

FL-BAY 4760
3280
980

Herewith report on samples studied from the MAGNOLIA PETROLEUM COMPANY, STATE (BLOCK 4-B) #1, BAY COUNTY, FLORIDA.

Location: 21-3S-15W Elev.: 7' D.F. T.D.: Dr. 7,000' Schl.: 7003

- 3270-80' Cuttings composed mainly of flaky frags. of gray & green Velasco sh. and some frags of white, chalk; slightly micaceous chalk also carrying a Velasco fauna. Micro-fauna typical of the Velasco-dominated by specimens of *Globorotalia velascoensis*. Tamesi facies of midway.
- 3280-90' Materials and fauna similar to the above but with the addition of some (non-micaceous frags of white chalk) apparently of Cretaceous age. A few specimens of *Globotruncana arca* present. Age top of the Cretaceous.
- 3290-3300' Like the preceding with an increase in the number of Cret. chalk frags. present.
- 3300-10' Like the preceding with the addition of numerous frags. of a light gray-green ash. Micro-fauna washing from the sample still almost entirely Velasco with a few Cretaceous species (*Globotruncana arca*). A few frags of *Inoceramus* present. (Samples stay same lithologically & faunally to 3340-50')
- 3340-50' Approx. top of Taylor. Material and fauna similar to the above, but some specimens of *Stensionina americana* present, suggesting a possible top for the Taylor at or near this point.

Note: Lithology and fauna stay the same, mainly cavings of flaky gray-green and gray Velasco shales and forams common to the Velasco fauna, with a few frags of white chalk and a few Cret. forams and some *Inoceramus* frags. to 3570-80.

- 3360-70 First specimen of *Anomalina cosdeni*.
- 3570-80 Lithology & fauna in general similar to the preceding (mainly cavings from the Velasco), but some frags of a dark greenish gray, micaceous, thinly flaky sh. introduced into the samples at this point. Same as above, with a slow increase in the amount of gray shale frags. present to 3790.
- 3790-3800 Similar to the above but flaky gray sh. frags forming about 50% of the mod. fine screenings in the washed sample & some specimens of *Globorotalia umbilicata* present in the fauna. Fauna washing from the sh. apparently consists mainly of two species of *Globotruncana*, *Gumbelina* sp. *Globigerina* cretacea, a small variety of *Planulina texana* and the *Globorotalia* mentioned above. This point is suggested as a possible Austin top. Forams not abundant. Materials and general faunal characteristics the same as above to -

4040-50 Similar to above with the addition of some frags. of a brownish gray sh. present.

Note: (The shales present in this long sh. section in this well apparently grade gradually from thinly flaky greenish gray in the Taylor section into gray, more coarsely flaky and marly in the upper part of the Austin section to dark brownish gray in the lower part of the Austin section).
"speckled"

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State (Blk. 4-B) #1, Bay County, Fla.

4070-80' Similar to the above, with an increase in the amount of dark brownish gray sh. present. This sh. slightly carbonaceous and contains some small frags of fish bones and scales. No change noted in the micro-fauna.

4100-10' Sample in general like the preceding but some frags of finely & highly white strkd and spotted dark brownish gray sh "speckled sh" noted in this sample for the first time. Fauna mainly Velasco cavings.
Samples continue as above to -

4195-4200' Core #4 Core. Top 1 1/2'. Hard lt gray, chalky, highly micro-fos. marl- apparently a harder and more highly and uniformly chalky phase of the streak & speckled chalky sh above. Specimens of several species of Globotruncana, Globigerina cretacea abundant in this core. Some specimens of Gumbelina sp. & some Inoceramus frags also present. Bot. 2! Like the preceding.

4200-10' Cut. Like most of the cutting samples above, composed of various types of the ^{shales} shales present in the section and a large amount of Velasco sh. cavings also. Some Inoceramus frags & a few frags of the dark brownish gray to white strkd sh & some of the material described from the core above. No fossils new to the section present. Thinly flaky frags of a dark greenish gray sh. (possibly from this depth) common in the fine screenings.
Samples continue like the above to -

Termes
(midway)

4230-40' As above, but frags of a thinly flaky brownish black, somewhat micaceous sh. also present. This shale apparently represents the sh section shown on the Schlumberger from about 4210-52'. This sh (in part) somewhat light spotted. A small species of Globigerina cretacea, & Gumbelina sp. apparently common in the fauna of these shales. Samples the same with a steady increase in black sh. frags to 4260.

E. Ford
W. Atkinson

4260-65' Core #5, Top 4". Light greenish gray, extremely fine grained, micaceous & somewhat finely glauconitic cal. s.s. fossils noted. This sample probably marks the top of the Eagle Ford portion of the Tuscaloosa - W. Atkinson.

Top of the
Eagle Ford

Middle 2". Lt greenish gray - very fine grnd. argillaceous, highly micaceous (colorless mica ls. s. A few Ostracods, forams, & Inoceramus frags present. Forams consists of Globigerina sp. Gumbelina sp. & Anomalina? sp. & Valvulineria infrequens.
Bottom 4'8". Lt gray, very fine grnd, highly mica. argillaceous s.s. A few forams present. Species same as in sample from middle of the core.

4265-75' (Rec 5') Top 1'. Extremely fine grained, lt. greenish gray, micaceous, somewhat very finely glauconitic s.s. A few forams.
Core #6 Species as above.
4th 7 5'

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State (Blk. 4-B) Bay County, Fla.

4990-5000' Like cuttings at 4960-70 (the above) with the addition of many frags of a very thinly flaky, very finely sandy slightly mica-
céous and glauconitic brownish black sh. A few small arenaceous
forams present.

5010-20' Like the cutting samples above, but with the addition of a few
frags of gray, very fine grnd s.s. similar to that cored at
4978-85'. A few nod. of glauconite also present in this sam-
ple. A Marine Tuscaloosa, *Ammobaculites* present, less strongly
diagnostic arenaceous forams.

5020-30' Materials as above.

5030-40' Cuttings of shale as above, with the addition of fairly numerous
frags of lt gray, micaceous & glauconitic s.s. *Cytheris* sp. &
Cytherella sp? characteristic of the Marine Tuscaloosa section
present.

5040-50' Similar to the above with the addition of many frags of a white
Top of L. Tuscaloosa fine to mod. fine grained, micaceous s.s., (slightly carbonaceous)
This point taken as the top of the Lower Tuscaloosa. *lower part of*
M. L. Atkinson

5050-60' This sample shows only sh. No s.s. & many cavings.

5062-67' Rec 1' 11 1/2" Fine to mod. fine white sand some mica. (muscovite
Core #10 & biotite). Small amount of white ash as cementing medium for
the sand.

5067-77' Recovered 2'. Top 8". Fine grained highly micaceous (Muscovite
Core #11 & biotite), loosely consolidated s.s. carrying a few frags of
Ostrea? sp. & a few frags of carbonaceous matter. Apparently a
thin lense of highly micaceous thinly flaky gray shale also pre-
sent.
Bottom 1' 6". Dark gray, extremely finely & highly sandy sh.

5077-87' Recov. 3' 9". Top. 16". Lt gray, fine to mod. fine grnd. highly
Core #12 micaceous (gray & colorless mica) ashy, loosely consolidated s.s.
Bot. 2' 5". Black very highly & very finely micaceous sh.

5087-97' Recov. 2' 11". Top 6". Dark gray, very highly micaceous, silty
Core #13 shale. Bottom 29". Fine to mod. coarse micaceous, clear quartz s.

5100-10' Cuttings, compared ^{cored} mainly of various types of dark gray to black
flaky sh & some green sh similar to some noted from higher depths
& some frags of fine grained light gray micaceous s.s. (material
apparently mainly cavings)
Samples stay as above to (5200-10)

5200-10' Cuttings of various types of sh as above & fairly numerous frags
of white fine grnd. Somewhat micaceous s.s. some coarse grains
of clear quartz. Samples stay the same to 5340-50'.

*Top of Sect. 9
5147
Mr. S. E. Geol. Soc
on E-log. correlation
a core mostly gray
poor samples.*

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State (Blk. 4-B) #1, Bay County, Florida

5340-50' S.S. frags form about 50% of samples. s.s. is loosely consolidated fine to mod. coarse grnd., micaceous white s.s. Samples stay as above to -

5490-5500' As above, with a few frags of a waxy, blue green sh. noted in the samples for the first time. s.s. frags much less abundant. Samples stay like this to 5530-

T. L. Cret

Top. of
L. Cret.
samples

5530-40 Samples composed mainly of frags of flaky, partly silty & partly highly micaceous, gray & greenish gray shales & some frags of fine to mod. fine grnd mica. lt gray s.s. & some loose s. Part of this, at least, caving from much higher depth. Samples stay as above to (5610-20)

5610-20' Like the above, with some frags of a fine grained, irregularly light yellow spotted micaceous somewhat cal. s.s. introduced in this sample. This material increases in abundance to -

5630-40' Frags of the yellow spotted to light brown, mica somewhat calcareous s.s. fairly common in this sample, also some frags of the blue-green unctuous sh. Samples remain as above to -

5660-70' Samples composed of about 50% flaky gray & greenish sh as above, some frags of light gray fine grained s.s. & a few frags of the brownish yellow-spotted s.s. as above & about 50% fine to mod. fine loose quartz sand. Like the above to -

5710-20' Mainly sh with loose sand about 20% of sample.

5740-50' Sample almost entirely flaky frags of gray & greenish gray, micaceous & partly silty sh. A few frags of lt. gray s.s. Same to -

5790-5800 As above with a few frags of bluish-green unctuous sh., with lt brown, ankorite nodules, also some frags of yellowish green & red brown mottled, sandy sh.

5800-10' Sample almost entirely composed of flaky frags, of gray & greenish gray partly silty, mica, sh. (much of this material probably caving) Same to -

5850-55 ~~Approx. / top~~ ~~L. Cret.~~ Cuttings of sh. as above also abundant frags of a brownish to purplish red, gray & green mottled, somewhat sandy & mica., waxy sh. Some of the red sh. similar to same supposed to be characteristic of L. Cret.

5855-60' "Cored" Materials as above.

5860-65 "Cored" As above. No change to -

Magnolia Pet. Co.
State (Blk. 4-B) #1, Bay County, Florida

5855-65
L. Cret.

Core #15. A hard, sandy red, blue gray & mustard colored,
micaceous clay and very fine to fine grnd ~~finished~~ tan colored s.
pinkish

OWNER : Magnolia Petroleum Company,
P. O. Box 900, Dallas, Texas

FARM NAME : State Block 4B #1

LOCATION : Center SW/4 of Sw/4, Sec. 21, T3S,
R15W; 7 miles northwest of Panama City

COUNTY : Bay

ELEVATION : 2.2' Grd; 7.0 DF

STARTED : April 18, 1945

COMPLETED : May 22, 1945

CASING : 20" @ 109' w/220 sks; 13-3/8" @ 465'
w/400 sks; 9-5/8" @ 1601' w/500 sks

DEPTH : 7003'

DRILLER : Penrod Drilling Company (Hunt Oil Co.,)
Shreveport, La.

USE : Test for oil

REMARKS : Beginning to be salty water from 500-
520. Getting real salty 780' (Schlum-
berger interpretation by Sellin 9/12/45)
291 samples brought in by H. A. Sellin,
Geologist, Magnolia Petroleum co.,
Tallahassee, June 22, 1945, beginning
at 0 and continuing to 3000'. 462 sam-
ples from H. A. Sellin, July 2, 1945
beginning at 3000' and ending at 7000'.
Schlumberger, from 468 to 7003', rec'd
June 1, 1945.
Released from confidential file, by
Jeff Sellin - see letter dated January
16, 1952.

From Jeff Sellin by long distance telephone, May 14, 1945 - 6035' in Lower Cretaceous

| |
|---------------------------------|
| Topped Lower Cretaceous @ 5845' |
| " Upper Cretaceous @ 3185' |
| " Taylor @ 3275' |
| " Tuscaloosa @ 4257' |
| " Eocene @ 957' |

| | |
|-------------|--|
| 0-40, 40-60 | Coarse angular sand |
| 60-70 | Granular size sand, shell fragments <u>Amphistegina</u> sp. |
| 70-85 | Same |
| 85-100 | Same. Trace of glauconite, pyrite, phosphorite |
| 100-115 | Same. |
| 115-140 | Largely cement? |
| 140-150 | Quartz pebble gravel and shell fragments |
| 150-170 | Same, more or less limestone, fossils as molds. |
| 170-180 | Distinct lithologic change. White limestone Coralline algae common <u>Amphistegina chipolensis</u> |
| 180-190 | Same lithology. <u>Textulariella barrettii</u> <u>Archaias</u> sp. <u>Amphistegina chipolensis</u> <u>Robulus</u> sp. Camerinids reworked |

- 190-200 Same.
Textulariella barrettii
- 200-210 Same. Rather dark gray.
Operculinoides fairly common
Asteroids plates
- 210-260 Same.
390-400 Very light gray chalky corallines and shell fragments
500-510 Dark cream limestone. Spongy lattice growth?
510-560 Same.
560-570 Dark cream to cream granular very porous limestone.
Heterostegina
- 570-590 Same.
590-600 Cream colored granular very porous limestone. First marked faunal change.
Heterostegina common
Camerinids common
Lepidocyclina sp.
- 600-610 Same.
Lepidocyclina (very thin) abundant
- 610-620 Same. Some Lepidocyclinas are saddle-shaped.
690-710 Granular very porous cream colored limestone.
750-760 Same with 20% light olive sugary dolomite, containing Lepidocyclinas and little carbon.
790-800 Same, fauna abundant
890-900 Same.
Lepidocyclina sp. strongly tuberculate in center and finely around margins. Marginal portion very thin and usually broken off.
- 900-910 Largely light gray marl (s.s.) that is clayey.
910-920 Same, fauna abundant.
Textularia sp.
- 920-930 Same, partly light olive dolomite.
930-940 Same.
Tuberculate Lepidocyclina common
- 940-950 Mostly olive marl
Nodosaria sp.
- 950-960 Same lithology.
Nodosaria sp.
- 960-970 Same lithology, much marl. Fauna appears to be same, thus no marked break in lithology or fauna.
- 977-980 Very marly, if anything change is toward more clay.
Robulus cf. gutticostatus
- 980-990, 990-1000 Same.
1000-1010 Same, less marly
1010-1020 Same lithology.
Lepidocyclinas and Heterosteginas less common.
Strongly tuberculate Lepidocyclinas absent.
- 1020-1030, 1030-1040 Same.
1040-1050 Granular cream colored limestone. Trace of glauconite.
1050-1060 Earthy granular cream colored glauconitic limestone.
1060-1070 Same.
1070-1080 Same, little else than bryozoa.
1080-1090, 1090-1100 Same.
1100-1110 Very earthy cream colored limestone, poor fauna.
1110-1120, 1120-1130 Same.

MAGNOLIA
NO. 1 STATE BLOCK 4-B
BAY COUNTY, FLORIDA

DRILLER'S LOG AND SUMMARIZED HISTORY

| | | | |
|---------|--|---|---|
| 4-18-45 | 0-70' 70'-115' | Sand and shells Shells and lime | Spudded 24" hole at 11:00 Am. M. 103' of 20" OD Csg. cemented at 109' with 225 sax at 11:00 P. M. |
| 4-19-45 | | | W. O. C. |
| 4-20-45 | 115'-151' 151'-490' | Sticky shale Sand and shells | Began drilling at 7:00 A. M.; Mixed 20 sax Aquagel. 461' of 13-3/8" OD Csg. cemented at 466' at 5:00 P.M. |
| 4-21-45 | | | W. O. C. |
| 4-22-45 | | | W. O. C. Mixed 70 sax Aquagel |
| 4-23-45 | | | W. O. C. and W. O. 9 5/8" Csg. |
| 4-24-45 | 490'-505' 505'-855' 855'-1204' | Shells and lime Lime with streaks of shells Lime and shells | Drilled cement from 427'-480'. Began drilling 12" hole below cement at 2:30 P. M. Mixed 10 sax Aquagel |
| 4-25-45 | 1204-1300' 1300'-1600' 1600'-1865' 1865-1955' 1955'-1995' 1995'-2075' | Sticky shale Lime and shells with shale Sandy lime and chert Sandy lime and streaks of shale Lime and chert Sandy lime | |
| 4-26-45 | | | Ran Schlumberger to 2062' (First run). 1591' of 9 5/8" OD 36# Csg. cemented at 1601' with 500 sax at 6:00P. M. |
| 4-27-45 | | | W. O. C. Washing pits and R. U. blowout preventer, shale shaker, etc. |
| 4-28-45 | 2075'-2170' | Sandy lime | Tested Csg. 800# for 30 minutes. Drilled cement 1570' to 1605'. Began drilling 8 3/4" hole below cement at 4:30 P. M. Mixed 61 sax Aquagel |
| 4-29-45 | 2170'-2280' 2280'-2614' | Shale and lime Lime and shells | Totco: 3/4" off at 2210'; bulls-eye at 2325'; bulls-eye at 2446' |
| 4-30-45 | 2614-2795 2795'-3000' 3000'-3190' | Shale and lime Shale and lime | Totco: Bulls-eye at 2693'; 1/3" at 2890'; 1" at 3050'; 1" at 3185' |
| 5-1-45 | 3190'-3220' | Shale | New bit at 3220'. Totco: 3/4" at |

| | | | |
|---------|-------------|---|---|
| | 3220'-3275' | Shale | 3300'; 1/4" at 34000' |
| | 3275'-3550' | Chalk | |
| 5-10-45 | 5380'-5535' | Shale and sand | Mud weight, 9.9#; viscosity, 30. At 10:00 P. M., weight 10.0#, viscosity 33, weight 9.9#, viscosity 34. |
| | 5535'-5625' | Shale | |
| | 5625'-5730' | Shale and sand | |
| 5-11-45 | 5730'-5806' | Shale | S. D. circulating at 5850', waiting for pump motor clutch. |
| | 5806'-5850' | Shale | |
| 5-12-45 | 5850'-5854' | Shale | Installed pumpshaft and drilled slowly. |
| | 5854'-5855' | Red shale | 5850'-5855', from 7:00 A. M. to 3:00 P. M. |
| | 5855'-5865' | Core No. 15, Rec. 7' (6' shale, 1' sand) | Went in hole with Hughes Type J. conventional core barrel (8-1/4") at 5855' |
| 5-13-45 | 5865'-5871' | Shale | Put on Hughes rock bit and reamed 10' rat hole |
| | 5871'-5951' | Red shale and streaks of sand | |
| | 5951'-6035' | Shale with streaks of sand | |
| 5-14-45 | 6035'-6045' | Shale | Mud weight, 10.0# |
| | 6045'-6055' | Limestone | |
| | 6055'-6082' | Shale and sand | |
| | 6082'-6188' | Shale and sand and streaks of lime | |
| | 6188'-6247' | Shale | |
| 5-15-45 | 6247'-6305' | Shale, lime and sand | Circulated one hour for sample at 6275'. |
| | 6305'-6352' | Shale | Mud weight, 10.0# and viscosity 29 at 6300'. Totco: 1/2" at 6210' |
| | 6352'-6453' | Sand and streaks of shale | |
| | 6453'-6540' | Shale | |
| 5-16-45 | 6540'-6633' | Shale, lime and sand | New bit at 6697'. Mud weight, 10.0#, viscosity 34. |
| | 6633'-6697' | Shale | |
| | 6697'-6764' | Shale | |
| 5-17-45 | 6764'-6835' | Shale-sand | Hughes 8 1/4" Type J conventional core barrel put on at 6855'. Mud weight, 10.0#. Totco: 3/4" at 6852' |
| | 6835'-6855' | Sand and shale | |
| | 6855'-6865' | Core No. 16, Rec. 12' sand. | |
| | 6865'-6875' | Shale | |
| 5-18-45 | 6875'-6965' | Shale-sand | Mixed 15 sax Aquagel. Mud weight, 10.0#, viscosity 34. Pulled out of hole to run Schlumberger. |
| | 6965'-7000' | Shale, streaks of sand | |
| 5-19-45 | | Ran Schlumberger and took sidewall cores. Went in hole and conditioned mud. | |
| 5-20-45 | | Pulled out of hole, out at 6:00 A. M., out all day while geophone in hole. W. O. O. after 11:00 P. M. | |
| 5-21-45 | | Plugged hole in P. M. with 100 sax Atlas Quickset Cement from 1666' to 1475'. Began tearing down. | |

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|--------|--|---|--|
| 5-2-45 | 3550'-3784' | Chalk | Totco: 1/4° at 3875'; 1/4° at 3665'; Bulls-eye at 4100'. Waiting on Geologist from 1:15 A. M. to 10:00 P. M. |
| 5-3-45 | 4100'-4130' 4120'-4130' 4130'-4138' | Shale and lime Core No. 1, No. Rec. Core No. 2, Rec. 6" soft chalk | Strapped pipe, 4130'=4120'. Put on Reed wire line core head at 4120' (7 7/8") |
| | 4138'-4148' | Core No. 3, Rec. 1' chalk and shale | |
| | 4148'-4195' | Chalk | |
| | 4195'-4200' | Core No. 4, Rec. 4' chalk | |
| | 4200'-4240' | Chalk | |
| 5-4-45 | 4240'-4260' 4260'-4265' | Core No. 5, Rec. 5' shaly sand | 8 3/4" rock bit put on at 4295' |
| | 4265'-4275' | Core No. 6, Rec. 5' shaly sand | |
| | 4275'-4285' | Core No. 7, Rec. 6' shaly sand | |
| | 4285'-4295' | Core No. 8, Rec. 6' shaly sand | |
| | 4295'-4418' | Shale, streaks of sand | |
| 5-5-45 | 4418'-4877' | Shale | Totco: 1/2° at 4385' |
| 5-6-45 | 4877'-4976' 4976'-4978' 4978'-4985' | Shale Sanding Core No. 9, Rec. 2' shale | 8 3/4" Reed Wire Line Core Head put on at 4978'. Totco: 2/3° at 4938'. At 5020', started trip to put on 8 3/4" rock bit. |
| | 4985'-5020' | Shale | |
| 5-7-45 | 5015'-5062' | | Burnt out bearing in pump motor shaft while coming out of hole to put on rock bit at 5020'. Mixed 15 sax Aquagel. Drilled with auxiliary pump and motor with 300# pump pressure on mud line. Totco: 1/2° at 4980' |
| 5-8-45 | 5062'-5067' | Core No. 10, Rec. 2' sandy marl | Mixed 30 sx Aquagel and worked on pump. Put on Reed Wire line bit at 5062'. Mud weight, 9.6# |
| | 5067'-5077' | Core No. 11, Rec. 2' shale | |
| | 5077'-5087' | Core No. 12, Rec. 4' shale and sand | |
| | 5087'-5097' | Core No. 13, Rec. 3' shale and sand | |
| 5-9-45 | 5097'-5215' 5215'-5235' 5235'-5239' 5239'-5380' | Hard shale and sand Core No. 14, Rec. 1. Shale and sand | Put on Hughes 8 3/4" OSQ 2 bit at 5239'. Mixed 23 sax Aquagel. Mud weight, 9.6#; viscosity, 22. Weight 9.7#; viscosity 22. |

April 10, 1953

OWNER : Magnolia Petroleum Company, P.O. Box
900, Dallas, Texas

FARM NAME : State Block 4B-#1

LOCATION : Center SW/4, SW/4, Sec. 21, T3S, R15W;
7 miles NW of Panama City

COUNTY : Bay

ELEVATION : 2.2' Grd; 7.0 DF

STARTED : April 18, 1945

COMPLETED : May 22, 1945

CASING : 20" @ 109' w/220 sks; 13-3/8" @ 465'
w/400 sks; 9-5/8" @ 1601' w/500 sks.

DEPTH : 7003'

DRILLER : Penrod Drilling Company, Shreveport, La.

USE : Test for oil - dry and abandoned

REMARKS : Quality of water, salty from 500-520'
Beginning to be salty water from 500-520. Getting
real salty 780' (Schlumberger interpretation by H. A.
Sellin 9/12/45.

291 samples brought in by H. A. Sellin,
Geologist, Magnolia Petroleum Company, Tallahassee,
June 22, 1945, beginning at 0 and continuing to 3000'.
462 samples received from H. A. Sellin, and brought
into the office by Robert Hart and Allen Hauck, July
2, 1945, beginning at 3000' and ending at 7000'.
Schlumberger received June 1, 1945. 5/14/45 - From
Sellin by long distance telephone: "...6035' in
lower Cretaceous. Topped lower Cretaceous @ 5845';
topped upper Cretaceous @ 3185'; topped Taylor @
3275'; topped Tuscaloosa @ 4257'; topped Eocene 957'.
Schlumberger from 468 to 7003 feet.
Driller's log from 0 to 7000 feet.

0-40 Cts. Coarse, brown, clayey sand.

40-60 Fine, gray and brown, clayey sand.

60-70 Coarse-gravelly gray sand; shell and lime fragments.
Amphistegina sp.

70-115 Coarse gray sand; cream, soft, porous, phosphatic, glauconitic, sandy,
coquinoid limestone.
Amphistegina lessonii

115-140 Green, soft, glauconitic, fossiliferous, phosphatic, finely sandy,
calcareous shale.

140-160 Green-gray, hard, porous, moldic, phosphatic, glauconitic, sandy marl.

160-170 Same; tan, hard, moldic, glauconitic, phosphatic, sandy, microcrystalline
dolomite.

170-180 Green-tan, soft, porous, glauconitic, phosphatic, dolomitic, marl;
abundant small forams.

180-210 Cream, soft, porous, glauconitic, slightly sandy marl; very abundant
small forams.
Textulariella baretii
Operculinoides cf. tuxpanensis (common)
Archaias sp.

210-220 Same; large phosphate pebbles.

220-250 Cream, soft, porous, chalky, microcoquinoid, finely detrital, finely
dolomitic limestone.
Amphistegina chipolensis

- 250-410 Cts. Cream-white, firm, porous, recrystallized, algal limestone; detrital limestone as above.
Amphistegina spp.
Gypsina globula
- 410-480 Cream-white, gray-spotted, hard, porous, recrystallized, microcoquinoid limestone; cream detrital and algal limestones as above; fragments of phosphate pebbles.
- 480-490 No sample.
- 490-530 Cream, soft, porous, calcitic, coquinoid limestone.
- 530-540 Same, finely dolomitic.
- 540-550 Cream, soft, porous, finely dolomitic, finely detrital, coquinoid limestone.
- 550-590 Same.
Heterostegina texana
Miogypsina hawkinsi
- 590-600 Cream, soft, porous, finely detrital, microcoquinoid limestone.
Operculinoides vicksburgensis
Lepidocyclina sp.
- 600-660 Same.
Eulepidina undosa
Operculinoides vicksburgensis
Heterostegina texana
- 660-740 Same, finely dolomitic.
- 740-760 Limestone as above; tan, soft, porous, microcrystalline, sugary, dolomite
Eulepidina favosa
- 760-800 Cream, soft, porous, finely detrital, finely dolomitic, coquinoid limestone; abundant Heterostegina.
- 800-830 Same.
Lepidocyclina parvula crassicosta
- 830-879 Lime as above; some soft white chalk.
- 870-910 Cream, very soft, microcoquina; very abundant small forams.
- 910-920 Soft, pale green, pyritic, microfossiliferous, calcareous shale.
- 920-1000 Cream, soft, mealy, glauconitic, microfossiliferous, finely detrital limestone.
- 1000-1020 Cream, soft, mealy, finely detrital, calcitic, microcoquinoid limestone.
Lepidocyclina mantelli
Operculinella dia
- 1020-1050 Cream, soft, porous, chalky, sparsely microfossiliferous, marly limestone.
- 1050-1090 Same, slightly glauconitic.
- 1090-1130 Cream, soft, chalky, porous, microfossiliferous, slightly argillaceous limestone.
Bulimina jacksonensis
Robulus gutticostatus
- 1130-1140 Same; trace of brown chert.
- 1140-1160 Lime as above, slightly glauconitic.
- 1160-1190 Same; abundant small forams.
- 1190-1200 Cream, soft, porous, chalky, microfossiliferous, argillaceous, glauconitic limestone; pale green, soft, calcareous shale.
- 1200-1230 Soft, light green-gray marl; lime as above.
- 1230-1270 Pale Green-gray, soft, microfossiliferous marl or calcareous shale.
- 1270-1280 Gray, soft, microfossiliferous marl.
- 1280-1290 Cream, soft, chalky, porous, very microfossiliferous, marly limestone; pyrite.
Bulimina jacksonensis.
- 1290-1320 Same, less fossiliferous; brown chert; drusy quartz.
- 1320-1340 Light to dark gray, soft, microfossiliferous marl; common brown chert.
- 1340-1370 Cream, soft, porous, chalky, sparsely fossiliferous, marly limestone; brown chert.

- 1370-1390 Cream-white, soft, porous, sparsely fossiliferous, slightly argillaceous chalk.
- 1390-1420 Same; more argillaceous; common chert.
- 1420-1430 Cts. Cream, soft, porous, sparsely fossiliferous chalk.
- 1430-1460 Light gray to cream, soft, chalky, microfossiliferous marl; cream chalk as above.
- Bulimina jacksonensis
- 1460-1470 Cream-white, soft, porous, sparsely fossiliferous chalk.
- 1470-1480 Cream, soft, microfossiliferous, chalky marl.
- 1480-1500 Cream, soft, porous, glauconitic, fossiliferous, chalky limestone; glauconite is partly limonitized.
- 1500-1530 Light gray, soft, microfossiliferous, chalky marl; very abundant small forams; cream, soft, porous, glauconitic, fossiliferous, chalky limestone.
- 1530-1580 Cream and light gray with a greenish tinge, soft, microfossiliferous marl; abundant small forams.
- 1580-1600 Cream, soft, porous, chalky, glauconitic, microfossiliferous, marly limestone; cream, soft, porous, calcitic, glauconitic, microfossiliferous, finely detrital limestone.
- 1600-1620 Cream, firm, porous, glauconitic, calcitic, microfossiliferous, finely detrital limestone; trace of very fine sand.
- 1620-1650 Same; common brown chert.
- 1650-1780 Same; abundant gray and brown chert.
- 1780-1810 Cream, soft, porous, calcitic, glauconitic, fossiliferous, finely detrital, very fine, sandy limestone; traces of soft greenish marl; chert and drusy quartz.
- 1810-1820 Limestone as above, finely dolomitic and finely micaceous; common chert.
- 1820-1840 Same; drusy quartz; some soft, white chalk and green marl.
- 1840-1870 Limestone as above with more fine glauconite and fine sand; chert and drusy quartz.
- 1870-1960 Cream, firm, porous, fossiliferous, finely glauconitic, slightly finely sandy, finely detrital limestone; chert.
- 1960-1980 Same; some siliceous limestone.
- 1980-1990 Same; more siliceous limestone.
- 1990-2010 Cream-white, hard, dense, fossiliferous, slightly finely glauconitic, siliceous limestone; detrital lime as above.
- 2010-2030 Detrital and siliceous limestone as above; soft, light gray, microfossiliferous marl.
- 2030-2050 Pale green, soft, glauconitic, microfossiliferous, calcareous shale; limestone as above.
- 2050-2075 Cream, soft, chalky, porous, slightly glauconitic, fossiliferous, marly limestone; free quartz crystals, drusy quartz.
- 2075-2100 Pale green, soft, micaceous (muscovite and biotite), microfossiliferous, calcareous clay-shale; rare glauconite.
- Asterigerina texana
- Globigerina sp.
- Globorotalia wilcoxensis acuta
- Globorotalia wilcoxensis
- 2100-2120 Same; some similar but gray.
- Polylepidina gardnerae (rare)
- 2120-2130 Pale green, soft, very slightly glauconitic, microfossiliferous, calcareous clay-shale.
- Asterigerina texana
- 2130-2140 Same; cream, greenish, soft, porous, partly siliceous, finely glauconitic, microfossiliferous, ?silty limestone; chert.
- 2140-2170 Mostly limestone; little shale.

- 2170-2210 Same; pale green clay-shale as above.
 2210-2220 Light green-gray, firm, porous, microfossiliferous, partly siliceous, slightly glauconitic, marly limestone.
 2220-2280 Same; pale green clay-shale as above.
 2280-2290 Same.
 Nodosaria late jugata
 2290-2300 Cts. Same.
 Robulus magnificus
 2300-2580 Lime and shale as above.
 2580-2630 Gray, hard, dense, finely micaceous, argillaceous, partly siliceous, shaley limestone.
 2630-2700 Same; some dark gray, finely micaceous, carbonaceous, platey shale; samples mostly greenish lime and shale as above.
 2700-2720 Green-gray, firm, finely micaceous, finely glauconitic, calcareous shale; some gray shale as above.
 2720-2730 Gray, firm, finely micaceous, carbonaceous, calcareous shale.
 2730-2750 Green-gray shale.
 2750-2760 Gray shale.
 2760-2800 Samples alternate green shale and gray shale.
 2800-2810 Green, splintery, finely micaceous, microfossiliferous, slightly carbonaceous, calcareous shale.
 2810-3120 Same; occasional gray, splintery, micaceous, carbonaceous, calcareous shale.
 3120-3130 Green shale as above; some dark gray, soft, platey, finely micaceous, microfossiliferous, calcareous shale.
 Globorotalia velascoensis
 Globorotalia wilcoxensis acuta
 Globigerina triloculinoides
 3130-3140 Dark gray, platey, soft, finely micaceous, microfossiliferous, calcareous shale.
 3140-3210 Dark green and gray, soft, splintery to platey, finely micaceous, microfossiliferous, calcareous shale.
 3210-3230 Same; some hard gray-white; abundant small forams.
 Globorotalia membranacea
 3230-3260 Mostly green shale as above; a few fragments of white, soft, microfossiliferous chalk.
 3260-3270 Same.
 Globotruncana arca
 Globotruncana cretacea
 Gumbelina globulosa
 3270-3280 Same; more white chalk.
 Gumbelina striata
 Pseudotextularia varians
 3280-3290 White, soft, microfossiliferous chalk.
 Globotruncana arca
 Stensioina americana
 Palmula rugosa
 Cyroidina micheliniana
 Gumbelina plummerae
 Pseudotextularia varians
 Bolivina incrassata
 Bolivinoidea decorata
 Inoceramus prisms

WBy-3S-15W-21
W-933
Chih Shan Chen
Feb. 3, 1966

COMPANY : Magnolia Petroleum Co.
WELL : State Block #4-13, #1
LOCATION : Sec. 21, T3S, R15W

COUNTY : Bay
ELEVATION : 7' D. F.
DEPTH : 7003
COMPLETED : 5/19/45

REMARKS : Samples not used this study
Electric Log available
Taylor (?) 3403(?)

(CHEN 1963)

| | | |
|------|---------|---------------------------|
| 0 | 740 | OLIGOCENE AND YOUNGER |
| 740 | 1090(?) | OCALA GROUP |
| 1090 | 1800(?) | CLAIBORNE GROUP |
| 1800 | 2540(?) | WILCOX GROUP |
| 2540 | 3240 | MIDWAY GROUP |
| 3240 | | UPPER CRETACEOUS (TAYLOR) |

MAGNOLIA
NO. 1 STATE BLOCK 4-B
BAY COUNTY, FLORIDA

CORE DISCRIPTIONS

Wire Line Core Head, 4120'-4295' (Reed)

Core No. 1, 4120'-30'. Time, 10 minutes, with 1 to 1-1/2 points weight.

No recovery; soft, white chalk in cuttings.

Core No. 2, 4130'-38'. Time, 5 minutes, with 1 to 1-1/2 points weight.

No recovery; soft, white chalk in cuttings.

Core No. 3, 4138'-48'. Time, 3 minutes, with 2 to 3 points weight.

Recovered 6" chalk, light gray, very fine, argillaceous, streaked with and grading to gray to dark gray, calcareous shale containing blebs and tiny lentils of white, chalky material.

Core No. 4, 4195'-4200'. Time, 3 minutes, with 1-1/2 to 2 points weight.

Recovered 3'6"

1'6" Chalk, gray, fine, argillaceous, zones with minute shaly laminae and crenulations; fossiliferous; fine silt and much clay in residue;

2'0" Chalk, gray, fine, argillaceous, somewhat mottled; bottom part darker and shaly, with rare inclusions of green shale, part of which are coated with clear, drusy crystals (dolomite?).

Core No. 5, 4260'-465'. Time, 2 minutes, with 1-1/2 to 2 points weight.

Recovered 4'8"

8" Sandstone, fine to very fine; firm, tight and very calcareous; rather pale green-gray color due to much interstitial clay, more or less concentrated into thin zones; muscovite and a little biotite; trace of fine glauconite and an unidentified black mineral; peculiar bitter taste, slightly salty.

4'0" Sandstone, as above, less calcareous, somewhat softer and shalier; in general a cleaner-appearing sand but has many shale crenulations throughout and surface of core shows many small, light gray, hard, calcareous, irregular masses.

Core No. 6, 4265'-475'. Time, 6 minutes, with 1-1/2 to 2 points weight.

Recovered 5' sandstone as above with hard, calcareous streaks in top foot and bottom 6 inches.

Core No. 7, 4275'-485'. Time, 7 minutes, with 1-1/2 to 2 points weight.

Recovered 6' sandstone as above, with harder and more calcareous streaks in top 1'6" and bottom 1'2".

Core No. 8, 4285'-495'. Time, 10 minutes, with 1-1/2 to 2 points weight.

Recovered 4'8" sandstone as above with many dark gray shale laminae in top 1'1" and with 1"-3" streaks very hard and calcareous

4778 sandstone, 1'1" to 2'5" from top.

Wire Line Core Head, 4878'-5020' (Reed)

Core No. 9, 4978'-85'. Time 16 minutes (first 4' in 2 minutes), with 2-1/2 to 3 points weight.

Recovered 1'9" Shale, dark gray, slightly green, muscovitic and slightly sandy; irregularly interbedded with gray to light gray, ashy (?) or silty (?) sandstone (nearly 50%), medium-fine, tight, clayey and slightly calcareous with very fine glauconite; shale in bottom 6" carries fragile pelecypods or linguloid brachiopods. Possible slight salt taste in sands. Top 4' probably not recovered.

Wire Line Core Head, 5062'-5239'. (Reed)Core No. 10, 5062'-67'. Time, 1-1/4 minutes, with 1-1/2 to 2 points weight.

Recovered 1'11" Sandstone, light gray, medium-fine, well sorted, very soft and mushy, very slightly calcareous; trace of muscovite and glauconite (?) with much fine, interstitial material, either ash or silt (silt size).

Core No. 11, 5067'-77'. Time, 25 minutes, with 2 to 3 points weight.

Recovered 2':

8" Sandstone, similar to above but not so fine, fiermer but non-calcareous with few thin dark gray shale partings, especially in bottom part; few orange quartz grains and possibly some feldspar; less ashy (?).

1'4" Shale, dark gray to black, micaceous, with "poker chip" tendency; alternates with gray to dark gray shale, sandy with much muscovite and biotite.

Core No. 12, 5077'-87'. Time, 13-1/2 minutes, with 2 to 3 points weight.

Recovered 3'9":

1'4" Sandstone, similar to that in preceding core but softer and rather mushy as in Core No. 10; however, this sand was broken up and much disturbed in the barrel.

2'5" Shale, dark gray to nearly black, very platy with tendency to "poker chips"; bottom 2; much disturbed and broken.

Core No. 13, 5087'-97'. Time, 10 minutes, with 3 points weight.

Recovered 2'11":

6" Shale, dark gray, very hard, finely sandy, very micaceous with both muscovite and biotite; very thin, faint laminations;

2'5" Sandstone, light gray, fine, soft, slightly muscovitic and calcareous with an abundance of ash (?) of silt (?); sand much disturbed in barrel.

Core No. 14, 5235'-39'. Time, 20 minutes, with 2 to 3 points weight.

No recovery; A few, small (1/4) pieces found in barrel: Sandstone, gray, fine, well sorted, firmly cemented, porous, with little muscovite and possible trace of very fine glauconite; all pieces are the same type of sandstone and probably represent a section very close to this depth.

Conventional Barrel (Hughes, Type J)Core No. 15, 5855'-65'. Time, 20 minutes, with 2 to 3 points weight.

Recovered 7'4":

3" Shale, dark green, hard, structureless, with slight reddish mottling, part slightly sandy and micaceous;

1. 3" Shale, similar but deep red with small green spots, sandier and more micaceous;

2. 1'7" Sandstone, green and red, fine, very shaly, slightly calcareous, hard, tight, little muscovite and trace of biotite; almost a sandy shale; small, angular blocks of green sand give the appearance on the surface of the core of an intraformational conglomerate.

3. 1'10" Sandstone, similar but cleaner and more porous, with much muscovite and biotite; green-gray color due to shale content; small, angular blocks of sandstone as in overlying sandstone;

4. 1'11" Sandstone, ditto, but streaked and spotted with red sand and red, sandy shale.

5. 1'6" Shale, deep red, sandy and very micaceous, with a tendency toward platiness.

Conventional Barrel (Hughes, Type J)Core No. 16, 6853'-65'. Time, 12 minutes, with 2 to 3 points weight.

Recovered 10'9":

1. 8" Sandstone, gray, medium and little medium-coarse, cemented but very porous and friable; scattered muscovite and biotite; scattered

- orange and pink quartz and feldspar grains (also some white feldspar); much white, very fine and very soft, interstitial material, may be gypsum or ash (?); bottom 2" streaked with gray, micaceous shale;
2. 2" Shale, red and red-gray, fine, hard, finely micaceous, tends to be platy.
 3. 3'6" Sandstone as in top 8" but nearly all medium-coarse; rounded and flattened masses of dark gray, very micaceous shale in isolated bodies, increasing in abundance downward;
 4. 1'0" Sandstone, ditto, abundant shale bodies and thin streaks of dark gray shale;
 5. 2'0" Sandstone, ditto, mostly medium as in top 8" and abundantly muscovitic and biotitic; less white, soft, interstitial material;
 6. 2" Sandstone, ditto, with very large flattened bodies of gray shale (some greater than 3" in diameter);
 7. 2'0" Sandstone, ditto, slightly coarser, less micaceous, with scattered shale bodies, especially in lower half;
 8. 6" Sandstone, ditto, with abundant shale bodies, some of them 1" to 2" in diameter;
 9. 9" Sandstone, ditto, mostly medium coarse, clean and friable, with no shale bodies.

Sidewall Core, 4230' (Schlumberger, 2 shots)

Recovered: Shale, dark gray, fine, rather clayey, very calcareous; much fine sand in residue; part has slightly flattened, white, calcareous blebs.

Sidewall Core, 4362' (Schlumberger, 2 shots)

Recovered: Sandstone, gray, fine, calcareous, soft, porous and well sorted; muscovite and fine glauconite.

Sidewall Core, 4943' (Schlumberger, 2 shots)

Recovered: Sandstone, gray to dark gray, very fine and very shaly, soft but rather tight and very calcareous, muscovitic; rather pale green-gray streaks give a finely banded appearance.

SEE ROV BOOK

Line A to A¹

OWNER: Magnolia Petr. Co. No. 1 State Block 4-B.
 LOCATION: Center SW/4 SW/4 Sec. 21, T3S, R15W.
 COUNTY: Bay
 ELEVATION: 2.2 Grd.; 7' DF
 STARTED:
 COMPLETED:
 CASING:
 DEPTH: 7003'
 DRILLER:
 HEAD:
 YIELD:
 USE:
 REMARKS: 291 samples brought in by H. A. Sellin of the Magnolia Petroleum Co., June 22, 1945, beginning at 0 and continuing to 3000'.
 462' samples received July 2, 1945 from H. A. Sellin brought into office by Robert Hard and Allen Hauck 3000' to 7000'.

CRETACEOUS SYSTEM - GULF SERIESAUSTIN - TAYLOR EQUIVALENT

3220-3618 Limestone & shaly limestone
 3618-4208 Shaly chalk
 4208-4244 Shale

ATKINSON FORMATION - Zone A

4244-4364 Sand, glauconite, (nodular) Fauna: Planulina eaglefordensis
 calcareous or sand Valvuleneria infrequens
 bottom half. Gumbelina moremani
Trochammina wickendeni, etc.

4364-4700 Sandy shale, calcareous or nodular sand at bottom.

ATKINSON FORMATION - Zone B

4700-4938 Sandy, calcareous or nodular shale.
 4938-4988 Sand, glauconite. Fauna: Ammobaculites braunsteini
A. comprimatus, A. advenus
Ammobaculoides plummerae
Trochammina rainwateri, etc.

4988-5022 Shale, glauconite, calcareous or nodular.

5022-5072 Sand, glauconite

5072-5138 Sand.

COMANCHE SERIES

5138-5812 Sand

5812-5864 Red shale

5864-5948 Sand, red or variegated, calcareous or nodular

5948-6008 Shale, sandy

6008-6038 Sand.

6038-6084 Shale, sandy and calcareous or nodular.

6084-6104 Sand.

- 6104-6184 Red, sandy shale with streak of sand about 6144'.
- 6184-6214 Calcareous sand.
- 6214-6354 Red shale.
- 6354-7003 Red sand with streaks of shale.

Taken from Mesozoic Committee Cross Section by Mary W. Blount, September, 1950.

MAGNOLIA
NO. 1 STATE BLOCK 4-B
BAY COUNTY, FLORIDA

DRILLING TIME LOG

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> |
|-----------------|----------------|------------|-----------------|----------------|
| 300-05 | 2 | | 520-25 | 3 |
| 305-10 | 3 | | 525-30 | 3 |
| 310-15 | 3 | | 530-35 | 3 |
| 315-20 | 3 | | 535-40 | 2 |
| 320-25 | 3 | | 540-45 | 2 |
| 325-30 | 2 | | 545-50 | 2 |
| 330-35 | 3 | | 550-55 | 2 |
| 335-40 | 4 | | 555-60 | 4 |
| 340-45 | 4 | | 560-65 | 3 |
| 345-50 | 3 | | 565-70 | 8 |
| 350-55 | 2 | | 570-75 | 6 |
| 355-60 | 3 | | 575-80 | 5 |
| 360-65 | 3 | | 580-85 | 5 |
| 365-70 | 3 | | 585-90 | 5 |
| 370-75 | 4 | | 590-95 | 5 |
| 375-80 | 3 | | 595-600 | 4 |
| 380-85 | 5 | | 600-05 | 5 |
| 385-90 | 4 | | 605-10 | 5 |
| 390-95 | 3 | | 610-15 | 5 |
| 395-400 | 3 | | 615-20 | 5 |
| 400-05 | 3 | | 620-25 | 5 |
| 405-10 | 2 | | 625-30 | 5 |
| 410-15 | 2 | | 630-35 | 5 |
| 415-20 | 3 | | 635-40 | 8 |
| 420-25 | 4 | | 640-45 | 4 |
| 425-30 | 6 | Drig. slow | 645-50 | 5 |
| 430-35 | 7 | " " | 650-55 | 5 |
| 435-40 | 6 | " " | 655-60 | 5 |
| 440-45 | 8 | " " | 660-65 | 3 |
| 445-50 | 23 | " " | 665-70 | 4 |
| 450-55 | 5 | " " | 670-75 | 5 |
| 455-60 | 4 | | 675-80 | 8 |
| 460-65 | 2 | | 680-85 | 7 |
| 465-70 | 3 | | 685-90 | 7 |
| 470-75 | 5 | | 690-95 | 5 |
| 475-80 | 2 | | 695-700 | 5 |
| 480-85 | 3 | | 700-05 | 3 |
| 485-90 | 3 | | 705-10 | 4 |
| 490-95 | 2 | | 710-15 | 6 |
| 495-500 | 2 | | 715-20 | 6 |
| 500-05 | 2 | | 720-25 | 3 |
| 505-10 | 2 | | 725-30 | 3 |
| 510-15 | 3 | | 730-35 | 4 |
| 515-20 | 2 | | 735-40 | 6 |

Less weight

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> | |
|-----------------|----------------|--------------------------|-----------------|----------------|--------------------------|
| 740-45 | 8 | | 990-95 | 7 | |
| 745-50 | 8 | | 995-1000 | 4 | |
| 750-55 | 6 | | 1000-05 | 4 | |
| 755-60 | 5 | | 1005-10 | 4 | |
| 760-65 | 6 | | 1010-15 | 4 | |
| 765-70 | 10 | | 1015-20 | 3 | |
| 770-75 | 14 | | 1020-25 | 3 | |
| 775-80 | 9 | Speeded rotary from | 1025-30 | 8 | |
| 780-85 | 6 | 60 to 80 RPM | 1030-35 | 3 | |
| 785-90 | 6 | | 1035-40 | 4 | |
| 790-95 | 6 | | 1040-45 | 5 | |
| 795-800 | 9 | | 1045-50 | 4 | |
| 800-05 | 3 | Slowed rotary back | 1050-55 | 10 | Includes connection |
| 805-10 | 2 | to 60 RPM | 1055-60 | 5 | time (?) |
| 810-15 | 5 | | 1060-65 | 5 | |
| 815-20 | 4 | | 1065-70 | 5 | |
| 820-25 | 3 | | 1070-75 | 5 | |
| 825-30 | 6 | | 1075-80 | 6 | |
| 830-35 | 11 | Totco: $\frac{1}{2}$ off | 1080-85 | 5 | |
| 835-40 | 8 | | 1085-90 | 5 | |
| 840-45 | 7 | | 1090-95 | 4 | |
| 845-50 | 4 | | 1095-1100 | 5 | |
| 850-55 | 2 | | 1100-05 | 5 | |
| 855-60 | 6 | Changed tour | 1105-10 | 4 | |
| 860-65 | 4 | | 1110-15 | 5 | |
| 865-70 | 17 | Includes connec- | 1115-20 | 6 | |
| 870-75 | 8 | tion time (?) | 1120-25 | 5 | |
| 875-80 | 4 | | 1125-30 | 6 | |
| 880-85 | 4 | | 1130-35 | 5 | |
| 885-90 | 5 | | 1135-40 | 5 | |
| 890-95 | 7 | | 1140-45 | 5 | |
| 895-900 | 9 | | 1145-50 | 5 | Totco: $\frac{1}{2}$ off |
| 900-05 | 7 | | 1150-55 | 6 | |
| 905-10 | 5 | | 1155-60 | 6 | |
| 910-15 | 4 | | 1160-65 | 6 | |
| 915-20 | 4 | | 1165-70 | 7 | |
| 920-25 | 4 | | 1170-75 | 7 | |
| 925-30 | 7 | | 1175-80 | 6 | |
| 930-35 | 5 | | 1180-85 | 6 | |
| 935-40 | 6 | | 1185-90 | 6 | |
| 940-45 | 6 | | 1190-95 | 6 | |
| 945-50 | 5 | | 1195-1200 | 6 | |
| 950-55 | 4 | | 1200-05 | 6 | |
| 955-60 | 5 | | 1205-10 | 7 | |
| 960-65 | 3 | | 1210-15 | 5 | |
| 965-70 | 3 | | 1215-20 | 7 | |
| 970-75 | 3 | | 1220-25 | 6 | |
| 975-80 | 3 | | 1225-30 | 6 | |
| 980-85 | 3 | | 1230-35 | 4 | |
| 985-90 | 3 | | 1235-40 | 4 | |

Drilling Time Log, p. 3.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> |
|-----------------|----------------|----------------|-----------------|----------------|
| 1240-45 | 5 | | 1500-05 | 5 |
| 1245-50 | 3 | | 1505-10 | 7 |
| 1250-55 | 4 | | 1510-15 | 5 |
| 1255-60 | 4 | | 1515-20 | 3 |
| 1260-65 | 3 | | 1520-25 | 3 |
| 1265-70 | 2 | | 1525-30 | 6 |
| 1270-75 | 2 | | 1530-35 | 5 |
| 1275-80 | 3 | | 1535-40 | 6 |
| 1280-85 | 3 | | 1540-45 | 7 |
| 1285-90 | 2 | | 1545-50 | 2 |
| 1290-95 | 3 | | 1550-55 | 2 |
| 1295-1300 | 2 | | 1555-60 | 3 |
| 1300-05 | 2 | | 1560-65 | 2 |
| 1305-10 | 2 | | 1565-70 | 5 |
| 1310-15 | 3 | | 1570-75 | 5 |
| 1315-20 | 3 | | 1575-80 | 3 |
| 1320-25 | 5 | | 1580-85 | 3 |
| 1325-30 | 2 | | 1585-90 | 3 |
| 1330-35 | 4 | | 1590-95 | 2 |
| 1335-40 | 3 | | 1595-1600 | 2 |
| 1340-45 | 3 | | 1600-05 | 3 |
| 1345-50 | 4 | | 1605-10 | 2 |
| 1350-55 | 5 | | 1610-15 | 2 |
| 1355-60 | 2 | | 1615-20 | 4 |
| 1360-65 | 5 | | 1620-25 | 4 |
| 1365-70 | 3 | | 1625-30 | 4 |
| 1370-75 | 5 | | 1630-35 | 7 |
| 1375-80 | 3 | | 1635-40 | 3 |
| 1380-85 | 3 | | 1640-45 | 3 |
| 1385-90 | 5 | 15 sax Aquagel | 1645-50 | 5 |
| 1390-95 | 5 | | 1650-55 | 5 |
| 1395-1400 | 6 | | 1655-60 | 3 |
| 1400-05 | 4 | | 1660-65 | 2 |
| 1405-10 | 5 | | 1665-70 | 3 |
| 1410-15 | 6 | | 1670-75 | 6 |
| 1415-20 | 3 | | 1675-80 | 4 |
| 1420-25 | 3 | | 1680-85 | 8 |
| 1425-30 | 8 | | 1685-90 | 5 |
| 1430-35 | 6 | | 1690-95 | 4 |
| 1435-40 | 6 | | 1695-1700 | 6 |
| 1440-45 | 6 | | 1700-05 | 3 |
| 1445-50 | 3 | | 1705-10 | 3 |
| 1450-55 | 4 | | 1710-15 | 4 |
| 1455-60 | 2 | | 1715-20 | 4 |
| 1460-65 | 3 | | 1720-25 | 5 |
| 1465-70 | 2 | | 1725-30 | 4 |
| 1470-75 | 3 | | 1730-35 | 8 |
| 1475-80 | 2 | | 1735-40 | 7 |
| 1480-85 | 3 | | 1740-45 | 5 |
| 1485-90 | 4 | | 1745-50 | 5 |
| 1490-95 | 3 | | 1750-55 | 13 |
| 1495-1500 | 3 | | 1755-60 | 3 |

Specified rotary from 60 to 90 RPM

Drilling Time Log, p. 4.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> |
|-----------------|----------------|-----------------------------------|---------------------------------|----------------|
| 1760-65 | 5 | | 2020-25 | 5 |
| 1765-70 | 3 | | 2025-30 | 5 |
| 1770-75 | 4 | | 2030-35 | 4 |
| 1775-80 | 8 | | 2035-40 | 4 |
| 1780-85 | 8 | | 2040-45 | 5 |
| 1785-90 | 4 | | 2045-50 | 5 |
| 1790-95 | 15 | | 2050-55 | 5 |
| 1795-1800 | 2 | | 2055-60 | 7 |
| 1800-05 | 5 | | 2060-65 | 7 |
| 1805-10 | 6 | | 2065-70 | 5 |
| 1810-15 | 8 | | 2070-75 | 5 |
| 1815-20 | 3 | | | |
| 1820-25 | 4 | | Reduced hole from 13" to 8 3/4" | |
| 1825-30 | 3 | | 2075-80 | 4 |
| 1830-35 | 5 | | 2080-85 | 4 |
| 1835-40 | 5 | | 2085-90 | 2 |
| 1840-45 | 6 | | 2090-95 | 4 |
| 1845-50 | 7 | | 2095-2100 | 4 |
| 1850-55 | 10 | | 2100-05 | 3 |
| 1855-60 | 7 | | 2105-10 | 3 |
| 1860-65 | 5 | | 2110-15 | 3 |
| 1865-70 | 3 | | 2115-20 | 3 |
| 1870-75 | 4 | Totco: 3/4 off | 2120-25 | 3 |
| 1875-80 | 5 | | 2125-30 | 3 |
| 1880-85 | 7 | | 2130-35 | 3 |
| 1885-90 | 5 | | 2135-40 | 3 |
| 1890-95 | 3 | | 2140-45 | 3 |
| 1895-1900 | 3 | | 2145-50 | 3 |
| 1900-05 | 4 | | 2150-55 | 4 |
| 1905-10 | 5 | | 2155-60 | 3 |
| 1910-15 | 6 | | 2160-65 | 3 |
| 1915-20 | 6 | | 2165-70 | 3 |
| 1920-25 | 6 | | 2170-75 | 3 |
| 1925-30 | 5 | | 2175-80 | 3 |
| 1930-35 | 6 | | 2180-85 | 3 |
| 1935-40 | 6 | | 2185-90 | 2 |
| 1940-45 | 6 | | 2190-95 | 5 |
| 1945-50 | 6 | | 2195-2200 | 6 |
| 1950-55 | 6 | Changed tour | 2200-05 | 4 |
| 1955-60 | 6 | | 2205-10 | 3 |
| 1960-65 | 7 | | 2210-15 | 4 |
| 1965-70 | 8 | | 2215-20 | 5 |
| 1970-75 | 32 | Includes connec- tion time (?) | 2220-25 | 8 |
| 1975-80 | 19 | | 2225-30 | 12 |
| 1980-85 | 16 | | 2230-35 | 10 |
| 1985-90 | 14 | | 2235-40 | 10 |
| 1990-95 | 9 | | 2240-45 | 7 |
| 1995-2000 | 6 | | 2245-50 | 13 |
| 2000-05 | 6 | | 2250-55 | 15 |
| 20005-10 | 6 | | 2255-60 | 10 |
| 2010-15 | 7 | | 2260-65 | 10 |
| 2015-20 | 6 | | 2265-70 | 7 |

Totco: 3/4 off
2 points weight

Drilling Time Log, p. 5.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> | |
|-----------------|----------------|--------------------------------------|-----------------|----------------|------------------|
| 2270-75 | 8 | | 2540-45 | 10 | |
| 2275-80 | 10 | | 2545-50 | 10 | |
| 2280-85 | 10 | | 2550-55 | 15 | |
| 2285-90 | 7 | Changed tour | 2555-60 | 12 | |
| 2290-95 | 10 | | 2560-65 | 12 | |
| 2295-2300 | 12 | | 2565-70 | 16 | |
| 2300-05 | 7 | | 2570-75 | 16 | |
| 2305-10 | 11 | | 2575-80 | 11 | |
| 2310-15 | 10 | | 2580-85 | 10 | Totco: 1/2 off |
| 2315-20 | 6 | | 2585-90 | 11 | |
| 2320-25 | 7 | | 2590-95 | 9 | |
| 2325-30 | 7 | | 2595-2600 | 9 | |
| 2330-35 | 10 | | 2600-05 | 10 | |
| 2335-40 | 16 | | 2605-10 | 17 | |
| 2340-45 | 11 | | 2610-15 | 15 | |
| 2345-50 | 9 | | 2615-20 | 5 | |
| 2350-55 | 8 | | 2620-25 | 5 | |
| 2355-60 | 9 | | 2625-30 | 7 | |
| 2360-65 | 11 | S. D. 1 1/2 hours, packing swivel | 2630-35 | 8 | |
| 2365-70 | 8 | | 2635-40 | 8 | |
| 2370-75 | 10 | | 2640-45 | 8 | |
| 2375-80 | 8 | | 2645-50 | 9 | |
| 2380-85 | 6 | | 2650-55 | 10 | |
| 2385-90 | 9 | | 2655-60 | 9 | |
| 2390-95 | 9 | | 2660-65 | 6 | |
| 2395-2400 | 8 | | 2665-70 | 8 | |
| 2400-05 | 10 | | 2670-75 | 9 | |
| 2405-10 | 8 | | 2675-80 | 9 | |
| 2410-15 | 8 | | 2680-85 | 10 | |
| 2415-20 | 5 | | 2685-90 | 9 | Totco: Bulls-eye |
| 2420-25 | 7 | | 2690-95 | 15 | |
| 2425-30 | 13 | | 2695-2700 | 9 | |
| 2430-35 | 8 | | 2700-05 | 7 | |
| 2435-40 | 9 | Changed tour | 2705-10 | 8 | |
| 2440-45 | 7 | | 2710-15 | 7 | |
| 2445-50 | 7 | | 2715-20 | 9 | |
| 2450-55 | 7 | Totco: Bulls-eye | 2720-25 | 12 | |
| 2455-60 | 10 | | 2725-30 | 8 | |
| 2460-65 | 13 | | 2730-35 | 9 | |
| 2465-70 | 12 | | 2735-40 | 6 | |
| 2470-75 | 6 | | 2740-45 | 7 | |
| 2475-80 | 7 | | 2745-50 | 8 | |
| 2480-85 | 12 | | 2750-55 | 12 | |
| 2485-90 | 10 | | 2755-60 | 8 | |
| 2490-95 | 9 | | 2760-65 | 8 | |
| 2495-2500 | 5 | | 2765-70 | 7 | |
| 2500-05 | 3 | | 2770-75 | 7 | |
| 2505-10 | 4 | | 2775-80 | 7 | |
| 2510-15 | 6 | | 2780-85 | 7 | |
| 2515-20 | 4 | | 2785-90 | 9 | |
| 2520-25 | 8 | | 2790-95 | 9 | |
| 2525-30 | 10 | | 2795-2800 | 6 | |
| 2530-35 | 10 | | 2800-05 | 5 | |
| 2535-40 | 10 | | 2805-10 | 6 | |

Drilling Time Log, D. 6.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> | |
|-----------------|----------------|----------------|-----------------|----------------|-----------------|
| 2810-15 | 7 | | 3080-85 | 10 | |
| 2815-20 | 7 | | 3085-90 | 8 | |
| 2820-25 | 8 | | 3090-95 | 10 | |
| 2825-30 | 9 | | 3095-3100 | 8 | |
| 2830-35 | 8 | | 3100-05 | 8 | |
| 2835-40 | 7 | | 3105-10 | 8 | |
| 2840-45 | 9 | | 3110-15 | 9 | |
| 2845-50 | 10 | | 3115-20 | 11 | |
| 2850-55 | 9 | | 3120-25 | 10 | |
| 2855-60 | 14 | | 3125-30 | 10 | |
| 2860-65 | 7 | | 3130-35 | 8 | |
| 2865-70 | 7 | | 3135-40 | 8 | |
| 2870-75 | 5 | | 3140-45 | 8 | |
| 2875-80 | 5 | | 3145-50 | 10 | |
| 2880-85 | 8 | | 3150-55 | 10 | |
| 2885-90 | 5 | Total: 1/3 off | 3155-60 | 10 | |
| 2890-95 | 14 | | 3160-65 | 10 | |
| 2895-2900 | 10 | | 3165-70 | 10 | |
| 2900-05 | 8 | | 3170-75 | 8 | |
| 2905-10 | 9 | | 3175-80 | 8 | |
| 2910-15 | 11 | | 3180-85 | 8 | |
| 2915-20 | 12 | | 3185-90 | 10 | Total: 1 off |
| 2920-25 | 6 | | 3190-95 | 15 | |
| 2925-30 | 8 | | 3195-3200 | 17 | |
| 2930-35 | 8 | | 3200-05 | 20 | |
| 2935-40 | 8 | | 3205-10 | 12 | |
| 2940-45 | 11 | | 3210-15 | 16 | |
| 2945-50 | 8 | | 3215-20 | 14 | |
| 2950-55 | 5 | | 3220-25 | 11 | |
| 2955-60 | 5 | | 3225-30 | 8 | |
| 2960-65 | 7 | | 3230-35 | 9 | |
| 2965-70 | 6 | | 3235-40 | 10 | |
| 2970-75 | 7 | | 3240-45 | 8 | |
| 2975-80 | 7 | | 3245-50 | 9 | |
| 2980-85 | 9 | | 3250-55 | 8 | |
| 2985-90 | 8 | | 3255-60 | 7 | |
| 2990-95 | 7 | | 3260-65 | 6 | |
| 2995-3000 | 12 | | 3265-70 | 9 | |
| 3000-05 | 12 | | 3270-75 | 8 | |
| 3005-10 | 9 | Changed tour | 3275-80 | 14 | |
| 3010-15 | 7 | | 3280-85 | 20 | |
| 3015-20 | 8 | | 3285-90 | 16 | |
| 3020-25 | 8 | | 3290-95 | 16 | |
| 3025-30 | 5 | | 3295-3300 | 19 | |
| 3030-35 | 8 | | 3300-05 | 20 | |
| 3035-40 | 8 | | 3305-10 | 21 | Total: 3/4 off |
| 3040-45 | 7 | | 3310-15 | 13 | 3 points weight |
| 3045-50 | 7 | | 3315-20 | 9 | |
| 3050-55 | 7 | | 3320-25 | 9 | |
| 3055-60 | 7 | | 3325-30 | 10 | |
| 3060-65 | 7 | | 3330-35 | 9 | |
| 3065-70 | 8 | Total: 1 off | 3335-40 | 7 | |
| 3070-75 | 9 | | 3340-45 | 6 | |
| 3075-80 | 10 | | 3345-50 | 5 | |
| | | | 3350-55 | 6 | |
| | | | 3355-60 | 5 | |

Drilling Time Log, p. 7.

W-933

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> | |
|-----------------|----------------|--------------------------|-----------------|----------------|--------------------------|
| 3360-65 | 8 | | 3630-35 | 8 | |
| 3365-70 | 10 | Changed tour | 3635-40 | 9 | |
| 3370-75 | 8 | | 3640-45 | 4 | |
| 3375-80 | 6 | | 3645-50 | 5 | |
| 3380-85 | 7 | | 3650-55 | 5 | |
| 3385-90 | 9 | | 3655-60 | 7 | |
| 3390-95 | 9 | | 3660-65 | 6 | |
| 3395-3400 | 10 | | 3665-70 | 6 | |
| 3400-05 | 10 | | 3670-75 | 4 | |
| 3405-10 | 6 | | 3675-80 | 6 | |
| 3410-15 | 7 | | 3680-85 | 5 | |
| 3415-20 | 9 | | 3685-90 | 6 | |
| 3420-25 | 11 | | 3690-95 | 6 | |
| 3425-30 | 10 | | 3695-3700 | 6 | |
| 3430-35 | 10 | Total: $\frac{1}{4}$ off | 3700-05 | 6 | |
| 3435-40 | 8 | | 3705-10 | 4 | |
| 3440-45 | 9 | | 3710-15 | 7 | |
| 3445-50 | 11 | | 3714-20 | 3 | |
| 3450-55 | 10 | | 3720-25 | 6 | |
| 3455-60 | 10 | | 3725-30 | 3 | |
| 3460-65 | 8 | | 3730-35 | 4 | |
| 3465-70 | 6 | | 3735-40 | 4 | |
| 3470-75 | 10 | | 3740-45 | 5 | |
| 3475-80 | 9 | | 3745-50 | 6 | |
| 3480-85 | 9 | | 3750-55 | 5 | |
| 3485-90 | 10 | | 3755-60 | 6 | |
| 3490-95 | 10 | | 3760-65 | 6 | |
| 3495-3500 | 10 | | 3765-70 | 10 | |
| 3500-05 | 10 | | 3770-75 | 4 | |
| 3505-10 | 12 | | 3775-80 | 6 | |
| 3510-15 | 15 | | 3780-85 | 6 | |
| 3515-20 | 15 | | 3785-90 | 7 | |
| 3520-25 | 10 | | 3790-95 | 8 | |
| 3525-30 | 10 | | 3795-3800 | 3 | |
| 3530-35 | 10 | | 3800-05 | 3 | |
| 3535-40 | 10 | | 3805-10 | 4 | |
| 3540-45 | 10 | | 3810-15 | 5 | |
| 3545-50 | 10 | | 3815-20 | 5 | |
| 3550-55 | 10 | | 3820-25 | 5 | |
| 3555-60 | 14 | | 3825-30 | 4 | |
| 3560-65 | 11 | | 3830-35 | 3 | |
| 3565-70 | 14 | | 3835-40 | 8 | |
| 3570-75 | 12 | | 3840-45 | 6 | |
| 3575-80 | 10 | | 3845-50 | 6 | |
| 3580-85 | 6 | | 3850-55 | 7 | |
| 3585-90 | 4 | | 3855-60 | 5 | |
| 3590-95 | 13 | | 3860-65 | 6 | |
| 3595-3600 | 14 | | 3865-70 | 4 | |
| 3600-05 | 8 | | 3870-75 | 5 | Total: $\frac{1}{4}$ off |
| 3605-10 | 10 | | 3875-80 | 5 | |
| 3610-15 | 5 | | 3880-85 | 6 | |
| 3615-20 | 10 | | 3885-90 | 5 | |
| 3620-25 | 8 | | 3890-95 | 7 | |
| 3625-30 | 9 | | 3895-3900 | 8 | |

Drilling Time Log, P. 8.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> | |
|-----------------|----------------|------------------|-----------------|----------------|------------|
| 3900-05 | 7 | | 4127-28 | 1 | Core No. 1 |
| 3905-10 | 9 | | 4128-29 | 1 | " " " |
| 3910-15 | 7 | | 4129-30 | 2 | " " " |
| 3915-20 | 7 | | 4130-31 | 1 | Core No. 2 |
| 3920-25 | 9 | | 4131-32 | 1 | " " " |
| 3925-30 | 9 | | 4132-33 | 1 | " " " |
| 3930-35 | 10 | | 4133-34 | 1 | " " " |
| 3935-40 | 10 | | 4134-35 | 1 | " " " |
| 3940-45 | 11 | | 4135-36 | 1 | " " " |
| 3945-50 | 10 | | 4136-37 | 1 | " " " |
| 3950-55 | 10 | | 4137-38 | 1 | " " " |
| 3955-60 | 11 | | 4138-39 | 1 | Core No. 3 |
| 3960-65 | 10 | | 4139-40 | 1 | " " " |
| 3965-70 | 10 | | 4140-41 | 1 | " " " |
| 3970-75 | 9 | | 4141-42 | 1 | " " " |
| 3975-80 | 7 | | 4142-43 | 1 | " " " |
| 3980-85 | 9 | | 4143-44 | 1 | " " " |
| 3985-90 | 10 | | 4144-45 | 1 | " " " |
| 3990-95 | 9 | | 4145-46 | 1 | " " " |
| 3995-4000 | 8 | | 4146-47 | 1 | " " " |
| 4000-05 | 9 | | 4147-48 | 1 | " " " |
| 4005-10 | 12 | | 4148-50 | 1 | " " " |
| 4010-15 | 10 | Changed tour | 4150-55 | 2 | |
| 4015-20 | 10 | | 4155-60 | 2 | |
| 4020-25 | 9 | | 4160-65 | 2 | |
| 4025-30 | 8 | | 4165-70 | 2 | |
| 4030-35 | 5 | | 4170-75 | 2 | |
| 4035-40 | 5 | | 4175-80 | 2 | |
| 4040-45 | 4 | | 4180-85 | 3 | |
| 4045-50 | 5 | | 4185-90 | 2 | |
| 4050-55 | 7 | | 4190-95 | 1 | |
| 4055-60 | 8 | | 4195-96 | 1 | Core No. 4 |
| 4060-65 | 6 | | 4196-97 | 1 | " " " |
| 4065-70 | 6 | | 4197-98 | 1 | " " " |
| 4070-75 | 8 | | 4198-99 | 1 | " " " |
| 4075-80 | 9 | | 4199-4200 | 1 | " " " |
| 4080-85 | 8 | | 4200-05 | 4 | |
| 4085-90 | 8 | | 4205-10 | 6 | |
| 4090-95 | 5 | | 4210-15 | 7 | |
| 4095-4100 | 7 | Totco: Bulls-eye | 4215-20 | 10 | |
| 4100-05 | 6 | | 4220-25 | 20 | |
| 4105-10 | 6 | | 4225-30 | 14 | |
| 4110-15 | 10 | | 4230-35 | 13 | |
| 4115-20 | 6 | | 4235-40 | 13 | |
| 4120-25 | 6 | | 4240-45 | 7 | |
| 4125-30 | 4 | | 4245-50 | 5 | |
| | | | 4250-55 | 6 | |
| | | | 4255-60 | 2 | |
| | | | 4260-61 | 1 | Core No. 5 |
| | | | 4261-62 | 1 | " " " |
| | | | 4262-63 | 1 | " " " |
| | | | 4263-64 | 1 | " " " |
| | | | 4264-65 | 1 | " " " |
| | | | 4265-66 | 1 | Core No. 6 |
| | | | 4266-67 | 1 | " " " |
| | | | 4267-68 | 1 | " " " |

Strapped pipe, 4130' = 4120'

| | | |
|---------|---|------------|
| 4120-21 | 1 | Core No. 1 |
| 4121-22 | 1 | " " " |
| 4122-23 | 1 | " " " |
| 4123-24 | 1 | " " " |
| 4124-25 | 1 | " " " |
| 4125-26 | 2 | " " " |
| 4126-27 | 1 | " " " |

Drilling Time Log, p. 9.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> |
|-----------------|----------------|-----------------|-----------------|----------------|
| 4268-69 | 1 | Core No. 6 | 4430-35 | 8 |
| 4269-70 | 1 | " " " | 4435-40 | 11 |
| 4270-71 | 1 | " " " | 4440-45 | 10 |
| 4271-72 | 1 | " " " | 4445-50 | 11 |
| 4272-73 | 1 | " " " | 4450-55 | 8 |
| 4273-74 | 1 | " " " | 4455-60 | 7 |
| 4274-75 | 1 | " " " | 4460-65 | 9 |
| 4275-76 | 1 | Core No. 7 | 4465-70 | 16 |
| 4276-77 | 1 | " " " | 4470-75 | 12 |
| 4277-78 | 1 | " " " | 4475-80 | 13 |
| 4278-79 | 1 | " " " | 4480-85 | 13 |
| 4279-80 | 1 | " " " | 4485-90 | 7 |
| 4280-81 | 1 | " " " | 4490-95 | 10 |
| 4281-82 | 1 | " " " | 4495-4500 | 15 |
| 4282-83 | 1 | " " " | 4500-05 | 15 |
| 4283-84 | 2 | " " " | 4505-10 | 15 |
| 4284-85 | 1 | " " " | 4510-15 | 15 |
| 4285-86 | 1 | Core No. 8 | 4515-20 | 15 |
| 4286-87 | 2 | " " " | 4520-25 | 12 |
| 4287-88 | 1 | " " " | 4525-30 | 16 |
| 4288-89 | 2 | " " " | 4530-35 | 15 |
| 4289-90 | 2 | " " " | 4535-40 | 18 |
| 4290-91 | 1 | " " " | 4540-45 | 15 |
| 4291-92 | 1 | " " " | 4545-50 | 15 |
| 4292-93 | 1 | " " " | 4550-55 | 12 |
| 4293-94 | 1 | " " " | 4555-60 | 11 |
| 4294-95 | 1 | " " " | 4560-65 | 12 |
| 4295-4300 | 5 | New bit | 4565-70 | 12 |
| 4300-05 | 5 | | 4570-75 | 12 |
| 4305-10 | 11 | 2 1/2-3 points, | 4575-80 | 12 |
| 4310-15 | 6 | 550# mud pres. | 4580-85 | 12 |
| 4315-20 | 7 | | 4585-90 | 11 |
| 4320-25 | 5 | | 4590-95 | 9 |
| 4325-30 | 6 | | 4595-4600 | 11 |
| 4330-35 | 6 | | 4600-05 | 10 |
| 4335-40 | 7 | | 4605-10 | 12 |
| 4340-45 | 7 | | 4610-15 | 11 |
| 4345-50 | 7 | | 4615-20 | 4 |
| 4350-55 | 7 | | 4620-25 | 10 |
| 4355-60 | 4 | | 4625-30 | 10 |
| 4360-65 | 5 | | 4630-35 | 11 |
| 4365-70 | 4 | | 4635-40 | 11 |
| 4370-75 | 4 | | 4640-45 | 18 |
| 4375-80 | 3 | | 4645-50 | 13 |
| 4380-85 | 4 | Totco: 1/2 off | 4650-55 | 12 |
| 4385-90 | 5 | | 4655-60 | 13 |
| 4390-95 | 4 | | 4660-65 | 12 |
| 4395-4400 | 6 | | 4665-70 | 15 |
| 4400-04.5 | 10 | | 4670-75 | 18 |
| 4405-10 | 10 | | 4675-80 | 13 |
| 4410-15 | 7 | | 4680-85 | 14 |
| 4415-20 | 7 | | 4685-90 | 12 |
| 4420-25 | 7 | | 4690-95 | 15 |
| 4425-30 | 11 | | 4695-4700 | 16 |

Drilling Time Log, p. 10.

| <u>Interval</u> | <u>Minutes</u> |
|-----------------|----------------|
| 4700-05 | 12 |
| 4705-10 | 14 |
| 4710-15 | 15 |
| 4715-20 | 13 |
| 4720-25 | 16 |
| 4725-30 | 18 |
| 4730-35 | 20 |
| 4735-40 | 18 |
| 4740-45 | 17 |
| 4745-50 | 16 |
| 4750-55 | 14 |
| 4755-60 | 12 |
| 4760-65 | 13 |
| 4765-70 | 13 |
| 4770-75 | 12 |
| 4775-80 | 12 |
| 4780-85 | 13 |
| 4785-90 | 13 |
| 4790-95 | 12 |
| 4795-4800 | 12 |
| 4800-05 | 12 |
| 4805-10 | 12 |
| 4810-15 | 13 |
| 4815-20 | 16 |
| 4820-25 | 15 |
| 4825-30 | 12 |
| 4830-35 | 12 |
| 4835-40 | 13 |
| 4840-45 | 15 |
| 4845-50 | 15 |
| 4850-55 | 15 |
| 4855-60 | 13 |
| 4860-65 | 15 |
| 4865-70 | 13 |
| 4870-75 | 12 |
| 4875-80 | 12 |
| 4880-85 | 14 |
| 4885-90 | 15 |
| 4890-95 | 15 |
| 4895-4900 | 22 |
| 4900-05 | 23 |
| 4905-10 | 25 |
| 4910-15 | 20 |
| 4915-20 | 20 |
| 4920-25 | 20 |
| 4925-30 | 12 |
| 4930-35 | 22 |
| 4935-40 | 25 |
| 4940-45 | 12 |
| 4945-50 | 11 |
| 4950-55 | 18 |
| 4955-60 | 15 |
| 4960-65 | 14 |
| 4965-70 | 20 |
| 4970-75 | 12 |
| 4975-78 | 3 |

Changed tour

Soft at 4976'

| <u>Interval</u> | <u>Minutes</u> | |
|-------------------------------|----------------|--------------------|
| 4978-79 | 1 | Core No. 9 |
| 4979-80 | 1 | " " " |
| 4980-81 | 1 | " " " |
| 4981-82 | 1 | " " " |
| 4982-83 | 3 | " " " |
| 4983-84 | 4 | " " " |
| 4984-85 | 7 | " " " |
| 4985-90 | 22 | |
| 4990-95 | 35 | Changed Tour |
| 4995-5000 | 17 | |
| 5000-05 | 7 | |
| 5005-10 | 12 | |
| 5010-15 | 27 | |
| 5015-20 | 40 | |
| Strapped pipe, 5020' to 5015' | | |
| 5015-20 | 26 | 2-3 points weight, |
| 5020-25 | 18 | 300# pump pres. |
| 5025-30 | 20 | |
| 5030-35 | 17 | |
| 5035-40 | 13 | |
| 5040-45 | 10 | |
| 5045-50 | 10 | |
| 5050-55 | 10 | |
| 5055-60 | 5 | |
| 5060-62 | 1 | |
| 5062-63 | 1 | Core No. 10 |
| 5063-64 | 1 | " " " |
| 5064-65 | 1 | " " " |
| 5065-66 | 1 | " " " |
| 5066-67 | 1 | " " " |
| 5067-68 | 1 | Core No. 11 |
| 5068-69 | 2 | " " " |
| 5069-70 | 1 | " " " |
| 5070-71 | 7 | " " " |
| 5071-72 | 5 | " " " |
| 5072-73 | 4 | " " " |
| 5073-74 | 2 | " " " |
| 5074-75 | 1 | " " " |
| 5075-76 | 1 | " " " |
| 5076-77 | 1 | " " " |
| 5077-78 | 1 | Core No. 12 |
| 5078-79 | 1 | " " " |
| 5079-80 | 1 | " " " |
| 5080-81 | 1 | " " " |
| 5081-82 | 1 | " " " |
| 5082-83 | 1 | " " " |
| 5083-84 | 1 | " " " |
| 5084-85 | 2 | " " " |
| 5085-86 | 5 | " " " |
| 5086-87 | 1 | " " " |
| 5087-88 | 1 | Core No. 13 |
| 5088-89 | 1 | " " " |
| 5089-90 | 1 | " " " |

Drilling Time Log, p. 11.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> |
|-----------------|----------------|------------------|-----------------|----------------|
| 5090-91 | 1 | Core No. 13 | 5320-25 | 19 |
| 5091-92 | 1 | " " " | 5325-30 | 15 |
| 5092-93 | 1 | " " " | 5330-35 | 15 |
| 5093-94 | 1 | " " " | 5335-40 | 13 |
| 5094-95 | 1 | " " " | 5340-45 | 10 |
| 5095-96 | 1 | " " " | 5345-50 | 10 |
| 5096-97 | 1 | " " " | 5350-55 | 10 |
| 5097-98 | 2 | Drig. with dummy | 5355-60 | 10 |
| 5098-99 | 23 | " " " | 5360-65 | 12 |
| 5099-5100 | 1 | " " " | 5365-70 | 10 |
| 5100-05 | 3 | " " " | 5370-75 | 8 |
| 5105-10 | 5 | " " " | 5375-80 | 10 |
| 5110-15 | 4 | " " " | 5380-85 | 6 |
| 5115-20 | 4 | " " " | 5385-90 | 6 |
| 5120-25 | 5 | " " " | 5390-95 | 8 |
| 5125-30 | 5 | " " " | 5395-5400 | 9 |
| 5130-35 | 5 | " " " | 5400-05 | 3 |
| 5135-40 | 4 | " " " | 5405-10 | 9 |
| 5140-45 | 5 | " " " | 5410-15 | 16 |
| 5145-50 | 4 | " " " | 5415-20 | 10 |
| 5150-55 | 4 | " " " | 5420-25 | 16 |
| 5155-60 | 7 | " " " | 5425-30 | 7 |
| 5160-65 | 5 | " " " | 5430-35 | 21 |
| 5165-70 | 21 | " " " | 5435-40 | 15 |
| 5170-75 | 8 | " " " | 5440-45 | 8 |
| 5175-80 | 8 | " " " | 5445-50 | 8 |
| 5180-85 | 25 | " " " | 5450-55 | 7 |
| 5185-90 | 13 | " " " | 5455-60 | 9 |
| 5190-95 | 14 | " " " | 5460-65 | 29 |
| 5195-5200 | 14 | " " " | 5465-70 | 15 |
| 5200-05 | 25 | " " " | 5470-75 | 12 |
| 5205-10 | 15 | " " " | 5475-80 | 10 |
| 5210-15 | 10 | " " " | 5480-85 | 11 |
| 5215-20 | 11 | " " " | 5485-90 | 11 |
| 5220-25 | 5 | " " " | 5490-95 | 3 |
| 5225-30 | 31 | " " " | 5495-5500 | 13 |
| 5230-35 | 24 | " " " | 5500-05 | 8 |
| 5235-39 | 41 | Core No. 14 | 5505-10 | 4 |
| 5239-40 | - | | 5510-15 | 10 |
| 5240-45 | 20 | | 5515-20 | 8 |
| 5245-50 | 19 | | 5520-25 | 13 |
| 5250-55 | 8 | | 5525-30 | 19 |
| 5255-60 | 7 | | 5530-35 | 20 |
| 5260-65 | 2 | | 5535-40 | 11 |
| 5265-70 | 7 | 250# Pump pres. | 5540-45 | 24 |
| 5270-75 | 6 | | 5545-50 | 11 |
| 5275-80 | 6 | | 5550-55 | 30 |
| 5280-85 | 11 | | 5555-60 | 15 |
| 5285-90 | 10 | | 5560-65 | 9 |
| 5290-95 | 8 | | 5565-70 | 29 |
| 5295-5300 | 8 | | 5570-75 | 17 |
| 5300-05 | 12 | | 5575-80 | 11 |
| 5305-10 | 10 | | 5580-85 | 11 |
| 5310-15 | 28 | | 5585-90 | 13 |
| 5315-20 | 23 | | 5590-95 | 13 |
| | | | 5595-5600 | 57 |

Drilling Time Log No. 12.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> | <u>Core No. 15</u> |
|-----------------|----------------|--------------------------|-----------------|-----------------|--------------------|
| 5600-05 | 64 | | 5857-58 | 5 $\frac{1}{2}$ | " " " |
| 5605-10 | 31 | | 5858-59 | 1 $\frac{1}{2}$ | " " " |
| 5610-15 | 34 | | 5859-60 | $\frac{1}{2}$ | " " " |
| 5615-20 | 10 | | 5860-61 | 2 | " " " |
| 5620-25 | 11 | | 5861-62 | 1 $\frac{1}{2}$ | " " " |
| 5625-30 | 13 | | 5862-63 | 1 $\frac{1}{2}$ | " " " |
| 5630-35 | 15 | | 5863-64 | 2 | " " " |
| 5635-40 | 15 | | 5864-65 | 3 | " " " |
| 5640-45 | 15 | | 5865-70 | 22 | |
| 5645-50 | 30 | | 5870-75 | 5 | |
| 5650-55 | 25 | | 5875-80 | 6 | |
| 5655-60 | 20 | | 5880-85 | 4 | |
| 5660-65 | 20 | | 5885-90 | 4 | |
| 5665-70 | 13 | | 5890-95 | 6 | |
| 5670-75 | 10 | | 5895-5900 | 8 | |
| 5675-80 | 11 | | 5900-05 | 10 | |
| 5680-85 | 10 | | 5905-10 | 17 | |
| 5685-90 | 10 | | 5910-15 | 25 | |
| 5690-95 | 10 | | 5915-20 | 27 | |
| 5695-5700 | 10 | | 5920-25 | 4 | |
| 5700-05 | 35 | | 5925-30 | 10 | |
| 5705-10 | 45 | | 5930-35 | 6 | |
| 5710-15 | 19 | | 5935-40 | 12 | |
| 5715-20 | 11 | | 5940-45 | 4 | |
| 5720-25 | 30 | | 5945-50 | 4 | |
| 5725-30 | 20 | | 5950-55 | 30 | |
| 5730-35 | 39 | | 5955-60 | 40 | |
| 5735-40 | 14 | | 5960-65 | 35 | |
| 5740-45 | 17 | | 5965-70 | 35 | |
| 5745-50 | 27 | | 5970-75 | 15 | |
| 5750-55 | 11 | | 5975-80 | 20 | |
| 5755-60 | 10 | | 5980-85 | 25 | |
| 5760-65 | 9 | | 5985-90 | 25 | |
| 5765-70 | 11 | | 5990-95 | 30 | |
| 5770-75 | 30 | Filteration, 24 parts | 5995-6000 | 30 | |
| 5775-80 | 37 | water; Cake, 1/32. | 6000-05 | 30 | |
| 5780-85 | 26 | | 6005-10 | 10 | |
| 5785-90 | 24 | | 6010-15 | 10 | |
| 5790-95 | 19 | | 6015-20 | 10 | |
| 5795-5800 | 17 | | 6020-25 | 5 | |
| 5800-05 | 25 | | 6025-30 | 15 | |
| 5805-10 | 30 | | 6030-35 | 40 | |
| 5810-15 | 25 | | 6035-40 | 35 | |
| 5815-20 | 24 | | 6040-45 | 50 | |
| 5820-25 | 38 | | 6045-50 | 45 | |
| 5825-30 | 47 | | 6050-55 | 50 | |
| 5830-35 | 38 | | 6055-60 | 35 | |
| 5835-40 | 25 | | 6060-65 | 43 | |
| 5840-45 | 35 | | 6065-70 | 47 | |
| 5845-50 | 41 | | 6070-75 | 45 | |
| 5850-55 | | Drld. from 7:00 A. M. to | 6075-80 | 40 | |
| | | 3:00 P. M. while S. D. | 6080-85 | 30 | |
| | | for pump motor shaft | 6085-90 | 8 | |
| 5855-56 | $\frac{1}{2}$ | Core no. 15 | 6090-95 | 8 | |
| 5856-57 | 2 | " " " | 6095-6100 | 6 | |

Drilling Time Log, p. 13.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> | |
|-----------------|----------------|--------------|-----------------|----------------|-----------------------|
| 6100-05 | 6 | | 6380-85 | 5 | |
| 6105-10 | 27 | | 6385-90 | 6 | |
| 6110-15 | 15 | | 6390-95 | 5 | |
| 6115-20 | 34 | | 6395-6400 | 4 | |
| 6120-25 | 26 | | 6400-05 | 5 | |
| 6125-30 | 24 | | 6405-10 | 8 | |
| 6130-35 | 25 | | 6410-15 | 13 | |
| 6135-40 | 15 | | 6415-20 | 5 | |
| 6140-45 | 7 | | 6420-25 | 4 | |
| 6145-50 | 8 | | 6425-30 | 5 | |
| 6150-55 | 22 | | 6430-35 | 4 | |
| 6155-60 | 24 | | 6435-40 | 4 | |
| 6160-65 | 18 | | 6440-45 | 6 | |
| 6165-70 | 19 | | 6445-50 | 7 | |
| 6170-75 | 24 | | 6450-55 | 12 | |
| 6175-80 | 40 | | 6455-60 | 37 | |
| 6180-85 | 30 | | 6460-65 | 33 | |
| 6185-90 | 26 | | 6465-70 | 21 | |
| 6190-95 | 30 | Changed tour | 6470-75 | 55 | Changed tour |
| 6195-6200 | 15 | | 6475-80 | 40 | |
| 6200-05 | 14 | | 6480-85 | 35 | |
| 6205-10 | 31 | | 6485-90 | 15 | |
| 6210-15 | 26 | | 6490-95 | 10 | |
| 6215-20 | 19 | | 6495-6500 | 9 | |
| 6220-25 | 20 | | 6500-05 | 10 | |
| 6225-30 | 20 | | 6506-10 | 7 | |
| 6230-35 | 25 | | 6510-16 | 9 | |
| 6235-40 | 20 | | 6515-20 | 24 | |
| 6240-45 | 30 | | 6520-25 | 41 | |
| 6245-50 | 55 | New bit | 6525-30 | 45 | |
| 6250-55 | 30 | | 6530-35 | 45 | |
| 6255-60 | 13 | | 6535-40 | 55 | |
| 6260-65 | 20 | | 6540-45 | 26 | |
| 6265-70 | 12 | | 6545-50 | 30 | |
| 6270-75 | 4 | | 6550-55 | 23 | |
| 6275-80 | 6 | | 6555-60 | 8 | |
| 6280-85 | 10 | | 6560-65 | 22 | |
| 6285-90 | 6 | | 6565-70 | 38 | |
| 6290-95 | 19 | | 6570-75 | 13 | |
| 6295-6300 | 23 | | 6575-80 | 12 | |
| 6300-05 | 24 | | 6580-85 | 12 | |
| 6305-10 | 18 | Changed tour | 6585-90 | 10 | |
| 6310-15 | 20 | | 6590-95 | 11 | |
| 6315-20 | 27 | | 6595-6600 | 13 | |
| 6320-25 | 16 | | 6600-05 | 52 | |
| 6325-30 | 20 | | 6605-10 | 27 | |
| 6330-35 | 24 | | 6610-15 | 15 | |
| 6335-40 | 27 | | 6615-20 | 13 | |
| 6340-45 | 25 | | 6620-25 | 16 | |
| 6345-50 | 18 | | 6625-30 | 46 | |
| 6350-55 | 9 | | 6630-35 | 15 | |
| 6355-60 | 8 | | 6635-40 | 11 | Down 30 minutes, rain |
| 6360-65 | 5 | | 6640-45 | 8 | |
| 6365-70 | 44 | | 6645-50 | 4 | |
| 6370-75 | 4 | | 6650-55 | 22 | |
| 6375-80 | 4 | | | | |

Drilling Time Log, p. 14.

| <u>Interval</u> | <u>Minutes</u> | | <u>Interval</u> | <u>Minutes</u> |
|-----------------|----------------|----------------------|-----------------|----------------|
| 6655-60 | 42 | | 6870-75 | 13 |
| 6660-65 | 22 | | 6875-80 | 30 |
| 6665-70 | 20 | | 6880-85 | 50 |
| 6670-75 | 9 | | 6885-90 | 55 |
| 6675-80 | 5 | | 6890-95 | 30 |
| 6680-85 | 5 | | 6895-6900 | 28 |
| 6685-90 | 7 | | 6900-05 | 15 |
| 6690-95 | 26 | | 6905-10 | 15 |
| 6695-6700 | 25 | New bit | 6910-15 | 15 |
| 6700-05 | 20 | | 6915-20 | 16 |
| 6705-10 | 20 | | 6920-25 | 15 |
| 6710-15 | 20 | | 6925-30 | 13 |
| 6715-20 | 20 | | 6930-35 | 15 |
| 6720-25 | 20 | | 6935-40 | 15 |
| 6725-30 | 15 | | 6940-45 | 13 |
| 6730-35 | 10 | | 6945-50 | 11 |
| 6735-40 | 10 | | 6950-55 | 13 |
| 6740-45 | 12 | | 6955-60 | 19 |
| 6745-50 | 10 | | 6960-65 | 25 |
| 6750-55 | 10 | | 6965-70 | 11 |
| 6755-60 | 17 | | 6970-75 | 8 |
| 6760-65 | 30 | | 6975-80 | 7 |
| 6765-70 | 25 | Down 1 hour, 15 min- | 6980-85 | 32 |
| 6770-75 | 36 | utes, rain | 6985-90 | 51 |
| 6775-80 | 43 | | 6990-95 | 17 |
| 6780-85 | 16 | | 6995-7000 | 20 |
| 6785-90 | 10 | | | |
| 6790-95 | 55 | | | |
| 6795-6800 | 42 | | | |
| 6800-05 | 26 | | | |
| 6805-10 | 22 | | | |
| 6810-15 | 14 | | | |
| 6815-20 | 30 | | | |
| 6820-25 | 41 | | | |
| 6825-30 | 28 | | | |
| 6830-35 | 22 | | | |
| 6835-40 | 6 | | | |
| 6840-45 | 12 | | | |
| 6845-50 | 10 | | | |
| 6850-55 | 7 | | | |

Strapped pipe, 6855'=6853'

| | 1 | Core No. | 16 |
|---------|----|----------|----|
| 6853-54 | 1 | " | " |
| 6854-55 | 1 | " | " |
| 6855-56 | 1 | " | " |
| 6856-57 | 1 | " | " |
| 6857-58 | 1 | " | " |
| 6858-59 | 1 | " | " |
| 6859-60 | 1 | " | " |
| 6860-61 | 1 | " | " |
| 6861-62 | 1 | " | " |
| 6862-63 | 1 | " | " |
| 6863-64 | 1 | " | " |
| 6864-65 | 1 | " | " |
| 6865-70 | 12 | | |

Red indicator fossils

Small bags are washed samples.

FL-BAY1

FLA-Boy-OT-1

- 2500-10 buff, micro, porous, ind, slightly conc. ls
- 2510-20 do ls, Mgry, fissile, soft, calc. sh
- 2520-30 do ls, sh
- 2530-40 do
- 2540-50 do
- 2550-60 buff, ind, dense, calc. ^{Mgry} ~~sh~~ ^{blocky} sh
- 2600-10 do
- 2610-20 do
- 2620-30 do
- 2630-40 buff, ind, porous, slightly conc. ls
- 2640-50 sh as (2620-30)
- 2700-10 do
- 2750-60 do
- 2800-10 do
- 2850-40 do
- 2900-20 Mgry, fissile, blocky, soft, porous, calc, slightly waxy sh Some small flakes of mica visible
- 2900-10 do
- 2900-60 do not waxy
- 3000-10 do
- 3050-60 do
- 3100-10 do
- 3130-40 do
- 3200-10 do w/ some Mgry, fissile, soft, calc. sh
- 3200-10 do

5120-30 do

5150-40 do

5140-50 do

5150-60 do

5160-70 do

5170-70 do

5180-80 dk gray - dk gray, fossil, ind, slightly calc sh

5190-90 sh w/ wh fgn, ind, mic ss - calc

5200-10 do

5210-20 ss of abundant sh SS is slightly arg

5220-30 do

5230-40 sh as above

5240-50 ss (5210-20)

5250-60 do

5260-70 ss as above

5270-80 do

5280-90 do

5290-10 do

5300-20 do

5310-30 do

5310-20 dk gray - dk gray, fossil, ind, slightly calc sh T. f. ...

5320-30 N.S.

5330-40 ss (5310-20)

5340-50 do

5350-60 wh fgn, wh, calc, ind, mic ss

- 5700-101 sh as above From here down with ss & sh
- 5750-201 ss as above Fossils exposed just to describe character of
- 5770-101 sh as above chert
- 5750-601 ss as above
- 5800-101 ss as above
- 5840-501 do
- 5800-501 gray, arg. sh as above fine chert in bed that soft sh / patches of yellow
not thin
- 5855-601 do To within soft rock
- 5860-651 do
- 5895-101 do
- 5870-201 ss as above
- 5880-901 do
- 5890-001 do
- 5900-101 Brick red, blocky, soft sh w/ some grayed not thin
- 5910-201 do
- 5920-301 ss as above
- 5930-401 do
- 5940-501 do
- 5950-601 Gray - gray, fissile, red, slightly calc ch
- 5990-001 do
- 6000-101 do
- 6020-301 wh. gray, soft gray, slightly calc mic. long red ss
- 6050-601 gray sh as above To brick red sh
- 6120-101 do

4150-60 do

4200-60 do

4250-60 SS AS above

4300-60 do

4350-60 do

4400-60 brk. int. clay, calc. ss, sh

4450-60 do

4470-75 off wh. clay, calc. ss, sh

4475-70 do

4480-70 (L4450-60)

4490-00 do

4495-10 do some calc. nodules also

4500-00 do

4400-10 SS AS (L4470-75)

4450-60 do + sh AS (L4300-10)

4480-00 do

4500-10 SS AS above (L4470-75)

4550-60 sh AS (L4300-10) waxy-silty

4580-90 ss AS (L4470-75) A few nod. pieces

4600-10 sh AS (L4550-60)

4640-10 AS (L4580-90)

4645-00 off wh. clay, calc. ss, sh

4650-60 (L4550-60)

4660-70 do

4670-00 SS AS (L4645-50)

- 6675-80 | do
- 6700-10 | sh as (6550-60)
- 6750-60 | ss as above
- 6800-10 | do sh above this is now silt than above it
- 6850-55 | do sh above this is sandy silt
- 6855-60 | do
- 6860-65 | do
- 6865-70 | do
- 6900-10 | do
- 6910-20 | ss + rd sh as above
- 6920-30 | rd sh as above
- 6930-40 | ss as above
- 6940-50 | do
- 6950-60 | do
- 6960-70 | rd sh as above
- 6970-80 | ss as above
- 6975-70 | rd sh as above
- 6990-90 | ss as above

BAY-OT-1
 #1 State 4-B
 Paleo

| | | |
|-----------|---------------------------|----------------|
| 2510-20 | Cibicides Blanpiedi | Midway |
| 2520-30 | " " | " |
| | Globorotalia Angulata | " |
| 2940-50 | " Velascoensis | " |
| 3150-60 | " " | " |
| 3170-80 | " " | " |
| 3190-3200 | " " | " |
| 3230-40 | " " | " |
| 3280-90 | Globotruncana Conica | Navarro |
| | " Contusa | " , Taylor |
| | Gyroidiana Globosa | Taylor, Austin |
| | Boliviana Incrassata | Taylor |
| 3290-3300 | Stensionina Americana | " |
| 3310-20 | Globotruncana Comca | Navarro |
| | " Contusa | " , Taylor |
| | Pseudotextularia Deformis | Navarro |
| 3320-30 | Stensionina Americana | Taylor |
| 3360-70 | " " | " |
| 3390-3400 | Gyroidina Glovosa | Taylor, Austin |
| 3600-10 | Globotruncana Coronata | Taylor - E. F. |

Core Description

FLA-Bay-01-1

4, 4195-00

Top 1 1/2' Heavy blocky, med, calc, porous sh w well developed parallel laminae of small wh, calc lenses. U chy

Bottom 2' do contains round shell fragments & small bone frags

5 4260-65

Middle 26" Heavy, gray, calc, arg, soft, mic ss loosely consold

Bottom 26" do

6 4165-75

Top 1' do less arg & tighter than above

2nd & 3rd feet SS (4260-65)

4th & 5th feet do

Bottom 6' Heavy, fine, hard, light, med. ls

7 4275-85

Top 1 1/2' Heavy, gray, calc, arg, soft, mic, loosely consold ss

Next 30" do

Bottom 14" do

8 4285-95

Top 2' 5" Heavy, mic, hard, dense, sh, ls

Bottom 2' 3" SS SS (4275-85)

3 Heavy, silty, friable, highly mic, calc ss

4 Dark red, blocky, mic, silty, highly mic, calc ss

Bottom 1/2' Dark red, blocky, mic, silty, highly mic, calc ss

#16. 5653-651

Top 10' Heavy, silty, friable, mic, calc ss Arkosic

3 wh, fine, friable, ^{slightly} calc, mic, arkosic ss

4 Heavy, silty, friable, slightly calc, mic ^{Arkosic} ss w/ dk gray, irregular silty sh lenses ^{dark, mic}

506 do

7 off wh, fine, friable, arkosic, mic, slightly calc ss

8 do

Bottom 9" do