



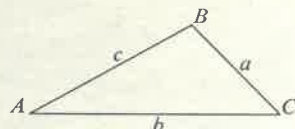
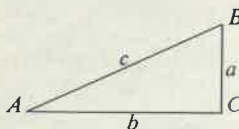
Since 1882



FIELD BOOK

No. 8152-60

FORMULAE FOR SOLVING RIGHT TRIANGLES



$$\sin A = \frac{a}{c} = \cos B$$

$$\cot A = \frac{b}{a} = \tan B$$

$$\cos A = \frac{b}{c} = \sin B$$

$$\sec A = \frac{c}{b} = \operatorname{cosec} B$$

$$\tan A = \frac{a}{b} = \cot B$$

$$\operatorname{cosec} A = \frac{c}{a} = \sec B$$

Given	Required	Solution
A, c	B, a, b	$B = 90^\circ - A, a = C \sin A, b = C \cos A.$
A, b	B, a, c	$B = 90^\circ - A, a = b \tan A, c = \frac{b}{\cos A}.$
A, a	B, b, c	$B = 90^\circ - A, b = a \cot A, c = \frac{a}{\sin A}.$
a, c	A, B, b	$\sin A = \frac{a}{c}, \cos B = \frac{a}{c}, b = \sqrt{(c+a)(c-a)}$
a, b	A, B, c	$\tan A = \frac{a}{b}, \cot B = \frac{a}{b}, c = \sqrt{a^2 + b^2}$

FORMULAE FOR SOLVING OBLIQUE TRIANGLES

Given	Required	Solution
A, a, b	B, c	$\sin B = \frac{b \sin A}{a}, c = \frac{a \sin C}{\sin A}$
A, B, a	b	$b = \frac{a \sin B}{\sin A}$
a, b, C	A, c	$A + B = 180^\circ - C, C = \frac{a \sin C}{\sin A}$
a, b, c	Area	side $\frac{a+b+c}{2}, \text{area} = \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

Printed in England



ENGINEERS FIELD BOOKS

Rainproof fine quality bond, bound in high visibility chrome yellow Coverex. Printed in blue and red water-proof ink.

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Right page: 4 horizontal and 8 vertical blue lines; red vertical center line.

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AND EQUIPMENT**

- levels
- transits
- theodolites
- tripods
- rods
- hand levels
- tapes
- planimeters
- accessories

The paper in this book is a fine quality thick Bond specially treated during the making to give "High Wet Strength". This quality has been used extensively for maps, etc. It retains its strength and writing surface when dried after having been subjected to extreme weather conditions.

Howard 15515 Madison County Core

DOWN	.25	soil	dark brown to grey humus gone, rootlets	
	4.5	sandy clay soil	med. to light brown leached clayey sand, at 3.5 to 4 feet the sand grains are very coarse	no s matrix
UP	20.0	sandy clay	dark to med. red brown color, massive bedding forms hard clods when dried	D
	27.5	sandy clay	lighter colored clay here (med. red) contains rip-up clasts of a very light orange clay and also some beds of the same type clay.	

mesk

at the surface

reminds me of the typical outcrops of miccosukee that are exposed, the clay beds don't seem to be flat-lying or continuous - they are jumbled looking almost like crossbeds or climbing ripple marks.

- 30.5 lower clay color is light orange with even content of sand in clay lighter orange clay beds, clay nodules and rip-up clasts
- 34.0 sandy clay becomes clayey sand below 30 the sand content increases as does the grain size, at 31' some very coarse grains
- 35.5 clay w/ clay beds this bed is medium orange, darker than the over and under lying beds, contains modules of white clay.

mesk

and stretched and disconnected looking clay beds.

- 38.0 white clay w/ fine sand developed modules of limonite the sedimentary character of this sequence is a cross between bedding and lisa gage banding the clumps of limonite have been swirled by drilling action in a white clay matrix
- 39.5 sand w/ clay beds micaceous sand with what are probably leached phosphite clasts and dark red clay ^{interbeds} clay beds are very thin (1 mm) and laminated the sand layers are orangish gray

39.5 - 48.5 appears to be a zone of gradation between the miccosukee and the underlying Hawthorne

- 40.0 clay jumbled orange and yellow

41.5 clayey sand
 med. orange clay matrix with white sand beds micaceous and sort of jumbled looking and apparent zones of oxidation
 43.5 sandy clay
 color differs from above and below by the greenness of the clay clay beds are off light orange and yellow
 47.0 clay with sand beds
 this sequence looks stripped and at an angle, like a barber pole the colors of the stripes are med to dark orange, yellowish grey and pale white grey

open clay, this yellow grey clay is the last occurrence (in sedimentary sequence) of Hawthorne like clays

mesk

probably picked at last occurrence of orange clay at 49.0'

HTRN

51.0 clay
 the sand contains abundant mica and the whole thing reminds me of flaser bedding the beds are thin and not flat hard waxy greenish (orangish?) clay with white and tan and brown interbeds the deeper the sequence - the more organic looking the clay beds are white bed just below it looks phosphatic
 53.5 phosphatic clayey sand
 interbedded and inter laminated phosphatic matrix and red clay matrix sandstones red color intensifies at 53.5' below that most of the sequence has colors indicative of a reducing environment
 54.25

HTRN

54.25 Clay

laminated yellowish grey
clay with nodules of
phosphate - appears to
be brecciated

55.0 carbonates
or phosphate
and organic
breccia

white phosphatic sand
overlies and orange
or light orange sandy
clayey bed this
directly overlies a very
brown phosphatic or organic
looking fine grained
matrix with white
nodules or clast looking
objects

the contact between this
area and the yellowish
grey clay beneath it
are knife sharp and
don't form a flat
surface

56.0 sandy
clay

sand with a clay matrix,
light greenish grey
color, very greenish
laminar (fine laminar)
this sand also contains

HTRN

57.5 clay

mica massive dark green
clay with nodules
or rip-up clasts of lighter
and sandier clay

63.0 clay

light greenish grey clay
mostly massive with
areas having dark green
laminar phosphatic
cracks into small
cohesive pieces when it is
dried

65.0 phosphatic white and grey interbedded
? calcifluorapatite? sandy phosphate
layers

67.0 clay

light greenish grey clay
mostly massive, cracks
into small cohesive pieces
when it's dried. brown
translucent chert

67 - 70 or to 76' probably
represents a rubble zone
present between the HTRN & SWNN
limestone in this area
- extensive Breccia
there is probably no SMRKs here

Rubble Zone SWNN brecciated & blue-green mud

68.0 organics and phosphatic carbonaceous material
apparent tendency toward bedding although there is some no areas that have horizontal trends to them

70.0 calcifluor-apatite black & orange possibly organic clays
this sequence appears dissociated brecciated and lumped together - just below 69 is a large chip of light brown translucent chert

71.0 recrystallized limestone
light to very light orange crystalline limestone overlies a 3" seq. of organic, phosphatic mud.

76.0 carbonate and olive green to blueish mud
biogenic metastatic limestone has moldic porosity and portions

SWNN

resemble the micro coquina type stuff - This area is very difficult to call especially since the rubble zone contains carbonates identical to those found below it in the Suwannee Fm, however the brecciated appearance and the green clays make it more organic & call these 9' a breccia zone rather than SMRK or SWNN

79. crystalline limestone
crystalline limestone very light orange in color w/ moldic porosity contains mollusk and such molds also some which resemble Kuphus inclassata

81.0 cavity or something
no sample

96.0 micro coquina
very light orange limestone contains skeletal forms

49.0 clay

mollusc and coral molds
yellow-green - grey
clay with carbonate
rip up clasts in it
(really it looks

phosphatic like clay
(mean) same color
as the overlying clays
may be a carbon filling
or something like that

192.0 limestone

very pale orange to
white micropaginated
limestone. portions
have lost their
porosity and are now
solid limestone
at 192 the limestone is
solidly recrystallized
and may be
dolomitized because
the skeletal pieces of
the forams are sharply
preserved not like the
overlying sections
the piece remains

197.0 dolomite

when you strike it.

finely preserved skeletal
pieces very pale brown

204.5 ls

recrystallized micropaginated

210.0 dol.

med brown solidly

stere
surg dolomite

replaced micropaginated
a strike makes it
ring - fracture fill
a very thick stylolite
at 210'

212.0 ls

recrystallized ls, voids
contains calcite dense
crystals

213.5 ls

algal layers or some
other horizontal bioherm
just below the
algal layers

are a light to med brown
dolomitized layer w/
well developed moldic
porosity. Turritella are
prominent here
moldic porosity in
upper part, lower part
very dense

215.5 dolomite

material &
dot from 208-222

* could this clay mark an unconformity?

SW NN

216.0 mud and storm deposit? yellowish carbonate greenish brown mud clasts matrix w/ carbonate breccia

227.0 ls
[^{Lon} ~~Strom~~ says] 229 cut off
except for the location of small mollusks and coral over

252 ls
at this point the dense recrystallized character of the cores change and an extensive moldic porosity is revealed in these rocks from 227 to 232 there are extensive turritella below this from 232 to 234 are bunches of leptocyclus just below 237 is a huge recrystallized shell and from 237 to 252 are a great deal of flat & thin shells resembling scallop shells

1240 CAL

but more delicate

252-258 is highly recrystallized and may be dolomitized

283.5 252-283 is light or pale brown & dol? has developed moldic porosity and whether it is dolomite or not, it is

densely crystalline

286 dol dense dolomite with no porosity (resembles

287 ls (^{Lon} ~~Strom~~) chert) brownish grey or brown color, resembles marble

288.5 dol? same as 252-283

291.1 dol same as 283.5-286

311 (15) (^{Lon} ~~Strom~~)

312.0 dol highly crystalline carbonate with well developed moldic porosity, many small mollusks

OCAL

Santa Fe Swamp Core

Samples

Samples for clay x-1-d

SF 1' soil core clayey sand - some charcoal

8' clay sandy clay - dries hard with red & orange streaks and black layers and streaks clay itself is yellowish-white

18' sand clayey sand orangeish-white may not get enough clay out of here

20' clay organic med to dark ^{base} orangeish grey clay

- 40' clay
- look - check samples here
 - one of orange clay near the base of the gradation contact
 - one at the middle (green & a little orange clay)
 - one at the top white and a little green clay

want to see if there's any char in clay types that could →

MCSK ← 1 → 40SC

MCSK
HTRN ← 1 → HTRN

111 Santa Fe Swamp - Samples

illuminate the nature of the contact
- do the clays differ enough that
they could have different provenance?

40.5' Clay - All brn - just ~~below~~ layered
brn/grn clays - some grn "blebs" - lg sd grains

45' Clay - bright ^{orange} yellow; sl. sandy

48' Clay - predom. white; little orange;
coarse phosphate grains

54' Clay - dk gray; near transition
from orange to gray clays
- lots of coarse phosphate grains;
organic rich

60' DK gray clay - some phosphate
+ gtz grains, but more clay
rich than surrounding
zones

71' DK gray to brownish phosphate rich clay
- pretty sandy - all monotonous
looking

Santo Fe Core Descriptions

- 0-4 sandy and clayey sand - white with grey and brown plant traces and mud - roots and charcoal
- 4-6 clayey sand - orange and yellow bands 6" thick with grey-white bands 6" thick darker at 6'
- 6-8 clay - ratio of clay to sand increases - streaked red and grey patina on a white or light grey clay majority
- 8-8.5 clay white & light grey streaked red and grey patina
- 8.5-10 sand with clayey matrix yellow
- 10-26 sand w/ clayey matrix varies from greyish yellow at 10' to white w/ greyish yellow at 26'
- 26-28 clayey sand sand particles become smaller and clay content increases at 28' get orange grey and white varves or laminae

UDSC

28-3

30.5-

HTRN ← 17 UDSC

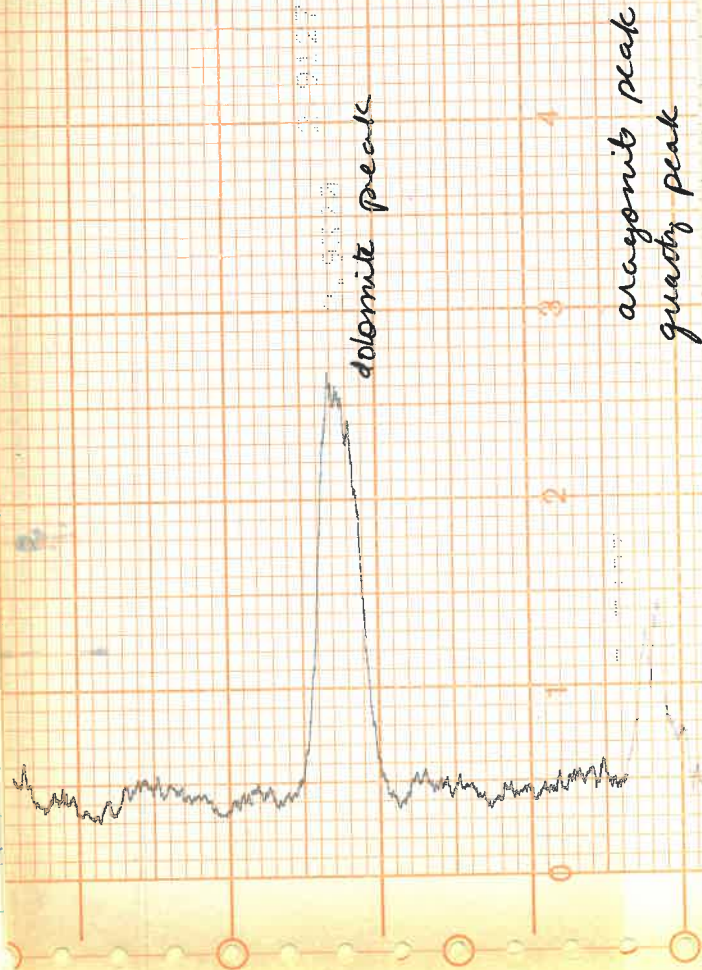
39.5-

40.5

42

43-

45-



beginning of reduced #TRN ← 1 → end of oxidized HTRN

phosphate clasts are accompanied by large well rounded quartz clasts

51-53.2 calcareous mud with phosphate clasts - very orange - some of the phosphate clasts are quite large and are probably rounded - rip-ups from some sort of hard ground, the clasts contain sand, mud and phosphate - this may be a hard ground developed on top the reduced sequence and below the oxidized sequence

53.2-58.5 calcareous silty mudstone with coarse and fine phosphate clasts good deal of matrix calcite and thin beds of light olive gray clay avoid thin dark phosphate often these clasts float in the fine sand and calcareous mud matrix, accompanied by large sand grains fossils - mollusk - bivalve impression - some areas are better cemented

58.5-680 calcareous silty mud with intermittent clay beds - this clay fills in burrows and

item doesn't appear to be bedded
68.0-84.0 calcareous silty ~~sand~~^{mud} - still grey
(light olive grey) as above it becomes
darker - nearly to olive grey - this
sequence is nearly "massive, sorta
monotonous"

Beginning at 43' the matrix appears
chalky or dusty - "as a clay" in hand
specimen - from x-ray diffraction
peaks and closer inspection the matrix
seems to be aragonite or dolomite
these particles are not cemented but
remain free from cementing and as
water is added - disaggregate freely

84.0-89.0 dolo silt - yellowish grey, olive
black, unconsolidated - lighter
colored dolo-silt possibly due to the
lower clay (dark) percentage

89.5-91.5 dolo silt - yellowish grey - tight
most of this sequence is fine grained
carbonate which dissolves when
added to HCl - not many phosphate
clasts

91.5-99.0 dolo-silt, very light grey and
light grey - clayey - dolomitic

actually, like the overlying
sequence, except the residue
contains more green clay (when
dissolved) and the primary
state (the core) exhibits an
acicular mineral possibly
dolomite (or aragonite)

99-116 sand, - white, yellowish grey and
light olive grey, unconsolidated
ripped-up chunks of sand are
included in the sequence, a lot more
sand in this than the overlying
sequence, dolo-silt is present
only in the matrix, this sample
contains a good deal of rounded
phosphate clasts.

116.5-123 sand, med. light grey, olive black
unconsolidated (loose) less dolomite
matrix and a good deal of
phosphate clasts

123-127 Clay - brownish grey, organic
rich dark clay with limited
phosphate clasts

127-129 sand - med. light grey, yellowish grey
olive black

loose (this is sand, clay and phosphate, little if any carbonate and contains pink sand grains, possibly quartz)

129-132.5 sand, yellowish gray, olive black contains filled voids (filled w/ dolomud) which appear to have been burrows or boring, one of these contains cubic and tetrahedral sulfide minerals (brightly colored yellow and blue) possibly bornite or chalcocypite

132.5-140.2 sand - yellowish gray, olive black (loose) and a good deal of phosphate 20%, contains balls and blebs of clay, and clay laminae, brown phosphate ovoids out number brown-black ones, as in the overlying 100 feet, fossil molds possibly mollusks

140.2-141.0 clay - light olive gray - (loose) bedded, interlayered & laminated contains dolo-rhomb

141.0-142.0 dolomite yellowish gray and light olive gray (tight) dolo cement worm traces & fossil molds

hard dolomitic phosphate, bioturbated burrows filled with dolomud

142.0-142.3 sand, light olive gray, olive black loose - massive, phosphate - friable sand unit w/in a resistant dolomite sequence

142.3-150 dolomite - yellowish gray, light olive gray - tight - bioturbated, mollusks and fossil molds

150.0-158.0 dolo-silt - loose - yellowish gray, light olive gray, olive, gray (loose) shark teeth, mollusks, molds and fragments more reduced clay than the overlying and underlying sequences

158-162 dolo-silt - yellowish gray, light olive gray - chalky and clayey more compact than over or underlying sequences mollusk molds and casts

162-164.5 dolo-silt, yellowish gray, light olive gray, olive gray (loose) bioturbated and interbedded fossil frags & molds

164.5-168.0 dolomite, olive gray, yellowish gray, light olive gray, very tight, dolomite cement

168-172 good crystalline dolomite little porosity
shell hash at the top of the
Ocala Group, recognized by the
presence of lepidocyclus and
calcium carbonate, portions
have been bored (costs, molds
mollusks & lps.)

Lacrosse Core Samples (Clump)

Beulsh

Site access - not restricted

- wire cable thru 52 mels
- easy to walk around

- shell casings on site

- abandoned cell? → now
used for ATU's or dirt bikes

→ ~~easy~~ no warning
sign

no "No trespassing" signs

- no landfill signs

- can walk right into sludge

- cow or horse droo doo

not covered at all

& grass not growing on it

La Crosse Tower Core Description

- 0-4.0 blackish red soil primarily
quartz sand, med. to crs
rounded sand grains and
iron particles present
- 4-6.0 very pale orange med. gr sand
- 6-12.2 grayish brown and dusky brown
sandy silt, dark due to and
organic mud with lighter
colored layers attributed to the
presence of lighter colored clay
associated with some clay
beds - this becomes darker
down section - black and
brownish gray - a dark sandy
unit possibly due to a high
peat content
- 12.2-14.0 Clay dark yellowish brown & dusky
yellowish brown, high sand & gty
content and a little phosphate
- 14-16 shaly to p.s.
- 16-18 Clay dark yellowish brown
small amt of phosphate.
- 18-22 pale yellowish brown sand
with a small amount of secondary

Coarsest to finest 7 HLN ← 1 → soil use

- dolomite and phosphate
- 22-24.0 Shelby tube P.S.
- 24-25.7 greenish grey clay with small amounts of phosphate & dolomite
- 25.7-26.0 dusky yellow sand with a little dolomite and 12% phosphate nodules, this sand is abed w/in 5' of greenish grey clay, below 24' these sand layers are more frequent and display an interbedded nature
- 26.0-28.8 greenish grey phosphatic, dolomitic clay - massive
- 28.8-36.0 dark yellowish brown and dusky yellow clayey sand beds with a high phosphate content and clay interbeds, these clay beds gradationally overlie a muddy dolosilt which in turn overlies a well lithified sandy dolomite - this sequence contains rip-up clasts (large gravel sized) of dolosilt
- 36.0-38.0 very pale orange - light olive grey, sandy dolosilt
- 38-40 no recovery
- 40.0-43.0 light olive grey sand, massive - mottled & streaked w/ high clay content

- 40.3-43.3 - yellowish grey - very pale orange dolomite (sandy) well lithified sacrosic with mollusk casts and casts of other fossil fragments
- 43.3-50.0 no recovery
- 50.0-54.0 yellowish gray and light olive gray phosphatic dolomitic sandy clayey sand sequence, mottled streaked, bioturbated with infeg. interbeds - phosphatic sand/ granules occur in discrete lenses
- 54-57.0 no recovery
- 57-73.0 yellowish gray & light olive gray clayey sand, mottled streaked, bioturbated and interbedded, sequence has dolosilt concentrations (white and powdery, phosphate is granule-sized with black ovoid clasts 69-71' has high dolosilt content
- 73.0-86.5 yellowish gray & light olive gray dolosilt - down section the sequence becomes more dolosilt rich, although in all other aspects (color, sedimentary style and intermittent dolosilt and phosphate concentration

86.5-87.0 grayish olive green & grayish yellow phosphatic dolomitic clay with at least 3% pyrite cubes darker clay beds interbed with the grayish yellow clay beds (high sand %) - phosphate probably in the calcifluorapatite form - (white & powdery)

87.0-91.0 shaly tube p.s.

91.0-103.5 grayish yellow-green and dusky yellowish green clay - darker clay forms the interbeds as above except the lighter layers have a higher percent of dolosilt - clay beds generally high in pyrite white mica occurs in the sandy dolosilt (light) layers

103.5-111.0 yellowish gray sand phosphatic, dolomitic & pyritic

111.0-117.0 no recovery

117.0-120.0 yellowish gray clayey, phosphatic dolomitic sand, less consolidated layers are interlayered with hard well consolidated dolomite sands, esp from 120' to 121' (including next sequence)

120.0-126.3 yellowish gray clayey, phosphatic dolomitic sand (as above) except slightly more clay & dolomite

126.3-127.0 dark yellowish brown, olive gray, clay bedded ^{white} interlayered & laminated with limestone layers - transition zone from limestone to overlying dolomite is marked by a zone of intercalated dark yellowish brown-olive gray clay and white calcite, clay layer has fossil fragments in its surface

127.0-136.0 no recovery

136.0-137.5 white & very pale orange limestone with 15% sand 7% phosphate 2% pyrite and fossil molds and fragments most notably from mollusks

137.5-138.0

dark yellowish brown, olive gray dolomitic phosphatic clay interbedded with white limestone "clay" may actually be a muddy micritic dolostone

{ same as interval 126.3-127.0 }
may be transition zone w/ underlying limestone

138.0-139.0

no recovery

139.0-142.0

very pale orange & white dolomite

5% fine-grained sand 2% pyrite
and one layer of powdery ls. ^{mostly well consolidated}
(CaCO₃) fossil molds & fragments?
of mollusks, bryozoans, corals
& poss. ostracods, ^{gastropods, limatella, bivalves}

142.0-143.0

very pale & white, mostly next, well consolidated limestone with fossilized algae, bryozoa, corals, mollusks (see above) and molds & fragments of other fossils
- scallop shells intact - middle porosity 1-2" lenses of grey chert which has filled these voids w/o removing the calcium carbonate.

143.0-144.0

no recovery

144.0-146.5

limestone as in 142.0-143.0

146.5-147.0

no recovery

147.0-148.5

limestone as in 142.0-143.0

148.5-151.0

no recovery

151.0-157.2

chert, med light grey with micro fossils w/in the silica matrix

157.2-158.5

microcoquina (shells) white

and very pale orange, recrystallized well consolidated, massive probably benthic forams
- (Lepidocyclus sp.) mollusks and echinoids

not on 19-10-1955

2 miles past store
after night unless from
one industry

go left around island (see
map)

1) Gravel Point Sids are
4 feet thick - organic and sands
@ the surface, covered by
two feet of peat and
unknown kind of sand which
is somewhat

below this inferred St Marks
LS but with corals w/
vibracore.

20R715 20R715

20 Johnson

Pollen analyst Barbara Hansen
University of Minnesota

¹⁴C Tison NSF lab
Miami

600-800 per accelerator date

David Andrew Board

185' geometry seems correct

about 180° west of

Gravel pt.
30° 4' 29.5"
83 57.19

Symbols



Spartina alterniflora



cabbage palm



Distichlis spicata



Mariscus jamaicensis



Juncus roemerianus

mud =

sand ::

oyster shells

clam shells

oyster bio herms



rootlets



roots



bioturbation

Supp

199-92

12/18

① 1' 3 in sand & *Mariscus*
on top of *Mariscus*
high side of 8 feet of water

10-10

cabbage palm:

cedar

bay trees & *Mariscus*

Juncus in foreground / *Cladium*

maritima

jamaicensis

and in channel

② 3' 8" water Co feet sediments
next to *Juncus* - *Cladium jamaicensis*

10-10

③ 7' 8" water depth in channel
off the pt of island
get *Mariscus* exposed in channel
here

11

at rocks several times when
water depth 1.15 @ surface
feet around and just 4.7' & ds

3' water depth

(10:44)

(HT)

seeds 2.7"

Sixty days

hummock on marsh across from the
point in channel

9 dead palm trees

6 live palm trees

Cedars

oak trees

(C)  Kcorro pack & take a part
environment measure

oyster shells on bottom here

algae on water

grasses on island

w/ cladium jamae & spartina
albino flora

(12:10)

(HT)

(5) 6" of carbonate rock below

rock @ surface

grasses + C in edge marsh

water 2.5' deep

(6) water 4 feet deep
apex of island
seeds 4' 4"

(12:15)

(11:15)

scattered oysters on bottom

(7) water 9 feet

(12:20)

(11:15)

grasses

seeds 4' 4"

some rock right here @ the bottom
poked up to get the sediment
location

(12:25)

(HT)

(8) water 6' 9" deep

16 w/ a small amount of sand 2-3' & ds
over it

grasses + C

hummock w/ 3 dead palms
& 3 live palms

on edge marsh

(12:30)

(9) 4' 5" water depth 4' 4" seeds

the first spartina

in mostly grasses

(10) limestone water depth 7' 9" (12:43) HT
some sand 2-4 inches
juncus all

(11) 7' 5" water depth (12:50) HT
sds 3' 1"
juncus & a few spartina, juncus
inland spartina closest to water

(12) juncus pinnatifid (1:00) HT
water 5' 2"
sand spartina in front
@ 1/2 height
and
some smaller
sds 2' 7"
variable, rocks "white" below the boat

(13) water 5' 10" (1:10) HT
juncus w/ a small amt j.c.

1' 6" sds ^{sandy} silt (1:20)

(14) a number locate this place HT
4' 3" water depth

sandy bottom 1' 11"
across the channel 2 live palm
& 2 dead palm

no sds, juncus but a few
short spartina

(15) lido creek inlet (1:30) HT
muddy bottom mostly juncus
water 2' 7" tall spartina
interspersed
4' 8" of sds in main lane
but some small
area w/ short spartina in front
area flattened = s.d. dormant in water

(16) 2' 2" water depth (1:40) HT
is rough @ surface
1' 4" much
same place as 15

(17) 2' 6" water depth (1:50) HT
juncus w/ a few tall &
very short spartina
short in front
tall w/hi juncus
plot of sand @ the line

sds 1' 5"

*in core here

⑮ 1/2 @ surface not put around for
seeds water 5'4" 2:00 (HT)
1'2"

⑯ 8.5" deep didn't hit bottom (HT) 2:15
evidence of past erosion
some juncus, eroded
short spartina
erect, in part
of the eroded juncus

⑰ 2.5' to 1.7" seeds 2:20 (HT)
oyster barn to the east
CV shells

⑱ 2:15 (HT)
seeds 4.9 feet
20 + feet of
spartina
here @ the headland

⑲ oyster shell, 2:30 (HT)
3.5" seeds on the
marsh surface
also washed up oyster shell
with clams

to measure erosion? perhaps
sea level will
take a look @ Calabro Pt
esp. the east side of
Calabro point

1/23

⑳ 10:48 LT

last cut off
on the S side
mud 2' thick
part 1' thick & can be measured
on cross section
because it's
eroded

4 cedar trees

5 palms

1 dead palm

576 wide maple - myrtle confere
longer 43y

← groundsel tree on cottonbush
PENICUM v. rostratum - switch
or panicum

㉑ 11 30 05 04 12:36 LT
83 89 28

6" sediments

1.7" water

juncus r. + s.p.

(24) 3.7" seds 12:34 (LT)

2.3" H₂O

HL 30 05 02

83 59 32

[mainly srt sp. silm. 2]

(28) 4" seds 2.2" H₂O 12:41 (LT)

30 05 11

83 59 31

[sc few SA]

(26) 30 05 19 12:41 FT

83 59 40

2.4" H₂O

1.6" seds

[sc + few SA]

(29) 30 05 40 1:05 FT

83 59 45

2.0 H₂O

3.6 1.5

[sc + few SA]

(28) 30 07 06 1:13 FT

83 59 5

6.0 H₂O

15 @ bottom

[mainly srt sp. silm. 2]

(29) 15' water 1:21 FT

4" seds =

[mainly srt + some SA]

(30) 30 06 32 1:26 FT

83 59 37

5.1 H₂O

15 @ surface

[mainly srt + some SA]

(31) 30 06 30 1:32 FT

83 59 30

15 @ surface

7.6 H₂O

[mainly srt + some SA]

(32) 15 @ surface 1:37 FT

6.0 H₂O depth

[mainly srt + some SA]

West Pass

(33) 15 @ surface 11:53 2/4

oysters grown

just a few in 15

water depth 3.3

3.3

4.9

8.2

16.00

8.20

7.8

Seds 7.8' depth

seen 4 @ bottom - with a sand layer

(32) 15 @ surface 12:26
water 5.6" deep

(33) 3.9' water 12:27

15 @ surface 6" of sed @ surface

(38) 4.7' water 12:30
15 @ surface 6" of sed @ surface

(37) 2.9' sed 12:35
3' water
up near to bank

(32) 3.2 H₂O 12:37
3.6 sed

(34) 7.8 H₂O 12:44
15 @ surface
oxygen on anchor

(40) 4.2 H₂O 12:44
1.8 sed
spread over 15

(41) 4' H₂O 15 @ surface a little sand 12:51

(42) H₂O 7.2' 12:55
2-3" sed
15 @ surface

there are trees just north
of the little inlet river

(43) H₂O 6.2 1:00
15 @ surface

5 meters NE dead palm tree

5.8' sed

so get pockets of deep sediments

(44) 7.0 water 1:06
1.5' sed

@ confluence

5.6 water
1.1 sed

@ same place shows

how highly variable the sed
depths are

grass island in middle of confluence
7.7' sed

(45) 15 @ surface 1.18
water 5' deep

palm trees on both
sides & grass

(46) 1.5' sed 1.20
1 ft H₂O
4.6' sed

in a thicket of cedars
palm
Spanish bayonets

(47) 5' H₂O 1.27
6' sed
bisect another flooded
hammock
∴ probably have 5-6' sed
under here

(48) drowning hammock
1 live palm

4.2 dead palms

15 @ surface

(49) 0.2' water 1.31
2.4' sed

@ 1.35 3' spaced to be at
2.40

SO try again may hit 1.40

6.5 2/21
(50) 3.7' water 12:14
2.6 sed hit 15

got three cores taken

short @ 4:20 inlet down for
medium @ 1st place back camp
longest @ island

(51) 5.5' H₂O 1:38
wet pass
3.75' sed

(52)

5.8' total

1.48

3.5' H₂O

2.3 sed

(53)

5.5' H₂O

1.55

LS @ surface

(54)

little island

2.00

Sed 2.4' ~~white~~

dichroms

1.5

2.14

(55)

H₂O 2.75

Sed 3.05

(56)

3.0 H₂O

2.21

1.1' sed

also 1.5 @ surface

(57)

1.5 @ surface

2.26

Sed

2.5 H₂O

2.5

4.1

3.0

3.4 sed

add
Take 58

Cores Take the first successful core

#1 taken on the west side of the island - although it says east side on the core.

this one doesn't have compression marks

#2 Core taken after the island on the the west bank of the river
A 9" of compression in this one

#3 - Wood creek - probably 2+ feet of compression @ this site lots of Mont mollusks ... there may have been a compression of this length

#4 Cabell point

add
Take 59

2/27

(60)

1 ft H₂O

2.4 seeds

11:15

(61)

Smokeyhouse Creek 10:54 3/17 ^{to} 4:00H₂O 1.5 foot seeds4.14 → core went down 9.1' then
hit wood

Core broken #5

compressed 1"

above H₂O 1.5'

3.15 and 4.4

- 1.5

h. 1.5

215

6.9

9.0

2.15

9.1

100

= compression

23% compression

(62)

H₂O1' 1" H₂O

12:04

oxygen's rapid loss

2 segments

east side of river

2.5 seeds

(62)

plus

8.4

- 4.9

3.5 seeds

8.8 total

(63)

11.5 H₂O

12:14

4.3 seeds

(64)

5.2

3.0 H₂O

12:18

2.3 seeds

actually a little 2 less

4.3

(65)

3.4 H₂O

12:21

3.9 seeds

(66)

4.6 total

2.8 H₂O

12:24

4.8 seeds

(67)

total

9.6

12:28

4.0

2.6 seeds

4 more deeper sand

product would hit

(68)

total

6.2

12:35

H₂O

2.7

3.5 seeds

definitely heard 15

(64) ~~5.1~~ 12:40
 H₂O 3.3
 2.7 s.s. hit 1.5
 2.8

(65) 12:43
 H₂O 2.3
 s.s. 3.4

(71) 12:50
 H₂O 4.2
 9.7 (s.s. +) hit sand layer

(72) 12:55
 H₂O 3.0
 1.0 = 2.5
 s.s. = 0.5

(73) 1:01
 total 6.3
 H₂O 5.5 Fish
 s.s. .8

(74) 1:06
 H₂O 2.5
 4.1 + hit sand layer
 palms w/ tops blow off

(75) 1:10
 H₂O 2.7
 5.4 s.s. +
 hit something hard

15 intermediate in channel w/ last
 A station

(76) 1:15
 total 3.4
 H₂O 2.5
 s.s. 1.3
 in palms' cove

(77) 1:20 in palms' cove

(78) 1:25 in palms' cove
 look over
 palm woods not
 into
 H₂O 2.0
 s.s.

2.3 above s.s. y. cal 4.2 2.9 from
 10' of computation core 4.6 or 2

15 boulders @ surface

measuring this
 one

~~78
 total 7.5
 H₂O 5.5
 sed 2.0
 2:12~~

~~80
 total 5.7
 H₂O 7.2
 1.5
 2:13~~

~~81
 total 5.2
 H₂O 3.9
 1.3
 2:14~~

79
 total 4.6
 H₂O 4.7
 sed .1 on 1.5
 2:22

80
 total 5.6
 H₂O 4.5
 sed 1.1 on 1.8
 2:26

81
 total 7.8
 H₂O 4.0
 sed 3.8 +
 2:31

11.002.000 2.000

Brookland Heidi

3/24/92

Avalla

wind from NE

(82)	probe	3.3	11:53
	water	3.1	
	sediment	0.2	

(83)		3.4	11:55
		1.1	
	sed	2.3	

(84)		5.4	12:00
		1.7	
	sed	3.7	

(85)		4.7	12:05
		1.4	
	sed	3.3	

(86)		9.6	12:08
		1.4	
	Sed	<u>8.2</u>	

(87)		4.6	12:10
		2.1	
		2.5	

(88)		3.6	12:30
		2.8	
	sed	<u>1.2</u>	oyster bottom

(89)		3.5	12:32
		7.7	
		<u>2.2</u>	

(89)		3.6	12:35
		4.3	
		<u>1.3</u>	

(90)		4.7	12:37
		2.4	
		<u>2.3</u>	

(91)		3.9	12:40
		2.7	
		<u>1.2</u>	

(92) Sample @ 60

3.7
3.2

Sed .5

12:42.

(93)

6.0
2.6

Sed 3.4

12:45

(94)

2.3
2.4

0.1

12:47

CORE TAKEN BETWEEN 11:30
probe # 87 and # 89 marked
on map by a square #7

(95)

probe 5.9
water 0.9
Sed 5.0

CORE #7

(96) probe 5.4
water 0.7
4.7

1:50

3/25 Arm off Grubbs Pt.

10:34

(97)

T 3.9
W 5.2
S .7

juvies

13 near surface

(98)

T 7.5
W 3.7
S 3.8

juvies, sp. silv.
muck, bottom

10:40

(99)

T 5.2
W 1.6
S 4.6

juvies w/ sp. silv. 10:16

(100)

T 4.9
W 3.9
S 1.0

11:00

(107) T 6.6 Sandy bottom 12:10
 W 2.5
 S 4.1

(108) T 5.9 sandy shell 12:12
 W 2.1
 S 3.7

(109) W 3.5 1/2 @ surf w/ 12:14
 2 2
 Oysters

(104) T 12.1 1/2 @ surface then 12:18
 W 2.3 sandy bottom
 S 10.2 + didn't hit bottom

Vibracore location 12:26

(105) W 2.3 hit 1/2 of probe 12:28
 within 1/2 all the way

(106) 3.8 12:29
 1.8
 2.0 Sandy bottom

(101) 3.8 T 12:32
 1.1 W
 2.75

(100) 2.3 Sandy bottom 12:15
 1.8
 .5 1/2

(104) 3.0 W 1/2 in crack 12:37

(110) 2.4 W 1/2 in crack 12:39

(111) 7.4 Sandy bottom 12:49
 7.2

1.7 back on axis 12:52
 (112) 1/2 at 12:52

(113) 4.0 more murellonite 12:54
 3.5
 2.5 stretch

(114) 4.6 12:56
 3.1
 1.5

(115) 1/2 @ surface 4.5 1/2 12:59

Amhook River 3/28

(117) T 3.8
W 2.3
S 1.5

10:38
shells
oyster under in b.
sand

(118) T 7.4
W 2.1
S 5.3

10:46
sand

(118) T 4.8
W 2.4
S 1.9

sand 10:50

(119) T 5.0
W 2.5
S 2.5

sand 10:53

(120) T 3.7
W .3
S 3.4

oyster for
sand
ls 10:55

(121) T 4.4
W 3.0
S 1.4

oysters 11:00

(122) T 6.0
W 6.7
S 1.3

sand

11:05

(123) T 6.2
W 6.4
S 1.1

oysters 11:07

(124) T 7.3
W 7.0
S .3

sand

11:11

(125) T 5.5
W 5.5
S 0.0

oysters

11:14

(126) T 7.3
W 2.1
S 5.2

soft muck 11:16

(127) T 7.9
W 3.4
S 4.5

muck/sand/ls 11:18

(128) T 2.1 shell back / 15 11.21
W 3.8
S .3

(129) 2.1 all soft sed $\frac{W}{S} = \frac{7.1}{1.1}$ 7.1% coarse

took a core here, a lot of material
white stuff came out of the bottom
before we capped it.

peat/muck / 15 11.27

(130) T 6.9 soft muck 11.29
W 6.5
S .4

(131) hammock on ls peninsula 11.35
1.3' peat in some place
little soil
live oak, crotalaria palms
oak, guineal or
cotton bush
surrounded by grass

(132) T 5.1 shell back 11.49
W 4.5
S .6

(133) 2.1 sed S muck / 15 11.53

(134) W 5.0 1st surface of channel
11.58

across the channel 1' sand / 15

(135) T 4.9 1st channel surf 11.15
W 4.5
S .4

(136) 6.4 muck "Ankerling" 11.30
4.9
3.5

(137) 2' of ls peninsula along 2:43
under line A fork

mouth of A R
(138) 2.1 sand / 15 3:00
4.5
4.5

remember to plot this one

Core #9 mean #10

cabell pt.

~ 1.9' water

~ 7.5 sds should be

Core #10 mean 98

5.8

before compaction

Core #8 station
129

6.6 before
compression

Core #11

inland of #117

11.9 ft before compaction

8.3 total core

3.6

$$\frac{3.6}{11.9} = \frac{x}{100}$$

$$11.9 \overline{) 360}$$

Core #12

6.7 before compression

@ sample point #136

too big mud on it

#13 gamble point

reds #7

1.8 recovered

4/17 - and we forgot a pencil
and the metal latter stands
and we drove to Panama
City - by boat.

Core @ AR 126

Core # 14

11.8 ft - length of 1st section.

added

8 feet w/ connectors

-6.5

1.5

3' above water

1 foot to cap

11.8

+1.5

13.3

-1

so total

[12.3" damaged in 7]

44% lost
6.9 recovered

139 water depth

4/23/92

1:11

3'

only oyster bars visible on
willis pt water edge

140

6.4 +
3.4 water

1:18

3.4 seds sands

141

$$\begin{array}{r} 6.0 \\ 3.3 \\ \hline 6.7 \end{array}$$

1:21

-2.3 water

4.4 seds all shells?
Sand

142

$$\begin{array}{r} 6.7 \\ 3.1 \\ \hline 4. \end{array}$$

shells + seds 1:30

143

$$\begin{array}{r} 3.3 \\ 2.6 \\ \hline .8 \end{array}$$

muck

seds

144

$$\begin{array}{r} 4.4 \\ 2.5 \\ \hline 2.9 \end{array}$$

muck

H₂O

seds

145

shells hit bottom of

cell

-1.0

5.1

1:41

1:41

146

oysters

1:45

10+ shells/s/muck

2.0 water

8+ feet

147

1:49

6.4

muck

1.1 water

5.3 feet

148

4.3 fine sand

1:56

2.5 water

1.8 feet.

149

7.1

muck then sand then
limestone

2.5

4.6

2:02

150

9.0 seds

no H₂O

shells over

muck over

s over 15

core # 15 right here

1.4 to pos core from sed's
.6 water depth

cut off 2.4

2.1

4.8

7.1

11.9

- 1.4

10.5 → total depth

7.1 recovered

3.4 - core lost

Sed depths are real variable only
4' ± 20 feet max

151 ~~total~~ 3.0

w 3.4

sed's 4.6

muck

3:10

152

11.0

3.5

7.5

3:15

mucky w/ s2m
before the bottom

3:25

153

4.5

1.0

3.5

sand + shells / muck

154

5.4

1.4

4.0

3:29

all muck

155

3.3

3.0

muck / ls 3:32

156

5.5

1.3

4.2

sed's

muck under ls

bro

ls.

3:35

4/29/92 Clear sky - 11:30
breezy NW 10-15 mph
Brad: Heidi

CORE #16

between AR 74 : AR

75 on Smokehouse
Creek

X Sed thickness ^{5.9} 6.6 ft.
sandy / maybe some shell

CORE #17 - 12:30

LAST CORE for
Smokehouse ??

between AR 68 : AR 69

Sandy maybe some
shell before limestone

Sed thickness 6.4 ft

6.0

5/20

12:18

East side of river - Blue line

#1 Boat Landing

#2 113

#3 111

#4 1

6.9 to 1.0 pg seeds

sulfur creek

node #7

11:20

5/20

Core # 19 is 19

6.2 total 1'

1.2 water

4.0 seeds recovered 35"

Core # 19 is 19 1/8 to seeds 12:20

No 15 in bottom but probe

inserted in core hole

indicated 15 was @
bottom of hole

5.5

CORE #18

near AC 103

11.6 ft sediment probe

12.75 core length

- 3.6 to top of

9.15 sec.

6.0 recovered

6/2/92

ARC-1

1st channel marker

SW of Caselle Pt

water 10 feet @ 11:10

ARC-2

st angle reef NE of channel

marker for ARC-1 150 yards

N of angle bar

H₂O 9.5

@ 12:15

4.8' sed

1/2' compression

4.8 sds

ARC-3

H₂O 3.5'

N of little island in Smokey Creek

ARC-4

on Sully Creek + West P. ss

intersection

@ 4:01

H₂O 4.5'

looks like 15 plug in ss. bottom of ss
core.

SW 15N

3-5 mod chip

SW 10-15 2-4"

scatter shows fine, thin st.

ARC-core 21

Ndr of arc-1

water 1.8'

10:17

actual TO 3.8

Total sed. 2.0

move 1.0

lost 50%

to compression

ARC-22

10:49

3.3 sed thickness

H₂O 1.25

what was recovery? 1.75

what was compression

location @ AR-15

ARC 23

11:05

5.7 real sediments retained 2.9
water .5+

location # AR 107

$$\frac{2.9}{5.7} = \frac{x}{100} \quad 51\% \text{ lost}$$

ARC 24

1:51

water 1.5
depth 6.0
recovered 2.9

location AR-38

compaction = 50%

ARC 25

hit wood @ base of ARC 24 12:34
(last core) so look another one for

location AR-38

Sample @ water 1.5
bottom of core 9' sed
1.2 cm below it 4' recovery 760% compaction

ARC 26

water 1.5

location AR-43

1:08

10 8' 3"

recovery

5' 3"

hit 15

dead palm tree bark

WOOD SAMPLE

#24

2' @ bottom

#25

28" 1" from bottom

#1

14"

#4

35"

25" 25"

Petrology

all plastic cores ARCS

# 15 -	67-72"
# 20 -	45"-49"
# 19	25-28"
# 10	36-40"
# 5	60"
# 16	58-63
# 1	4.5"
# 8	08"
# 12	2.0'
# 11	7.0'

ARC conversion to w # S

$\sqrt{x} = 2.1$

LAUC

1	16754	SF	1	16778	SF
2	16755	TV	2	16779	SF
3	16756	SF	3	16780	SF
4	16757	TV	4	16781	SF
5	16758	TV			
6	16759	SF			
7	16760	SF			
8	16761	SF			
9	16762	SF			
10	16763	SF			
11	16764	TV			
12	16765	SF			
13	16766	SF			
14	16767	TV			
15	16768	TV			
16	16769	TV			
17	16770	SF			
18	16771	SF			
19	16772	TV			
20	16773	SF			
21	16774	TV			
22	16775	SF			
23	16776	SE			
24	16777	TV			
25					
26					

#	Compaction	total depth	compaction
16754	2.3 25%	2.9	16780 - 7.4.3
16755	1.9 50%	2.9	16781 - 7.4.8
16756	INC		
16757	6.9 24%	8.6	
16758	2.0 30%	2.6	
16759	21.5 32% (leaked)	5.94	
16760	4.5 40%	6.3	
16761	4.3 26%	5.4	
16762	8.1 30%	10.53	
16763	5.7 5%	6.0	
16764	1.8 - 0?		
16765	8.4 44%	12.1	
16766	6.9 32%	9.1	
16767	5.9 11%	6.5	
16768	6.2 6%	6.6	
16769	5.7 34%	7.4	
16770	3.2 27%	4.1	
16771	5.2 - 0?		
16772	1.1 50%	1.65	
16773	1.8 47%	2.65	
16774	3.3 49%	4.9	
16775	2.4 48%	3.6	
16776	3.7 44%	5.0	
16777	5.3 36%	7.2	
16778	1.0 - ?		
16779	4.4 10%	5.1	

7/9/92 - First Turn on Steinhatchee

SR1 12:35 sandy

2.8' H₂O

4.5' sediments

SLC-1

4.2' ^{top}

got 3.4' sediments 24% compaction

25' of spartina in front of juncus " " and some cotton bush - got erosion surfaces on the marsh front of Biv Creek just like @ Gamble point.

Bay

sandy at the bottom, didn't get limestone in the bottom but probe indicates its presence just below the core bottom in hole

SR-2 1:27

looking west can see bay mouth bar area is sandy lies on the S edge of tidal creek

1.5' H₂O

4.7' seds

25' east of oyster bars

oysters across the river on the creek

SLC-2

1:29 about 14' didn't get this one back out - frog

berm ridge beach here
open sand on the south side of
the creek, spartina growing
on the majority of these sands

* try vibrocoring here

✓ SR-2 2:09 sandy

H₂O 2.3'
SR-2 4.4'

✓ SR-4 2:22 sandy

H₂O 2.5'
seds 12.4'

✓ SR-5 3.0 H₂O sandy 2:29
2.5 seds

✓ SR-6 3.0 H₂O muddy 2:35
2.0 seds

✓ SR-7 3.5 H₂O muddy 2:44
2.83 seds

✓ SR-8 3.2 H₂O muddy 2:49
2.8 seds

✓ SR-9 solid, sandy 2:54
2.5 H₂O
8.1 seds

probable dredge spoil, because this site is
right at the edge of the channel

✓ SR-10 90' off from $\angle 8$ 2:50
south (light)? 3:08
H₂O 5' 2"
seds 2.5'

✓ SR-11 Long Island
Berm Ridge Beach well developed; @
low tide - has wide sandy area

lots of trees just south of channel,
also evidence of tree die-off (dead cedars)
sandy bottom 3:34
seds > 9.5' probe won't go through
too much sand

H₂O 1'

✓ SR-12 4:12 plants: yucca, cactus-puckles
pear, ~~and~~ red cedar, cotton bush

sumac, live oak

oyster shells, 15 cobbles, salicornia
gambon

lepidocyrtus on cobbles - Ocala zone

H₂O .5

seeds 13.5+

✓ SR-13 4:38 mucky spartina 22m
H₂O 1.0' in front of juncus
seeds 4.8' flats

7/10/92 high tide Bivens Creek again

observation - Lantry Island's head land has
Areas of high vegetation -
trees at the mouth of river form
the largest area - the trees growing on the
spoil are about the same size, so it's possible
that that Lantry Island could also have
spoil - who do we ask about this

✓ SR-14 10:25 mucky sand

H₂O 3'

15 @ surface or 3+' of shells + muck
yet 15 sample

✓ SR-15 10:34 spartina salicornia

3 ~~seeds~~ H₂O

4.6' seeds

✓ SR-16

1.7 H₂O

5.5 seeds retrieved 4.5# 18% compaction

oysters across the tidal creek from here

✓ SR-16 1.5 H₂O 11:10 11:10

2.8 seeds

muck, oysters, ls.

✓ SR-17 2' H₂O 11:30 sandy

1' sand

✓ SR-18

11:37 sandy

2.5' H₂O

3.3' seeds

✓ SR-19

H₂O .7'

11:45

seeds 6.6'

✓ SR-4

mucky bottom in spartina @ confluence

11:45 seeds 6.1 ~~retrieved~~ 4.1 compaction = 33%

SR-20 muck H₂O 1.25 11:44
seeds 4.1

SRC-5 recovered 3 1/4 1/2

SR-21 mucky H₂O 2' = channel 12:30
seeds 0

H₂O 0 = creek edge
seeds 4'

SR-22 2' H₂O 12:40
1' mucky seeds

SR-23 2' H₂O 12:42
1' or less muck

SR-24 2' H₂O 12:45
1' or less mucky sands

Salicornia & bald areas w/ sands
or blackened ls, deer tracks

SR-25 1' H₂O 1:30
8' oysters and sands; long west-
warding oyster bar

2:00

SRC-6 17' H₂O muck w/ shells
6.6' seeds 6.1 recovered
9% compaction

SRC #7 muck w/ shells 2:20

2' H₂O

2.3' seeds

? recovered?

? compaction

Couttes - what kind of work is
he doing

Delta Accretion Embankment km
used in LA

Nature Wetland Research Center
3 branches Wetland Ecology

Spill Analysis - Route
Survey Group

Migratory Bird Branch

Boat 17.6 hours

8/10/48 Klein hatcher

boat is losing power

- possibly coils of folded plug

SR-26

H₂O depth

1.25'

1.34

sed depth

5.00

spatium 30' forms under

2 foot compression 3' recovers

40% compression

definitely is

sandy; peats

SR-26

2.2' H₂O

2:12

4.1' sed

Sandy

spatium forms 30' rim

unnamed channel next to Bivens Creek

2 measurements

SR-4 ① 15 in channel ② 6.5' sed 2" H₂O

SR-27



SR-28

H₂O

1.2'

3:47

SR-9

sed

0.5'

actually

4.7"

30

near

Also got core #9

Oysters in the channel all very mucky

lots of little islands - these are very thick sed. pile 10+ feet also mucky next to channels w/ 2 feet sed

SR-29

100 yards off the center of the mouth of this channel

2.7" sed

4.08

3.3' H₂O

Day 8/11/92

9:32

Long 1/2 and, mixed sed

JSR-30

11:30

2' H₂O

10:30

3.5' seds

actual recovery 2.5'

SR-31

28% compaction

this is as

far back as

we can go w/ this
boat.

✓ SRC core #10

clay @ 7'

11:04

come back here: vibrator

the marsh sediments

got 13+ feet of sediments

H₂O depth 6.5'

right next to core #10 in the
marsh

disc ended
need to U. Core here

✓ SRC 11 or SR-31

11:22

clay @ about 4.5', again deep
sediments

in tidal
creek

2' H₂O

3.5' to clay bed

✓ SR-32 Sparging

11:30

1' H₂O

6.5' clay unit

2.7 recovered

58% compaction

trying another core probably in clay

@ about 6

20 pounds on hammer

(got 10')

probe across the channel

20' into channel

11:47

H₂O 3.1'

3.5' seds

1/2 way across to 60' into channel

H₂O 3.7

11:50

3.0 seds

3/4 way across 80' into channel

4.3

H₂O

12:00

2.5 seds

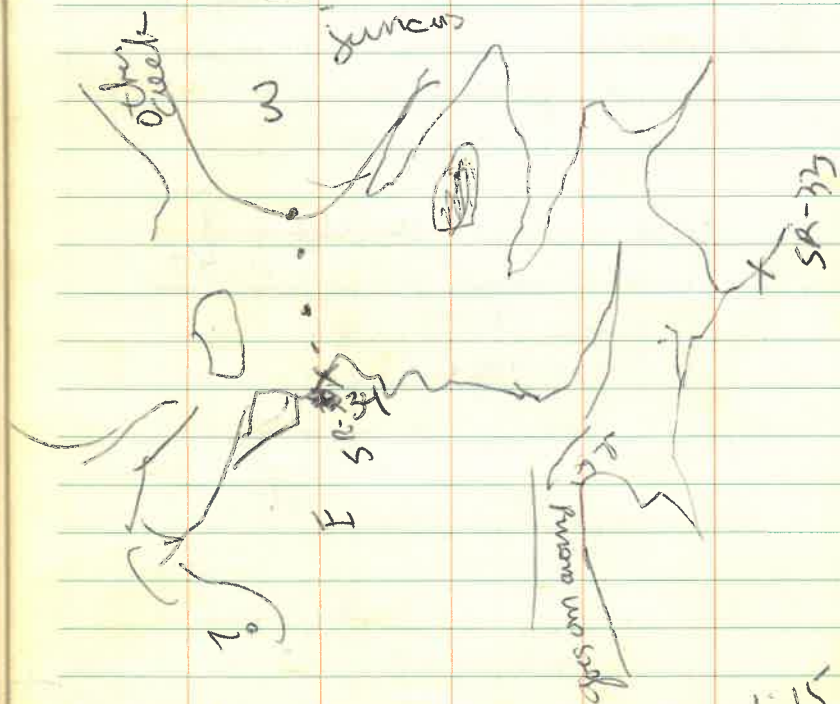
this transect goes across marsh
in tidal creek that goes east

marsh measurement activity
a long skimming stream of grass
between these two tidal creeks

H₂O 1.0 12:05
Seds 5.2

✓ SR-33 H₂O 1.25
Seds 7.2

12:15



✓ SR-34 H₂O 1.0
Seds 6.0

marsh, about 10'
#11

Tidal channel (4' out of grasses)
H₂O 4.2
Seds 2.6

H₂O 3.8
Seds 3.8

1/2 way
across
channel

H₂O 4.5
Seds 2.7

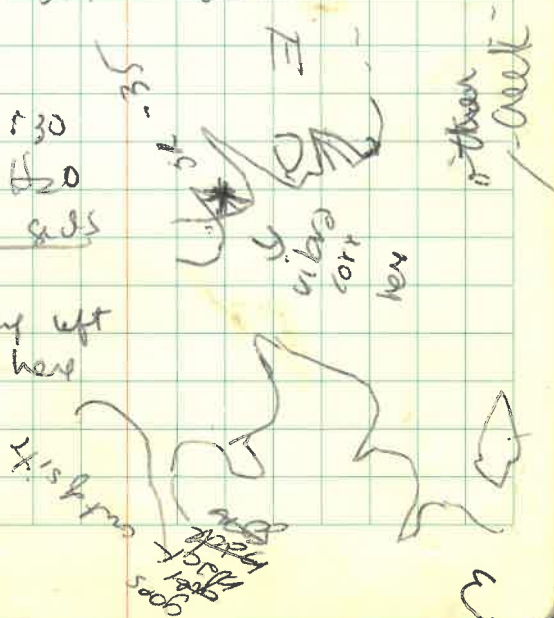
2/3 of way
across

H₂O 1.8
Seds 5.9

in the marsh
on the other side

1530
✓ SR-35 1.6 H₂O
14.1 Seds

juncos swirling left
2 PVC pipe here



motor got hot from being blugged up

✓ SR-36 1.5 H₂O muddy 2:00
1.3 seeds to sand layer

U1 by core site

Depth 16221



✓ SR-37 sand bar on 15 2:33
2.5' H₂O
1.7 seeds

grey organic sand

on the east end of the island
(on the south side)

a bunch of dead school palms

9/8/12

10:19

✓ SR-38

H₂O 4.25

seed 3.5

✓ SR-39

H₂O 3.0

12:47

mud 3.4 4.1

✓ SR-40

back in a little creek 1:01

seed 8' 2"

H₂O 1"

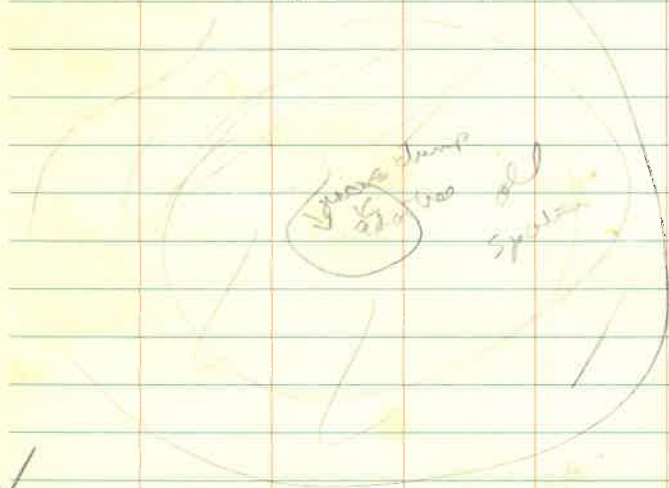
mud w/ sand layers

✓ SR-41 mixing of oyster - 1.05
 3.5 sds
3.0 H₂O

✓ SR-42 Spentina and a compound
 cedar tree

Sand & oysters right @ surface
 spawning in the Spentina

H₂O 1 foot
 4.8 sds w/ shells



✓ SR-43 oysters 2' down 1.30
 much @ surface

H₂O 15
sds 5.8

Oysters in creek @ confluence

✓ SR-44 Spentina - right sand 1.45
 beds in excess of 4' live oysters,
 dead cedar

a few palms, 1 or 2 ferns
 short

Take 11 hours to

✓ SR-45 1.56

H₂O .5

sds 2.4 all sand

Can see dunes from here

✓ SR-46 Spentina 2:00

dead palm fronds on the
 S side of the creek about 100 yards
 away

Sand 6" over 15.

.3 H₂O

4.8 sds

back of boat in channel

3" of sand over 15 /

3+ feet H₂O

✓ SP-47 big spandup 2:57
 points to the south and some
 dead ones

sds 7.5 gravel

H₂O .3

the creek turns just east
 of the hammer sampled @ 49
 big broad flat area of spandup
 one hammercore that is totally
 dead

✓ SP-48 4.9 sds 2:14
.1 H₂O

mostly sand

100 feet younger
 than sandy barrens w/ Salmon.

✓ SP-49 H₂O .2 2:18
sds 4.8 old sand

bank of brot 2' H₂O
.2 sds

Spandup flat

✓ SP-50 grass island 2:20

.5 H₂O

4.2 sds mucky

4 or 4.5 little up ~~is~~ island
 in the water here

✓ SP-51 end side of little band 2:24
 H₂O .2
 sds 3.8 mucky

break of heart 1' sds
 3' H₂O

✓ SP-52 mostly juvenes 2:26
 .2 H₂O
7.9 sds

✓ SP-53 mostly juvenes 2:31
 SF side of same island
 .4 H₂O
4.9 sds sandy little muck

SR54
✓

0 H₂O yuccas 2:55
2.7 sds
mini areas

W/ Salicornia at slightly higher elevation

SR55
✓

yuccas @ tidal creek 2:56
confluence

Salicornia inside yuccas rim
@ higher elevation

W/ sds sandy in marsh
0 H₂O

J

SR56

western marsh 3:02
sds of sand

20 1 foot

Oysters right @ surface about
1.5+ feet of shells and sand
overlying ls

J

SR57

H₂O 3:09
sds 4.6 sds

J

SR58

0 H₂O 3:13
2.4 sds mark

oysters behind one
in boat

SR59
✓

0 H₂O

3.5 oysters - sds

this 1 m from 6' to 2.5'



SR60
✓

4.3 sds
0 H₂O

ls in channel @ back of boat

SR61
✓

0.9 H₂O
12 sds

3:31 time

✓ SL 62 just n of Little Pond 3:51
Oaks OH₂O

2' s. oxygen @ surface
7+ feet, the pond

SL 63 Beach Ridge Bank 3:59

sands

9' sand in spring pond
furnace behind

✓ SL 64 golden rod salicorne

caulans

furnace

9+ sand

.5 H₂O

4:10.7

SL 65 live oaks, beach ridge bank 4:20
caulans, oaks, no palms

1 foot water

7.5' sandy s.d.s

✓ 9/9/92

SL 66 afternoon Sandy bottom

1+ foot of peat, erosion foot from

beach ridge bank

Spent 50' salicorne, furnace

4:20.4

SL 72

✓ SL 67 3.1 s.d.s

10:41

.9 H₂O

Hamrock just south of Sugar
pine & oaks path

✓ SL 68 7.3 s.d.s some sand 10:56
.1 H₂O

Hamrock just to the south

✓ SL 69 2 s.d.s 10:57
.4 H₂O

✓ SL 70 7.8 s.d.s 11:06
6 H₂O

✓ SL 71 9.5+ 11:12

Spent

✓ SR 72 1.3 H₂O
qt sds

11:17

✓ SR 73 dead cedars dead palms
11:30
112 fruiting
in rocks

0.3 sds
1.3 H₂O

✓ SR 74 4.0 sds
1.9 H₂O

11:32

✓ SR 75 2.7 sds
1.6 H₂O

11:34

just east of hammock

lots of dead palms @ fruit
fruiting & dead cedars

✓ SR 76 3.9 sds
1.1 H₂O

11:36

✓ SR 77 3.4 sds
1.0 H₂O

11:41

✓ SR 78

4.9 sds

11:45

1.8

Sound (

✓ SR 79

4.0 H₂O

Sound

11:49

5.0 sds

✓ SR 80

4.5 sds

1.8 H₂O

11:50

✓ SR 81

Viburnum

11:55

8.5+

vi

1.0 H₂O

✓ SR 82

2.1 sds

11:59

3.0 H₂O

✓ SR 83

1.8 sds

1.0 H₂O

est 12:03

(pine)

(Salicornia @ min w/)

(alt)

✓ SR 84
~~SR 84~~

4.4 seeds

1.15
~~1.03~~

1.2 H₂O

juvencs

✓ SR 85

muck

seeds 4.4

1.20

H₂O 1.0

detungio

✓ SR 86

no. oxygen here

1.24

juvencs

53 seeds

9 H₂O

✓ SR 87

3.4 seeds

1.24

1.2 H₂O

back of boat 2.0 H₂O

1.05 H₂O

✓ SR 88

4.0 seeds

1.24

1.1 H₂O

juvencs - a few (in
specimen)

✓ SR 89

3.3 seeds

2.0 H₂O

2.5
1.5
1.5

island out from 2-6 m deep

✓ SR 90

2.8 H₂O

1.30

7.6 seeds

✓ SR 91

1.5

7.0 H₂O

1.40

5.3 seeds

juvencs, short specimen

✓ SR 92

8+ seeds

1.47

vibracore site

1.0 H₂O

juvencs

✓ SR 93

8+ seeds

muck

1.44

1.0 H₂O

vibracore site

10/5 out @ the St. Marks Ferry

site of Don Colborn

Following 1 vibracore to use to

calibrate their uncalibrated seeds data

did not push core to penetration

all was done by vibracore

Set 7' to sediment

27

36

11

11.17

16 in on side to soil

23 inches on the way to the

7 inches of compression

10/20 11:27
 SR 94 - sand range
 - sandy bottom w/ oysters = probably middle
 H₂O 5.0'
 1' sediment
 pieces of spars
 loaded muck when pulled anchor up

SR 95 4' H₂O 11:37
 5.5 sds
 muck

SR 96 3.5' H₂O 11:43
 4.5 sds
 mostly coarse sand

SR 97 1.5' H₂O 11:53
 3.7' sds
 into oysters

SR 98 1.5' H₂O 11:58
 7' sds

SR 99 0' H₂O 12:21
 6' oyster-bar change

SR 99 and 1' H₂O 12:21
 7' mostly oysters - sand at bottom
 at edge of grass

SR 100 H₂O 2.5 12:31
 sds sand mark 7.5

SR 101 H₂O 3.0 12:39
 sds 2.7 muck sand

SR 102 2.5 H₂O 12:45
 3.0 sds

SR 103 0 H₂O 12:51
 6' sds shells over sand
 2.7' shell 5.3' sand

SR 104 sand 0 H₂O 12:54
 12.5 sds sand @ bottom
 double checked > 20'

SR 105 seaward side of oyster bar 1:11
 > 20' ran out of probe
 - back to double check 104
 because probe broke thru a layer
 of hard sand

SR 106 9.2' sand (at edge of bar
 at channel) 1:22

SR 107 1.7' H₂O 1:28
 > 20' sand

SR 108	H ₂ O	1.5	marker	1:53
	sed	2.5		
SR 109	H ₂ O	3.5		1:57
	sed	2.5	mostly	
SR 110	H ₂ O	0		2:05
	sed	4.5'	sed	
		3.5	oysters	
SR 111	H ₂ O	2		2:10
	sed	5.5	sed shell wash	
SR 112	4.5	sed	shell wash	2:15
	0 H ₂ O			
	pretty sure on dredging idiom			
SR 113	dredging material			2:21
	0 H ₂ O			
	5.5	to 15	mostly oysters	
	7 1/2	blocks		
SR 114	3.0 H ₂ O			2:32
	3.0	sed		
SR 115	4 1/2' H ₂ O			2:40
	1 1/2'	sed		

SR 116	H ₂ O	2.0		3:12
	sed	6.9		
	pure mud - turtle grass			
SR 117	H ₂ O	1.5		3:37
	sed	2.0		
	turtle grass			
SR 118	2' H ₂ O			3:51
	2.5'	sed		
	turtle grass			
SR 119	7.5	11.0		4:08
	1.5	sed		
	Redo of # 10			
				4:28
	2.5	sed		
	4'	H ₂ O		
SR 120	1.5' H ₂ O			4:35
	4.75'	sed		
	oyster bar			

SR 121 east of oyster bar
7.5' H₂O
1.5' seds

4:40

10/21

MO 122

9:55

SR 123 oyster bar off Long Island
4' water
3' seds

SR 124 4.5 H₂O
3.5 seds oysters 9:00

SR 125 5' H₂O
9' seds 9:12

SR 126 5' H₂O
1.25 seds 9:20

SR 127 5.5 H₂O
0.5 seds 9:29

SR 128 H₂O sed went down 1' 3/4
6.0 sed some oysters

SR 129 2.5 seds
6.5 H₂O 9:39

SR 130 4.5 H₂O
4.5 seds 9:45

SR 131 9:48
Sed 1 and clay layer @ the bar
7' H₂O
seds 5' + clay - 1/2 clay 2 oysters so
fell some oysters near the top

SR 132 7.5' H₂O
5' seds 10:10

SR 133 5' H₂O
10' seds - oysters on top 10:20

SR 134 7' H₂O
3.5' seds - oysters @ surface 10:33

SR 135 10' H₂O
2.5' seds outside 10:40

SR 136 8.5 H₂O
3.5 seds
oysters @ surface 10:47

SR 137 8.5 H₂O 10:52
 1.0 sds

SR 138 6.5 H₂O 10:55
 2.0 sds

SR 139 6.0 H₂O 11:02
 1.7 sds

SR 140 5.5 H₂O 11:07
 2.7 sds

SR 141 5.0' H₂O 11:11
 1' sds

SR 142 5.0' H₂O 11:19
 0.5' sds - rubble

SR 143 3.0' H₂O 11:27
 1.0 sds

SR 144 4.0 H₂O 12:24
 1.5 sds
 big dump of limestone large
 island
 oxygen & sulfur

SR 145 H₂O 2.5' 12:27
 sds 7.5'

SR 146 3' H₂O 12:37
 5' sds

SR 147 2' H₂O 12:41
 6' sds

SR 148 17 + sds 12:52
 3 H₂O

SR 149 3.5' sds 12:55
 2.5' H₂O

SR 150 2 H₂O 1:06
 4.5' sds oxygen

SR 151 H₂O 1.7' 1:10
 sds 3.0'
 pelms, cottonwood, spanish bayonet
 material levee

SR 152 H₂O 2.5' 1:16
 sds 2.5'

SR 153 adon hammock 1:22
2.0 H₂O
1.5 sids

SR 154 1.5 H₂O 1:35
5.5 sids sandy

SR 155 1.5 H₂O 1:38
3.3 sids sandy

SR 156 1.25 H₂O 1:42
2.9 sids
at 3' 4.2 sand on th hammock
adon 3' pan

SR 157 1.8' H₂O 1:47
5.8' sids

SR 158 2.0 H₂O 1:52
1.5 sids

2/4/93 Available
20 YDS WEST OF GAMBLER PT. LT.
L 30° 04' 86" → 52"
LON 83° 59' 14" 8"
14509.98
46388.43

30 04 40
83 59 26

2"
-15"

Available line east ham seat
out across oxygen pan

195° from Gambler Light

AR 157 11:43
4.5' H₂O

14441.85 → TD
46388.33

L 30° 4' 64"

L 83° 59' 54"

4' sids

38.4"
32.4"
+1.9"
-1.21"

AR 158 11:50
5.0 H₂O
3.0 sids

L 30 04.01' → 16

83 59.33 → 20

TD 46.387.64
63458.43

+0.3"
-1.7"
not accurate

AR 159 12:04

L 30 04.36 → 22

83 59.77 → 40

5.6 H₂O

2.5 sids

14508.40 → 1.1"
46388.36
-16"

AR 140 14507.96 TO 12.09
46388.99

6' H₂O

4.6' Sed

30 04.30' → 16 [9.4"]

83 59.82' → 18 [2.1"]
47

Just inside the oxygen bar
can see it from here & 75m
away

AR 141 oxygen Syonds. 12.23

5.5' H₂O

Seds 4

LL 30 01.73

84 01.11

TD 14497.73

46377.86

↓ on the oxygen bar
declin Pt New pt connection
Close 12.27

3.0 H₂O

4.5 Seds

LL 83'59.84' 18

14507.72 18

TD 46388.61

AR 142 H₂O 7.0 12.33
Seds 2.0

TD 14507.36

46388.44 13

LL 30 04.22 13

8359.98 59

AR 143 H₂O 5.5 12.37
Seds 11.0

TD 14506.99 59

46388.44 8.4

LL 30 04.14' 2.4

84 00.04' 2

AR 144 H₂O 6.5' 12.47
Seds 5.5

TD 14506.72

46388.58

Super mark LL 30 04.09' 5.25"

84 00.11 7.3"

AR 145 W-16778 @ the channel 12.51
marker

7.5' H₂O TD 14507.08

Seds 46390.76

LL 30 04.10 10.5"

84 00.31 19.42"

the channel marker

[Hot dipped galvanizing chain]

AK 166

5.9' H₂O
2' seds

[1.11]

1.1" LL 30.04.37.22

.52" 84 00.20.12

TD 14507.48

46391.70

AK 167

1.15" 5.0 H₂O
.47" 1.25 seds

[1.16]

30.04.39.23

84 00.14.11

TD 14507.71

46391.82

seaward side of

Cubella pit oyster bar

AK 168

Cubella pit oyster bar

[1.121]

1.25' H₂O
5.75' seds

1.4" LL
.52"

30.04.47.28

84 00.20.12

TD 14507.97

46392.43

AK 169

1.25' H₂O
3.75' seds

[1.128]

1.6" LL
.30"

30.04.54.32

84 00.12.7

TD

14508.24

46392.26

AK 170

H₂O
seds

[1.137]

LL

14508.46

Probe broke

TD

didn't take data

2/9/93

Loran
network

[11.06]

L > 30 04.24

L > 84 00.25

AK 170 repeat of 165

50 yds NW
of

3.5 H₂O

seds 1.5

plum

TD > 14496.
46391.

red near channel marker
250 yards away

6 10 yds

11:38

[1.71]

SE of
plum

4.5 H₂O

7.5 seds

AR 172 repeat of 170 ^{no data} ^{del 170} ^{re-assigned} 12:37

300 yards N of
cabbell pt oyster bar

H₂O 6'

seeds 3.5'

sittings: bird post 215°

gamble pt 60°

brush on cabbell pt 20°

And really we are on
an oyster bar next
oyster bar to the east

AR 173 5.5 H₂O
5.5 seeds

12:56

100 yards

N of oyster bar

in line between bird piles

and hangs on cabbell pt

AR 174 250 yards off oyster bar

5.5 H₂O

5.75 seeds

1:00

sittings: bush 30-35°

gamble pt 85°

bird post 200°

another 150° yards

about 400 yards to cabbell pt

AR 175 4.5 H₂O
9.5 seeds

1:15

15° to grass dump

80° to gamble pt

200' to bird tower

AR 176 150 yards from last pt 1:20
3.75 H₂O
2.25 seeds

15° bush

90° gamble

200 bird post

AR 177 4.5 H₂O
1.25 seeds

1:27

sittings: 10° bush

105° gamble pt

145° bird tower

AR 178

4.0 H₂O

5.5 seeds

11.32

135° to granite pt
a few feet to bush

Willis Pt transect

AR 179

3.0 seeds

1.75 H₂O

14.9

at least 5.5 ^{seeds} on Willis Pt.
6.08

Ken went up on
15th and
1st road

AR 180

4.5 H₂O

1.75 seeds

15.8

110 granite pt

55 Willis pt

205 new bird post

AR 181

4.0 H₂O

1.75 seeds

20.4

next 150'

20 H₂O on 15' on cropat stick in H₂O

300 yards from land

AR 182

6.25 H₂O

6.00 seeds

21.6

25° Willis pt
165" old bird post
210" new bird post

AR 183

5.0 H₂O

13.8 seeds

22.4

21 207° new bird post
67 157° old bird post
30° Willis pt.

AR 184

6.5 H₂O

4.0 seeds

23.32

1.0 seed > Karst lake

21 207° new bird post
55 145° old bird post

AR 185

7.0 H₂O

3.0 seeds

24.4

25 205° new bird post
40 130° old bird post

'AL 186

70 H2O

252

12.25 seeds

1
25

205°

old bird post

115°

new bird post

70

15.75

3.5

19.25

7.0

12.25

Wood Samples

- ① SRC-3 3' 9" ~~4' 1"~~
- ② SRC-3 4' 4"
- ③ SRC-3 4' 5"
- ④ SRC-~~10~~ 5'
- ⑤ SRC-~~10~~ 5' 3"
- ⑥ SRC-~~10~~ 5' 5"

3/11/93

12:18

SRC-12

Water 1.5 foot

on oxygen bar

very near 10³ but probably
not on it 10³

10.25 feet into seeds.

6.5

- 3' compaction

3.5

7.25 seed

28% comp

3

10' to top

SRC-13

6' H₂O

1:30

4' in water

4' H₂O 2.8 how much recovered

couple hundred seeds 5 of

green markers 13

SRC-14

pt. 64' had 9+

6.5

2:30

2.5

water

4.0

compaction

13.5 total

13.5

seeds

11.1 recover

2.4

2.4

x

13.5

100

18% compaction

SRC-15

4:30

1.5 H₂O

5. feet seeds total

2.1 outside of

pipe to

3.5 feet recovered

seed

1.5 feet compact

42% compaction

Ancilla 3/30/93

Pen. Wil & Hilde

AK187 4-5 seeds on 15

0-1' H₂O

10:45

Heterandrea on Heterotheca

30 16.21

83 54.12

AK188

39 seed

10:59

3.0 H₂O

30 05.91

84 01.00

AR 189 30 05.87 11:03

84 01.10

9.8

H₂O 5.8

due SW

sed 3.2

AL 190 30 05.21-12 11:18

84 01.46-52

-4

H₂O 4'

Sed 3.6 oxygen bar ?

AR 191 30 05.72-74 12:24

84 01.76-24

H₂O 4.5'

Sed. depth 7.5

AR 192 30 05.73 11:31

84 01.27

H₂O 4.5'

sed 3.5

SRCores

1 16898

2 16899

3 16900

4 16901

5 16902

6 16903

7 16904

8 16905

9 16906

10 16907

11 16908

12 16909

13 16910

14 16911

16912

16913

16914

16915

5/4/93 Stunhatchee River 1:31

SRC - 16 on the outside of the bend
just across from "the landing"

3.25' H₂O

3.75 to top of pipe

7.00 subtracted from total
to calculate the sediment deposit

13' sediment

5.75 above surface

7.5 inside pipe

17.0

9.5 sediment recovered

14.0

- 5.75

11.25 should have been

9.5 is

9.5	11.25
87.4	100

16% compression

SRC-17

2:51

6.75 outside of pipe used
31 foot A₂₀ depth

should get 12.25

$\frac{-3}{9.25}$ $\frac{9.25}{4.75} = 49\%$
get 4.5 4.7 comp

SRC-14

1 foot H₂O 4.01

8 feet should get

how much did we get?

calculated compression

4.75' returned

41% compression

5/5/93

9:10

SRC-19

inside 3.8 ft

water depth 1.5 ft

total recovered
% correct

retrieved
3.2

5.5 total

42% compression

21

29 40.12 07"

83 25.87 52"

$\frac{12}{100} \frac{4}{60}$

10:05

~~SR-20~~~~9:47~~

9.5 H₂O depth

didn't retrieve sample in core

SR-159 H₂O 9'

10:32

1.5 sds

SR-160

29 39.93

83 27.69

H₂O 8.0

sds 3.0

12.5

SR-161

H₂O ~~8.5~~ 9.0 10:46sds ~~4.0~~ 3.5

29 39.97

83 27.60

SR-162

$\frac{9}{12} \frac{10}{0}$
H₂O 8.25

10:54

sds 3.75

29 41.22

83 26.30

SR-163 12.5
 sand + mud 7.0 H₂O 10:58
 5.5 sed 29 43.74
 83 23.60

SR-164 10.0
 grass + shells 6.5 H₂O 11:02
 + sand 3.5 sed
 ? 29 40.09

SR-165 6.0 H₂O 83 27.34
 grass + shells 3.0 sed 11:08
 + sand
 7 29 40.09
 83 27.34

SR-166 6.0 H₂O 11:11
 grass + shells 4.0 sed
 + sand
 X 29 40.06
 83 27.34

SR-167 10.0
 grass + shells 5.75 H₂O 11:13
 + sand 4.25 sed
 29 40.12
 X 83 27.24

SR-168 7.5⁴ H₂O 11:19
 5.75 H₂O
 1.75 sed

29 40.17
 X 83 27.16

SR-169 10
 5.75 H₂O 11:23
 4.25 sed

29 40.22
 X 83 27.06

SR-170 5.5 H₂O 11:27
 1.25 sed

29 40.27
 X 83 26.94

SR-171 7.5⁰
 5.25 H₂O 11:32
 2.25 sed

29 40.30
 X 83 26.94

SR-172 6.25 H₂O 11.38
 sand + grass + shells
 * 29 40.34
 83 26.72

SR-173 H₂O 6.5 ~~11.41~~
 sand + grass + shells
 29 40.38 seeds 2.0 11.41
 93 26.58

SR-174 grass + sand + shells 1.5
 H₂O 6.25 11.44
 seeds 1.25
 * 29 40.43
 83 26.41

SR-175 grass + sand + shells
 H₂O 6.25 11.48
 seeds ~~2.0~~ 2.0
 * 29 40.48
 83 26.29

SR-176 H₂O 6.0 11.51
 seeds 3.75
 sand + shells
 29 40.51
 83 26.20

SR-177 8.25 11.54
 6.0 H₂O
 2.25 seeds
 sand + grass
 29 40.54
 83 26.09

SR-178 11.58
 29 40.58
 83 25.97
 10.0
 6.0 H₂O
 4.5 seeds
 Clean muck + salt

SR-179 5.0 H₂O 12.03
 2.25 seeds
 29 40.64
 83 25.84

SR-180 5.0 H₂O 12.41
 1.5 seeds

~~29 40.51~~

LL not works

0) Loren

CHECK LIST

- 1) PROBE
- 2) DEPTH FINDER, POLISH AND ELECTRONIC
- 3) MAPS FOR THE CORRECT RIVER, CONNIE
- 4) FIELD NOTEBOOK
- 5) SUNGLASSES, HAT
- 6) FLUSHING DEVICE
- 7) PVC PIPES
- 8) ALUMINUM PIPES, CAPS AND 3" PLUGS FOR VIBROCORE
- 9) SCI-TEX DEPTH FINDER (HARDCOPY) NEED BATTERY AND EXTRA PAPER
- 10) GAS TANK FOR 9.9 HP ENGINE
- 11) ENGINE TREATMENT IF NOT USING HIGH-TEST GAS
- 12) LIFE PRESERVERS AND TWO THROWABLE SEAT CUSHIONS
- 13) LADDER AND FEET
- 14) ANCHOR(S), TWO OR MORE IF VIBROCORING
- 15) TOTES:

#1 GREASE
OIL
GASOLINE ADDITIVE
SUNSCREEN
BUG SPRAY
GREASE GUN
FIRST AID KIT
FIRE EXTINGUISHER
TOOLS AND PARTS FOR EMERGENCIES
WD-40
REGISTRATION FOR BOAT
RED GREASE

#2 PLASTIC TAPE MEASURE
SAW
HAMMER
PAPER TOWELS
DUCT TAPE
BUNGIES
OFTEN USED TOOLS
PIPE GLUE

#3 CAPS
CONNECTORS
WD-40
GLOVES
COME-ALONG
GLUE
DUCT TAPE
PLUGS

16 17 15 14

inches, to 10's

The diagram illustrates the geometric construction of a circular arc tangent to two intersecting lines. Key elements include:

- Points:** P.I. (Point of Intersection), E, M, L.C. (Line Center), D, I, P.C. (Point of Contact), and P.T. (Point of Tangency).
- Angles:** Two angles of 50° are indicated at point P.C.
- Distances:**
 - TAN. DIST.: Tangent distance from P.I. to E and from P.I. to P.T.
 - RADIUS: The radius of the arc, shown from L.C. to the arc.
 - d: Distance from P.C. to D.
 - I: Distance from D to I.
- Lines:** Two intersecting lines forming a V-shape, and a circular arc centered at L.C. tangent to both lines.

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

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

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

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

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

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

1'	-0167	11'	-1833	21'	-3500	31'	-5167	41'	-6833	51'	-8500
2'	-3333	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	-10000

$\frac{1}{16}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
·0052	·0078	·0104	·0156	·0208	·0260	·0313	·0417	·0521	·0625	·0729
1	2	3	4	5	6	7	8	9	10	11
·0833	·1667	·2500	·3333	·4167	·5000	·5833	·6667	·7500	·8333	·9167