
non-foss zones, few beds w/ ~~medium~~
clay, thin clay bed 70'
Some VC sand scattered

Coos 80- carb (dolomitic), sandy
clayey sand varies w/ + VC
maybe clay too 80-105'

sandy clay zones

Upper Coos 80-186 more carb

Lower Coos 186- less carb more clay
diatoms in clay - mottled appearance
becomes v. sand in clay/dol at base
of Coos @ 297 to 303

m ft 303-

Pandemic

4/13/21 Marathon WWTFF #3
4/14/21 Bowling 1 W-19791

Time Home to FGS/home ^{13th} 1.0 ¹⁴ 1.0
Prep at FGS meet w/ Ed C. 0.5
^{13th} Core description start 11:00 A - 12:45

1:45 - 2:45

All Ls is fossiliferous, varying textural

Foss frags appear mostly mol, maybe some
weathered rexta forams

Box 1 Small vugs / pore space to 10'

0-4.5' ^{whit to tan} Ls, weathered, fossil frags, few oolites

APPROX 4.0
recov
good recov
but jumbled
zones
0-0.5' then beat up core w/
3 med of more competent rock, crumbly
soft to very hard, rextal, zones

^{silt} carb mud w/ hard frags, more
after rx than hrd

Box 2 Ls, AS Box 1 w/ ^{few} less hard zones/
4.5-8
good
recov
Frags, more fossil frags in zones
not as weathered

Note: weathered grainstone to
peck stone to 10'

Box 3

8-12.5 8-10 Ls AS ABOVE
 good 10-12.5 Ls, harder ^{more rextal} than above
 recov fossils frags abundant,
 becomes very vuggy, large
 vugs, very perm - connect,
 vugs,

Box 4

Less weathering ^{to} variable
 12.5-24.5 Ls as 10-12.5, to 15'
 15-15.7 as per onsite Log (OSL)
 rubbly, hard Ls, chunks as
 10-15", OSL - no recov 15.7
 to 20.7 & 20.7 to 25.7,
 carb sand in mud tie
 20-24.5' Box 4 6" of hard
 rubble, looks like 10-15'

Box 5

Ls 24.5-25 as 20-24.5
 24.5-34 Ls 25-30 " " " very poor
 recov

31- Ls, very hard frags, gray
 somewhat vuggy very rextal

1st recognizable coral @ 30.75 or
 so, possible duncrust, one piece
 noted in rubble

gray Ls rubble to 33

33-34 Ls very hard, rextal white
 to off white to tan, less vuggy
 near 33', more vuggy near 34'
 to 34.5 then very broken up
 to 35.
 35-39 Ls very hard, large vugs
 white to tan

Box 6

34-39

Box 7 as 35-39 with decrease in
 39-44.5 vugs

40-44.5 50% recovery
 Ls, very hard, vuggy, fossils
 corals to approx 41.5
 poor recovery seems to be from
 41.5-44.5, PCs of hard Ls

Box 8 Ls As 41.5-44.5 to 50
44.5-55 poor recovery large coral
in rubble 45-50 rextal
50-55 Ls white to tan very hard, rextal
coral near 50 then vuggy
Ls

Box 9

55-62.5 Ls, white to tan, not as
hard as 50-55 except
coral head - 55 approx 57
57-60 then very hard rextal
Ls
60-62.5 Ls white to tan, very hard
vuggy to very vuggy

Box 10

62.5-67.5 Ls, white to tan, very
hard, common corals
vuggy zones

Box 11

67.5-81 Ls as above to approx 68.5
or 69' Hard, rextal coral
69-70 Ls white, soft to hard,
powdery, v-f grained
70-80 Ls, white to gray poor recov
hard, some vugs, fine coral
pcs
80-85 Ls light gray, hard pcs
poor recov

Box 12

Ls, rextal coral, tan, very
hard 85-91
82-90 Ls, white, softer with
hard pcs, very poor recov
90-91 Ls, tan to gray, very hard
lots of vugs

Box 13

Ls to 90-91, coral around
91-94.5 94 very rextal

Box 14 White to tan
LS as 91-94.5 corals w/
94.5-99.5 calcite orange, ^{very} vuggy
good recov 99.3-99.5 rubble
LS hard - broken by drill
Calcite is honey colored

Box 15 ^{white} LS, hard to soft 99.5-100
94.5-107.5 good recov. 99.5-100
LS, white to tan, soft to hard
few vugs 100-105 ^{mod} recov
lots of ^{loose} calcite sand
LS white to tan, v. hard 105-107.5
mod recov, vuggy, corals

Box 16 LS as 105-107.5 to approx
107.5-117.5 108.5
poor recov LS, white, soft w/hard pcs
No vugs poor recov 108.5
110 NO recov 110-115
115-117.5 LS, white to tan, v. hard
very vuggy, corals, calcite
best developed yet

Box 17 LS as 115-117.5
117.5-122.5 great calcite 120

Box 18 LS as 117.5-127.5 from
122.5-127.5 122.5-127.5 then 125-127.5
hard LS broken up but vuggy
poor recov 125-127.5
127.5-130 at 125-127.5

130-132.5
LS, tan to white, hard vuggy
no corals, calcite is
clean

Box 19 LS as 130-132.5
132.5-137.5
good recov

Box 20 LS as 132.5-137.5 to 139
137.5-141 139-140 rubble from
drilling hard lot gray ls
138 139-140 more mol molds

Box 20 140-141 Ls, lgt gray, white
carb. tan, v. hard vuggy, moll
molds

MA called FT at 140'

Box 21 Ls, lgt gray - white, tan
141.5-144.5 v. hard, fewer vugs,
moll molds/casts, coral
at ≈ 144
becomes more vuggy 149.5

Box 22

144.5-147.5 Ls, white, lgt gray v. hard
Vuggy 144.5-146.5
less vuggy 146.5-147
more " 147-147.5

Box 23 Ls as 147-147.5 down
147.5-150 to 148.7 v. Vuggy
TD Ls 148.7-150 as above
w/ fewer vugs

4/15/21
while to tan
0-10 Ls, soft to hard, weathered
foss - moll frags etc

10- ≈ 14.5 Ls, ^{whit + tan} hard, not as weathered
foss, vuggy

14.5-30 poor recov. to 30' whit, creamy top
in boxes Ls, hard, foss
vugs.

30-33 Ls, gray, broken up, hard
coral at $\approx 30.5-30.75$ some
vugs in the pcs

33- ≈ 50.2 Ls whit-tan, hard to v. hard
 ≈ 33.5 w/ corals, vuggy
zones beat up by drilling but
pcs hard

coral at 144 has
honey-colored calcite

Note: Much of the coral is honey-colored
to 121 or so then clear calcite to TD

250.2-~59.7 Ls, tan, soft to hard
foss w/ corals, small vugs

59.7-90 Ls wht-tan, some softer
zones, mostly hard to v. hard
foss w/ lots of coral vuggy
zone 60-63 looks brecciated

90-100 Ls, wht-tan, hard to v. hard
foss w/ lots of coral, very
vuggy, foss w/ coral

100-105 Ls, wht tan, soft to hard
foss, poor ~~recov~~ recov, foss some
coral, vugs

105-~121 Ls, wht to tan, mostly hard
w/ few softer zones, foss w/
abund corals, very vuggy

121-150 TD Ls, wht tan, v. hard
w/ hard / softer zones, foss w/
very minor coral vuggy to
very vuggy. Increasing ^{fewer vugs}
moll molds: Cstr ≈ 140
1st coral at ≈ 144

4/19/21

Examining Longkey #1

W-17156 upper 158'

0-12.3 AS WWTF #3 NO SMP!
12.3-12.5

12.5-105 1st corals Pouter then

M. Annularis KC

1st coral much higher in
section than #3

the Longkey #1 core has
much better recovery than
#3.

numerous instances of soft calc
in burrows & viding out

Seems to be more coral
in LK#1 than #3 could
be an artifact of poor drilling
in #3

raggy zones & drilling rubble
zones

major litho change at
105' K. Cunningham called
Tormami 105-158

105-158 looks v. similar to
>140 in #3

FIELD BOOKS

Rain high Prim Left Right

Stock Stock

Left Right

Stock 7 1/2

Left Right Inch

Stock 7 1/2

Both tical

Stock Stock

Left Right

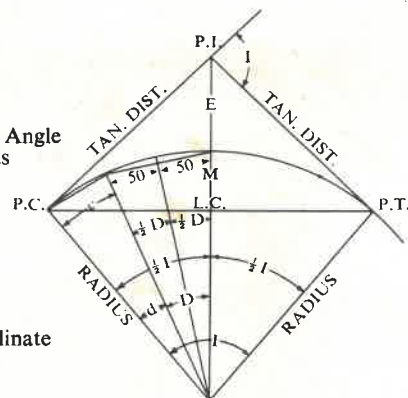
Stock No. 8152-60 Field Book Size 4 1/2 x 7 1/2 inches.

Both pages: 10 x 10 blue lines; inch lines slightly heavier.

Stock No. 8152-75 Cross Section Book Size 6 1/2 x 8 1/2 inches.

CURVE FORMULAE

- D = Degree of Curve
 1° = 1-Degree of Curve
 2° = 2-Degree of Curve
 P.C. = Point of Curve
 P.T. = Point of Tangent
 P.I. = Point of Intersection
 I = Intersection of Angle, Angle between Two Tangents
 L = Length of Curve, from P.C. to P.T.
 T = Tangent Distance
 E = External Distance
 R = Radius
 L.C. = Length of Chord
 M = Length of Middle Ordinate
 c = Length of Sub-Chord
 d = Angle of Sub-Chord



$$R = \frac{L.C.}{2 \sin \frac{1}{2} I} \quad T = R \tan \frac{1}{2} I = \frac{L.C.}{2 \cos \frac{1}{2} I}$$

$$\frac{L.C.}{2} = R \sin \frac{I}{2}, D 1^\circ = R = 5730, D 2^\circ = \frac{5730}{2}, D = \frac{5730}{R}$$

$$M = R (1 - \cos \frac{1}{2} I), = R - R \cos \frac{I}{2}$$

$$\frac{E + R}{R} = \sec \frac{I}{2}, \frac{R - M}{R} = \cos \frac{I}{2}$$

$$c = 2 R \sin \frac{1}{2} d, d = \frac{c}{2 R}$$

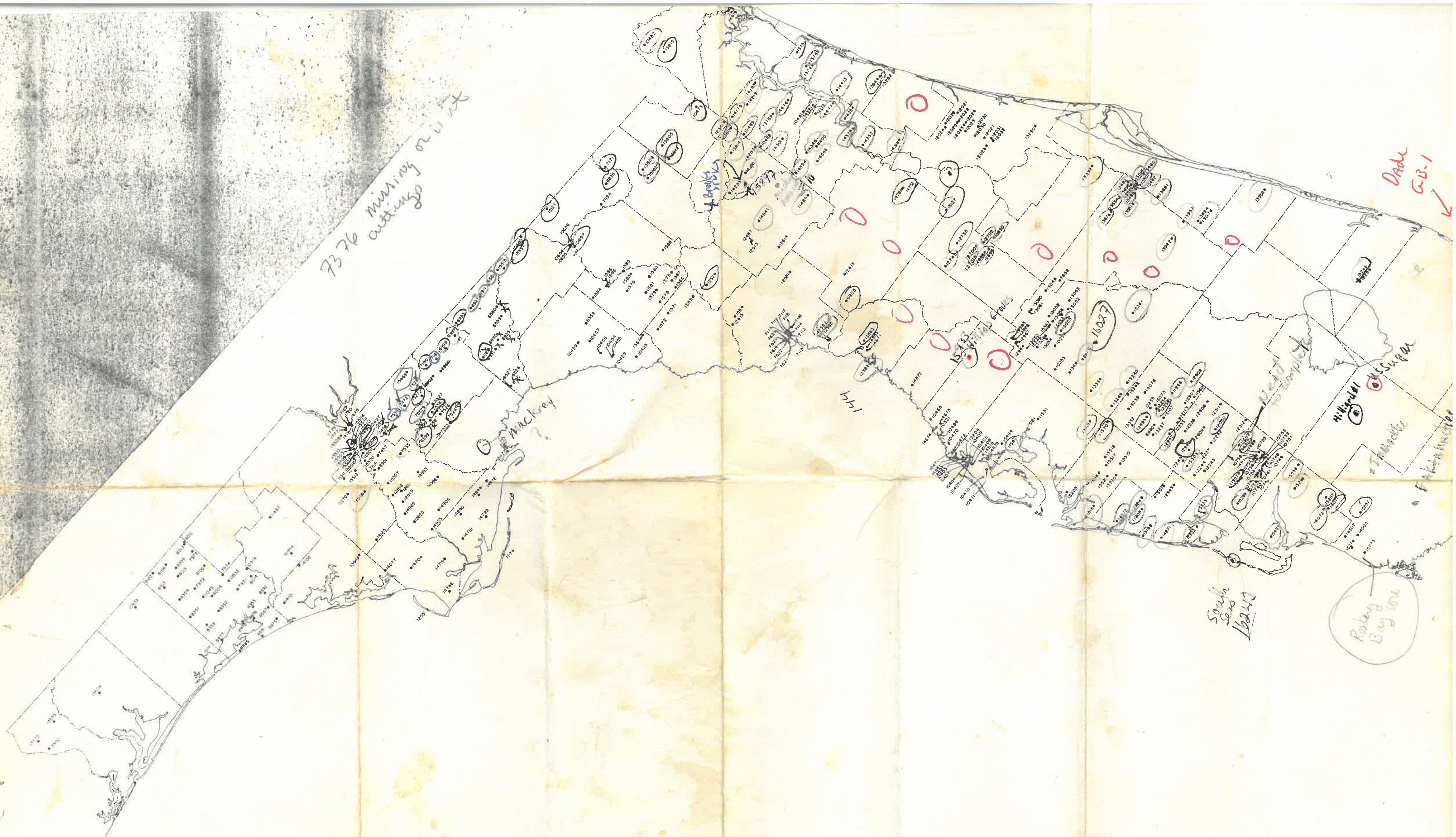
$$L.C. = 2 R \sin \frac{1}{2} I, E = R (\sec \frac{1}{2} I - 1), = R \sec \frac{I}{2} - R$$

Minutes in Decimals of a Degree

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

Inches in Decimals of a Foot

1/16	.0625	3/16	.1875	1/2	.5000	5/8	.6250	3/4	.7500	7/8	.8750
1/8	.1250	1/4	.2500	5/16	.3125	3/8	.3750	1/2	.5000	5/8	.6250
3/8	.3750	1/2	.5000	5/8	.6250	3/4	.7500	7/8	.8750	1	1.0000
1	1.0000	1 1/16	1.0625	1 1/8	1.1250	1 1/4	1.1875	1 3/8	1.2500	1 7/8	1.8750
2	2.0000	2 1/16	2.0625	2 1/8	2.1250	2 1/4	2.1875	2 3/8	2.2500	2 7/8	2.8750
3	3.0000	3 1/16	3.0625	3 1/8	3.1250	3 1/4	3.1875	3 3/8	3.2500	3 7/8	3.8750
4	4.0000	4 1/16	4.0625	4 1/8	4.1250	4 1/4	4.1875	4 3/8	4.2500	4 7/8	4.8750
5	5.0000	5 1/16	5.0625	5 1/8	5.1250	5 1/4	5.1875	5 3/8	5.2500	5 7/8	5.8750
6	6.0000	6 1/16	6.0625	6 1/8	6.1250	6 1/4	6.1875	6 3/8	6.2500	6 7/8	6.8750
7	7.0000	7 1/16	7.0625	7 1/8	7.1250	7 1/4	7.1875	7 3/8	7.2500	7 7/8	7.8750
8	8.0000	8 1/16	8.0625	8 1/8	8.1250	8 1/4	8.1875	8 3/8	8.2500	8 7/8	8.8750
9	9.0000	9 1/16	9.0625	9 1/8	9.1250	9 1/4	9.1875	9 3/8	9.2500	9 7/8	9.8750
10	10.0000	10 1/16	10.0625	10 1/8	10.1250	10 1/4	10.1875	10 3/8	10.2500	10 7/8	10.8750





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