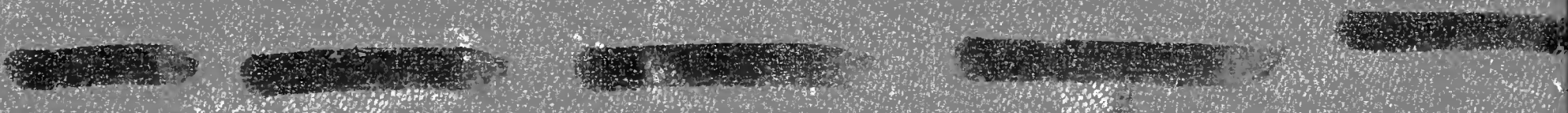


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UNITED STATES

DEPARTMENT OF THE INTERIOR
ALEXANDER
DI-8

APPROVED DECEMBER
RUSSELL



EXHIBIT

YAKIMA

Funeral 1959-59

Jan. 2, 1951 - Tuesday

KENNEY NO. 1 - New England, MA

- 0'0" - 7'6" - Mixture of pieces of worn coral, beach Foraminifera (*Calcarena*) and pieces of asphalt paving, etc.
- 7'6" - 10'0" - 10" recovery with Gailing core barrel (3 3/4" ID) - Beach rock; well cemented beach sandstone with many forams - probably went through 2' of this material.
- 10'0" - 12'2" - drilled with rock bit; soft material; no cuttings taken.
- 12'2" - 22'8" - Small cuttings recovered from mud 7' from hole opening, *Calcarena*, *Holmidea* sections, small mollusks (shell got + pelecypods, small pieces of coral (some fresh and worn). This section had few hard streaks but drilled easily in 5 minutes.
- 22'8" - 33'2" - Beach forams, *Holmidea* + coral; most of pieces appear worn; drilled easily like last. Small cuttings only, taken 7 feet from hole.
- 33'2" - 43'8" - Took last rock coarse cuttings from mouth of hole! Rock contains corals + many mollusks; many shells very fresh.

with bright orig. color; many
cherty masses that probably
are oolite; moll. include
Cypraea, Turbo, etc. - some
piled up with both rollers.
Deposit app. well consolidated -
with big James + Moore drive
barrel.

43' 8" - 46' 1"

(2)

James and Moore barrel down
29" in 64 blows - with 27"
weaving; sand, coral & shell
not consolidated; put in
core box unsorted.

43' 8" - 54' 2"

Coral (including Helopora),
algae, shells; some of
coral appear worn; Helopora
conspicuous fairly abundant
(from above?). Drilled easily

54' 2" - 59' 2"

Hole filled in 3-4' with
cuttings due to thinning
of mud as soon as 5' drill
rod

54' 2" - 59' 2"

- coral, Helopora + forams
(Calcareous and abundant
at all higher levels). Coral
appear to be most abundant
constituent

59' 2" - 64' 8"

Took off 5' rod + added
10' 6" rod. Worn coral +
Helopora with few forams

64' 8" - 75' 2" Calcareous + Marguopora
Coal and fossils (Worm
Calcareous + Marguopora)
- too soft to core

75' 2" - 81' 0" Stopped in middle of run
when hard material was
encountered; no cutting takes
(run ahead) (about 80')

81' 0" - 83' 6" Put in 4 1/2" Gallego core bit -
(2) blocked after about 2' 6" -
recovered 10" broken coral
also with shells, etc.

83' 6" - 85' 8" Mostly pieces of coral (broken);
Marguopora etc. from above

85' 8" - 96' 2" Similar to last (see Helicopora
from above?) - cell full with
cuttings

96' 2" - 100' 0" Side bit with calcarescence
(Worm Calcareous etc. from
above?) - stopped at 100'
to set 8" casing

Set 79' 4" of 3" pipe (4 pieces welded
together) and to down last 2 sections + strength
of pipe welded to down collar feet on hole.
Spent balance of afternoon + night 9 PM
in fishing. Got back length of 4" pipe in
fishing tool. Got small amount. Turn bit
and bring up short fish. from depth 60'

Jan 3, Wed.

Recovered first with 6" rock bit, then cleaned to 100' with 7 7/8" rock bit; circled on bottom, bringing up very coarse coral fragments & coarser than any cuttings obtained yesterday - apparently due to casing.

100'0" - 103'0" Put in Kelly 4 1/2" cor bit - considerable chunk, whether that sample like hard coral - though harder claimed only calibration. Bit blocked after about 3'; recovered 19" cor; piece at top looks worn but remainder may be in pts. of 1 colony, possibly in place.

(4)

100'0" - 110'6" Put in stabilizer (guide) of 6" pipe above 7 7/8" rock bit; worked slowly through casing. The end of casing probably not cramped by drawing but there may be an slight bit with guide may have cut part & slip further.

(96-100')

96'0" - 106'6" Cuttings mostly coral (or alga?) - and Helopora & shell fragments (Strombolia, etc) - tan color - calcareous - pale from above

106'6" - 117'0" - 100m + fresh coral, rounded frags. Helopora, Halimeda + worm

- 117' 0" - 127' 6" Marguaporas; coral gray-to white hard. Intersol drilled easily
- 127' 6" - 138' 0" Very similar to last; drilled a little harder; coral, forams, Pecten ^{some calcite}
- 138' 0" - 148' 6" - Similar to last; each species, - mostly white coral
- 148' 6" - 159' 0" - mostly white coral, algae (?), Pecten shell; some light calcite; some coral well preserved; some white small forams. - some worn Colcarina & Marguaporas; Helopora rare; color very light gray.
- 159' - 169' 6" Very similar to last but not large pieces with beach forams cemented in (covered from above) some good white beach type forams.
- 169' 6" - 175' 0" Coral is similar to last; some algae nodules; rare Homotrypa and Helopora. Some of coral appear to be yellow calcite + prob. in microstethal Well preserved micro-moll
- 175' 0" - 185' 0" Cut in gallery 4' 1/2" cor bit 4' in 5 1/2'; recovery 32"; hard coral heads at top and soft sand with moll. below (put in box un washed)

(5)

X

Note -

201 - 232½ contain many
well preserved mollusks
- last 10½' esp. rich

30

Jan. 4, 1951 ~ Thursday
Night Toward

169'6" - 180'0" - like earlier cuttings,
as if in a ...

Jan. 4, 1951 ~ Thursday
Night tower

- 169'6" - 180'0" - like earlier cuttings, possibly fewer; rare *Helicopora* - no filling in hole following 7 hr. shut down.; *Halmimeda*, many worn *Calcareon* + mang.; *Arac* (small)
- 180'0" - 190'6" - White coral (crust, worn pitted), cidarid spine, rare *Homotrema*, brownish calcite; few worn beach forams; rare micro-gast.; note large piece yellowish calcite.
- 190'6" - 201'0" - similar to last; some moll. Soft. - rare *Homotrema*, green brownish calcite; well preserved *Cerithium*, tellinid, etc - looks like lagoon fauna
- 201'0" - 211'6" - Corals, algae, good moll., small cidarid - this almost surely in a lagoon fauna; some forams.
- 211'6" - 222'0" - Coral + shell (these cuttings and all later ones taken directly from overflow of casing) - good moll.; few small white forams.
- 222'0" - 232'6" - Coral + shell, soft. Very rich in well pres. moll., many worn beach forams; *Halmimeda*, - lagoon suggested near shore.
- 232'6" - 243'0" - Coral, shell, forams, *Halmimeda*, - soft. - moll. not as abundant as in last interval. - gast.

243'0" - 253'6" Same as last - many forams
Noted Polinaria + other gast.
(some with orig. color pattern),
Halimeda, etc. Evidently
shallow lagoon fauna.
Drilled easily.

253'6" - 258'6" Trench boring, 4 1/4" core
no covering in hole. Material
hard bc. with many shells;
corals not conspicuous
- possible change from ^{first} appearance
yellow calc. ? [The calc.
from prev. next core - big xls
from borings in same]

(6)



3 1/4" recovered

253'6" - 264'0" Block with 7 1/8" rock like, no
caving; coral + shell; drilled
like last. Some yellow calc.
- in xls. Halimeda + some
beach type forams

264'0" - 274'6" Gray ls with abundant xl
yellow calc. - some purple
ble-dog-tooth type - forams,
moll., Halimeda, etc. - except
for abundance of calcite does not
differ greatly from last 2
intervals!

274'6" - 285'0" Similar to last; lots of
yellow calcite

285' - 295'6" gray ls & piece brown material; shells & some ls. calcite - drilled like last. [Note foss. brown nodules of brown calcite - these more abundant at lower levels - e.g. 412 - 422 1/2 - wrapped in paper] - brown calcite much more abundant at base

295'6" - 302'6" - Drilled harder, 3 1/2 feet from end of rod; pulled out to core; gray ls - good moll (Polymnia); yellow calcite not conspicuous; Margin - open

302'6" - ³⁰⁷310'0" Pull in 4 1/4" core barrel - hard for 1" - then softer - recovered 39" core to (upper 1", single head) - note recryst. to calcite & the brown calcite & brown in same.

(7)

303'0" - 307'0" Back to 7 1/8 rock bit - coral, shells (1 1/2" diam) & yellow calcite. Some algal nodules - part of coral interval (if core for steps for circulating mat)

307'0" - 317'6" Similar to last - corals incl delic. to branching forms that are common (next opposite drilled hard) better at end; encrusted Hal. seq.

①

33

except for well
31 ±

317'6" - 328'0" - drilled hand - mostly

except for shell
3' ±

317'6" - 328'0" - drilled hard, - mostly
recryst. coral chips - essentially
through large head - on
coral knoll's
Rare Homotrema.

328'0" - 338'6" - mostly hard drilling, same
as last except for rare Halimeda;
few forams - most of the
interval app. through recryst.
coral

338'6" - 349'0" - softer in latter half; cuttings
similar to last.



349'0" - 359'6" - softer in upper half, harder below
similar to last; some small
white forams

← Renney collects cuttings to bottom K-1 →

359'6" - 370'0" - Red coral, calcite, algal
nodules, beech forams; a very
few particles are light brown
in color.

370'0" - 380'6"

Mainly coral (see 2) with molde
of both pelican + gull, some

370'0" - 380'6"

Mainly coral (re-X) with molds of both pelley & gast, some forams, few yellowish-brown green (mostly xl-calcite), few small worm forams - some green pure white banded calcite.

380'6" - 391'0"

Re-X coral & coral & moll. molds, some yellow calcite.

391'0" - 396'0"

Put in 4 1/4" Stanley bit & berty bit - recovery 100% of Hard, porous coralliferous li with numerous molds large moll. - coral also preserved as molds

(8)

391'0" - 401'6"

Re-X coral, moll. molds, Halimeda, white, yellow & brown calcite, marginopores, etc

401'6" - 412'0"

Re-X coral, white, yellow & brown calcite

412'0" - 422'6"

Similar to last with molds of Pecten & other moll (large green shell, from above?) - tridacna forams (+ globigerinids?) in brownish calcite matrix -

[these occur above
e.g. 285-295 1/2"]



? ->

422'6" - 433'0"

possible change of formation? - Re-X mat. with some forams in brown calcite like last - one frag. then Tallmadge could be here above



(35)

433'0" - 443'6"

- Like last but with higher percentage to dark de with

433'0" - 443'6" - like last but with higher percentage of dark ls with very small forams.

Jan. 5 ~ Friday

Reached depth 433'6" before midnight Jan 4; circulated balance of night, cleaned up casing. Started to run 6" pipe in morning but unable to get string past slight dogleg below 8" casing; no sub available to use in drilling pipe down so decided to stand rig forward 5'9" (N65W) + set 6" casing in new hole. This → will be K-1A to be drilled with 9" rock bit - no sample above level of bottom of K-1.

K-1A

Jan. 6 ~ Saturday

Night shift drilled to 280 ± ft down - with new 20' stabilizer + 8 7/8" Reed rock bit. During early morning lost all circulation at 329 ft. + bit frozen but later able to rotate; bit plugged - unable to pull with cable (Benson claim 2" cavity encountered) - (not drilled over)

too fast + no mud in reserve. All the
 free string sufficiently to rotate and by
 running small pipe inside drill pipe
 unplugged bit; pumped in about
 50 bbl. newly mixed mud but
 could not get back circulation. Backed
 off (1 joint!) + abandoned hole before
 midnight.

Also a fine example of how
 radically section change in short
 distance - in this case 69 inches!

~~1 1/4~~ ~~2~~ x 5 ~~1/4~~ x 4') inch
~~1 1/4~~ x 4' x 4' / 100

4.5
 5.7
 5.1
 5.3
 4.9
 24
 4.3

54.5
57.5
31.5
49
24
29

K-1B

(36)

Jan. 7 ~ Sunday

→ Night shift started on rock
24' S65E of K-1 to new site = K-1B
Pulled 8" casing from K-1 with big crane
but same machine failed on attempt to
pull string from K-1A; Built up 8 3/4"
Red Rock bit by adding rollers from smaller
bit - to make 13" rock bit

Started K-1B in PM - to about 40'
by midnight. No difficulty going through
hard rock.

Jan. 8 ~ Mon

To 70'± by 6:30 AM; losing appreciable
quantity mud. Set 80' 3" of 8" casing
cementing to to prevent loss of mud
by overflow. Started drilling with 7 7/8"
rock bit in late afternoon.

Jan. 9 ~ Tues

Down to 315' by 7 AM; section harder
than either of other two; lost circulation
momentarily at about 329' (where
cavity was encountered in K-1A), no
further loss circulation during drilling
of next rock.

K-1B

337'4" - 347'10" / 1. P.M. Started taking cuttings
of K-1B at 337'4" ft. Fragments
are sharp, hard coral; few gastropods
uniformly light colored.

347'10" -

(Supply of aquagel running low and because no shipment is due for several days, the decision was made to use aquagel straight until 6" casing had to be put in & cemented. thereafter Baroid (barium sulphate) will be used for drilling mud, to dilute aquagel.
Cuttings similar to last

- Out of hole to inspect bit - cones loose but good for another 100' (only bit of That size we have) Russell

358'4" - 368'10" -

Resumed drilling 3:45 PM mostly fragments hard coral few pieces calcite - drills hard coral is white - calcite is light brown very few forams

368'10" - 379'4" -

mostly hard coral - increasing numbers of forams - Halimeda drills easier than last ten ft. some mollusc fragments - pieces of delicate branching coral

379'4" - 389'10"

hard white coral - have been adding water to mud since 4 PM

389' 10" - 400' 4" ✓ white coral ls - still adding water to drilling mud - some light brown recrystallized coral ls. no forams, mollusca, gastropods observed

400' 4" - 410' 10" 1/2 white coral ls. 1/2 yellow calcite(?) (recrystallized coral?) drills hard - still adding water to mud

410' 10" - 421' 4" ✓ Stopped adding water to mud at 7³⁰ PM
8⁰⁰ PM Pit 28.3°C Hole 30.2° Air 26.2
very little white coral - mostly buff coral ls. - some light brown, recrystallized coral - drills hard
few mollusca and forams - buff color above less pronounced in daylight

May be point of salt where some size in

421' 4" - 431' 10" - 8¹⁵ Pit 28.6° Hole 30.6 Air 26.3°C
sample similar to that above - drills hard - started out of hole at 8³⁰ for coring

started coring 10³⁰ PM completed
12⁰⁰ PM recovered 13" out of
4'3" 26% recovery - ls. with
many molds of molluscs - a leached
to much like last core (391-396) but with
less coral. -COA

431'10" - 442'4" Jan. 10, 1951 M. Russell

(Started drilling this run 2.25 AM Jan 10
with 41 rods on string. 12. Midnight til 2.25
to replenish water supply and restring rods)

Examination under artificial light, with
magnifying glass - hard, angular, sharp
fragments, many pieces of unaltered
coral, only one mollusk shell noted
no forams recognized. few dent with
calcite xls. Occasional fragments
darker than most.

(9)

core

sets
contain?

442'4" - 452'10"

Fragments hard, sharp, angular. Pieces
of fine coral branchlets as long as
3/4". Generally uniform light color
(artificial light) few darker fragments.
Some show clear line of demarcation
between light and dark material.
No organic structure other than above
corals recognized. (Greater % of fines
due to finer screen used this
sample).

452'10 - 463'4"

Sharp, fragments of uniform, textured ls. Coral structures on many. ~~Smooth~~ Smooth, curved surfaces on rare fragments may be molds of mollusk shells. Fragments mostly light, very few darker (artificial light). Duller, says from soft & drilled part all the way.

463'4 - 473'10. ~~part~~ Duller says formation soft for first 2 feet (463'4" -

465'4") then harder the rest of the way, which, he said, resulted in only fine fragments.

Vertical light
Fragments uniformly small, sharp. Surfaces (under binocular) granular, small tubes (worm borings?) filled with clear calcite (no 20 noted). 1 fragment Halimeda stood out because much whiter than rest, may be contamination. Possible echinoid spines. Organic structures probably coral but fragments too small for immediate identification.

473'10" - 484'4"

Duller says first 5 feet softer than last 5 feet which was "hardest we've drilled all night" (since 431'10"). Fragments sharp edged. Some have

granular surface + appear more porous than others which have smoother surface. Various forms of delicate, lacy organic structures, probably algal "fibers" a few of which are completely full of interstitial cementing calcite, color light, few dark fragments. One tubular fragment noted (unfilled)

484' 4" - 494' 10"

Subangular fragment with granular surface. Lacy, single layered mats of possibly Bryozoa but no pores visible, ergo probably algae. Prisms of calcite (pencil-shaped shell fragment), tubular structures (worms?) filled with clastic material.

Note: Driller says that from 457' 10" through 494' 10". The drilling has been smooth, the circulation very good, and loss of water (and mud) normal.

494' 10" - 505' 4"

Chips + sharp edged fragments of hard ls. Color (artificial light) uniformly light tan. Organic structures plentiful but difficult to identify owing to 1) small size of fragments 2) alterations (probably re + ligation) 3) well-cemented matrix of calcite. Many are undoubtedly

coral, others; rods, tubes, "bumps"
could be echinoid spines, sponges,
algae (no *Nalimeda*) molluscs.

505'4" - 515'10"

most fragments ~~are~~ subangular
with granular surface. Under
binoculars fragments appear mottled
or speckled with darker areas probably
clear calcite & white areas unaltered
sand or organic material too fine
to be distinguished. Many organic
structures, some coral, others obscure.
1 gastropod (mold probably)
1 fragment with smooth sides
meeting at obtuse angles, uniform
texture but with white branching
fibers through out (similar to
fibers permeating watermelon rind).

515'10" - 526'4"

First sample viewed this date
(Jan 10, 1951) in natural light.
Probably same as last few samples
but difference in shades of
color more distinct and division
between light & dark seemingly
more equal. Fragments rough
edged, organic structures moderately
plentiful but in form of molds,
much recrystallized calcite & several

fragments with clear crystal
faces. Single pelecypod shell
fragment probably contamination
from above.

9 AM. Jan 10, 1951

Went to 526' 4" (49 rods on string)
& began to pull prior to taking core.
Pulled 28 rods (294 feet) when
obstruction hindered pulling. (Bit
was at 232' 4") Kelley put
back on & Shuller tried to clean
out obstruction. Cleared OK in
one try.

526' 4" - 530' 10" Cored 4' 6"

12 Noon 10 January 1951 C. Alexis

10

Pulling core at change of shift

Obtained 7" of core - 13% Recovery

Started back in hole 12⁴⁵/PM

core mostly coral - some molluscs

526' 4" - 537' 3" Drilling with 5⁷/₈" rock bit

Started drilling 3⁰⁰/PM

tan recrystallized coral - considerable
calcite - some corals well preserved

May be chge noted at Bikini

Mud pit 29.9 Hole 29.2 Air 29.9

537' 3" - 547' 9" small fragments tan coral -

few bits white shell - noted

one spherical foram

Pit 29.8 Hole 29.5 Air 30.5

547'9" - 558'3" small fragments tan coral ls.
few larger pieces well preserved
coral - no forams observed

Pit 29.7° Hole 29.8 Air 30.8°C

558'3" - 568'9" small fragments tan coral ls. -
many specimens of branching
forms - drills easily -
take long time to take sample
must be many fines - this
fact observed all shift -

Pit 29.8°C Hole 29.9°C Air 27.0

568'9" - 579'3" similar to above

579'3" - 589'9" similar to above
15 min required to sample
drilled easy except for a few
harder spots

Pit 28.8 Hole 29.8 Air 25.8

589'9" - 600'3" mostly
small fragments tan coral ls.
fragments of thin shelled
molluscs - some appear to have
traces of original color
drills easily

600' 3" - 610' 9" Pit 28.6°C Hole 29.8° Air 25.4°C
tan fragments coral ls.
drills easy - fragments
small - 15 minutes to
collect sample - mostly
branching type of coral

610' 9" - 621' 3" tan fragments coral ls. - many
brown semi-spherical forams
drills easy as before -
15 minutes to collect sample

Attn { Started out of hole at 10 PM for
core run - will use Dames and
Martin Moore type - Do Not Wash
Russell Core - place in core box
as is.

12.10 AM Jan 11, 1950. M. RUSSELL
Arrived to take over new shift. In
addition to above, "ATTN MR" found
note reading "(AT) 700' look for
mollusc shells - if rich in
these, core with Fehling barrel,
do not core before 700 feet."

① 621' 3" - 622' 5" Dames + Moore core barrel
driven 14 inches. Recovering 5 inches
or about 35%. Core held loosely

in barrel and was eased
out of core barrel into core
box by holding surface
box (correctly oriented with
ref to top & bottom) & easing wire
out with hammer handle,
close examination impossible
because sample perpetuated
& covered with drilling mud.
Top $\frac{2}{3}$ appears unconsolidated
coarse material bound together
with drilling mud. Lower $\frac{1}{3}$
(less than 2 inches) is solid.

621' 3" - 631' 9"

Tan, ls. coral fragments,
calcite xls - forams,
mollusk fragments

631' 9" - 642' 3"

Tan ls. corals, molluscs (some
white). Recovery poor because
full box washed down to less
than half.

642'3" - 652'9"

Driller says "very loose formation"
refuses to say whether unconsolidated
or not. ~~but~~ If cemented must
be only very loosely so. Down
ward rate of drill very fast
Tan ls. coral fragment (out
of matrix) pelecypod shell
fragments (unaltered) brachiopod
gastropods,
moll. look fresh; much coral.

?? ← top Upper Ter. here or next →
lower interval? ~~HH~~

652'9" - 663'3"

Drill going down very fast. Driller
says "loose as a goose." Tan,
many corals. Molluscs, principally
pelecypods. Good molluscs
both gastropods & pelecypods; each
spike; none thick discard foramin. such
as are found in intervals below

663'3" - 673'9"

Tan. many fine, unaltered molluscs

several whole gastropods, coral
fragments. Still making
table feet; appear to be same
assemblage of mostly worn & worn forams
that characterize section at least to 726'3"
- may be upper Ter - not Vesellina &
white marginopora.

673'9" - 684'3"

Tan. whitish delicate fragments
of molluscs & coral. Forams
(Marginopora); some thick discoid
forms are badly worn; don't appear
on rock in mollusks on cuts unimpaired.
above & below

684'3" - 694'9"

Hets
Sos
Tan, delicate & thin fragments
of molluscs & corals. Disc
like forams (marginopora?)
Dull mud this sample
was very thin possibly
explaining why fragments
are so delicate & free of solid
heavy fragments which may
have settled back.

Some brown discoid invertebrate forams that
are clearly worn; mud like except in texture
that follows - if they are up. Ter this part
is too.

⇒ - change in color to brown in many cores

694'9" - 705'3"

(Driller says that since resuming hole making after last core at 621'3" there have been no more than 3 "streaks" which gave any resistance to drill. Feasibility of trying to get core of any sort in this material very doubtful).

Cuttings uniform Tab. Very few fragments which do not show distinct organic structure. Molluscs and corals predominate.

Traction of coring a problem at this time. Fragments fit conditions stipulated in note for taking core (rich in molluscs at 700 feet) but driller insists that material is too loose to pick up anything in Faxiling barrel (Tyre requested). Instructed him to add 1 more drill pipe but stop and take core immediately he strikes anything giving resistance to drill. If we strike nothing before 735 (which is regular 100 ft coring program place) will stop & take core regardless of condition of formation.

Very similar to 2 intervals that follow & very possible upper tertiary. H₂
(Many fragments of large corals, lot of gastropods, small Corium, Operculina (?), brown Marguipora, small echinospine)

705'3" - 715'9"

Dark tan cuttings. Fragments have fine detail. molluscs, coral disc-like forams. (Where such molluscs, start is very possibly Tertiary, ie on basis of *Bekini bunnings*^{etc} - *Verillus* as commonest; also *Halmada* (from Moore?); *Cardium* (most of moll. app. small species) - small ^{specimens}

715'9" - 726'3"

Dark tan (artificial light) cuttings. Many varied molluscs, free & unfiltered. Coral structure distinct & delicate. No indication of abrasion or cutting action of drill saw. Small size of material. Moll. mostly gastropods (*Cardium*, *Verillus*, etc). My guess is this is upper Tertiary, ~~HS~~ ^{HS} Forams (*Margospora*, *Opaculina* (?), few) Chone

(Note: Started pulling pipe at 6.40 AM to take Barnes & Moore core.)

726'3" - Barnes & Moore core tried. Seventy two (72) hammer blows with no appreciable progress seen at top. When drawn no recovery. Rubber packing ring found at lower tip of core barrel when drawn.

1951,
 Jan 11 - 10 AM
 Intend to clean out 7 3/8
 hole to 530 feet & set 6-inch
 casing; (this to be floated down on
 cement plug & cemented, will then clean
 out rat hole section (530 - 726) &
 try Failing (or Reed) core bbl.

- cleaned hole and ran 535' 6-inch casing to
 point 10" off bottom; completed by 6 PM;
 cemented in casing; pushing wooden plug
 down in casing. Loss of mud during placing
 of plug suggests escape of cement into formation.

Jan. 12 ~ Friday

Cleaned pumps, etc. following cement
 job of last evening; finished tightening
 up guy wires on rig. (Badly worn slips
 sent off for sharpening - 2nd pair ordered
 yesterday by teletype - to be safe handed out;
 had 1000' drill pipe on ship's deck here
 1/22)

circulated, adding water to thin mud;
 with water shut off lost 2" or quit.

Run with 34 double + Kelly + bbl
 = 726' 3" = bottom of
 rat hole - no resistance

34	
21	
34	
68	
71' 4" 4" Kelly	
10' 1" bbl	
726' 3"	

726'3" - 736'9" Dark tan cuttings with
much well preserved coral - small
branching forms; few Marginopora
- both brown & white; frag. moll.
abundant; no worn discord
forams seen in brief exam.
(Cuttings contain bits of wood
& rubber from plug used with
cement).

Out of hole to core

736'9" - 746'9" In with Harley 4 1/4" bit with bits -
(12) drilled very soft - no recovery

736'9" - 747'3" Back to 5 7/8" rock bit to ream
cored interval; very soft, apt.
unconsolidated coral & shell
almost uniformly tan color
(artificial light) - many small
gastropodes.

747'3" - 757'9" Drilled soft; cuttings like
last but coarser; difficult
to catch large sample because
of losses in washing out
wood from go-devil. Second
sack contains unwashed sample
(for fine)

(See Book II)

