REPORT ON SAMPLES FROM THE PAN-AMERICAN OIL COMPANY
NO. 1 - ADAMS McCASKILL PIERCE COUNTY.
GEORGIA

130-55	Cuttings composed principally of fragments of hard, cream-colored, chalky and irregularly sandy limestone, extremely finely granular and sandy limestone, about 50% very uneven-grained (coarse to very fine) clear quartz sand; a small amount of greenish-gray sandy bentonitic clay, and a few black and gray phosphatic pebbles; one fragment of a crab claw; no other fossils noted.
155-50	Like the preceding.
150-65	Like the preceding
165-80	Similar to the preceding, but with the sand content of the sample about 75% and the lime content correspondingly reduced; greenish-gray bentonitic clay fragments somewhat more abundant.
180-95	Cuttings composed of fragments of the cream-colored, sandy, granular lime and uneven-grained sand, as above, also a number of fragments of a hard, cream-colored, sandy lime showing traces of microscopic fossils fragments and numerous fragments of Barnea sp., and small fragment of a Pelecypod, too worn and broken to be determined; material suggests a beach or very near shore deposit; phosphatic nodules present, as in the preceding samples.
195-210	Like the preceding.
210- 25	Like the preceding.
225- 40	Like the preceding.
240- 55	Sample at this depth composed mainly of very uneven-grained (coarse to very fine) clear quartz sand, some phosphatic pebbles and about 15% small fragments of bivalves, Barnea sp., and a few small shark teeth; a few sandy limestone fragments, as above.
255- 70	Similar to the preceding, with the sandy lime fragments somewhat more abundant.
270- 85	Similar to the preceding, sand somewhat coarser.
285-300	Similar to the preceding; a few pyrite nodules also present.
310- 15	Similar to the preceding; shell fragments somewhat less abundant; no pyrite noted.
315- 30	Like the preceding.
330- 45	Like the preceding.
345- 60	Similar to the preceding; some fragments of Ostraea sp. noted.
360- 75	Cuttings of coarse quartz sand and some black phosphatic pebbles, a few sandy, cream-colored lime nodules and a number of shell fragments, including Ostraea sp., Barnea sp., and some indeterminable bivalves; a few fragments of gray, sandy clay.

375- 90 Like the preceding.

390-405 Like the preceding.

405- 20 Similar to the preceding, but with the black phosphatic pebbles forming about 25% of the material at this depth.

420- 35 Similar to the preceding, some fragments of a light yellowish-green and irregularly sandy clay present.

435- 50 Cuttings composed mainly of very coarse to very fine, clear quartz sand, about 25% black phosphatic pebbles and a few brown chert pebbles; some fragments of light yellowish-green, sandy clay; a few fragments of cream-colored, sandy limestone.

450- 65 Like the preceding.

465- 80 Conglomeratic gray sand, like the preceding, and a few fragments of light tan-colored, granular, irregularly sandy clay, and a few of brownish-gray, sandy, shaly clay.

480- 95 Conglomeratic sand, as above, and some fragments of a deep cream-colored, sandy, granular limestone.

495-510 Conglomerate as above, and about 25% fragments of light tan-colored, very finely granular and highly sandy limestone; a few fragments of crab claw noted, and some impressions of fossil fragments occasionally noted in the limestone; a number of shark teeth present.

510- 25 Sample composed mainly of fragments of the light tan-colored, granular, highly sandy limestone, showing some impressions of fossil fragments; a very small amount of the conglomeratic sand still coming in.

525- 40 Similar to the preceding; also a number of fragments of greenish-gray, slightly argillaceous, fine-grained sandstone.

540- 55 Like the preceding

555-570 Missing

570-85 Cuttings of coarse conglomeratic sand of small quartz and many phosphatic pebbles, and about 50% fragments of sandy, light tan-colored granular limestone and some hard, white sandy limestone, occasionally showing small fragments of microscopic fossils and fragments of impressions of same; some fragments of fine-grained, greenish-gray sandstone.

585-600 Similar to the preceding with the addition of a number of fragments of a porous, fine calcitized coquina; the coquina is made up of small, water-worn casts of microscopic fossils (mainly miliolids) and small fragments of molds of larger form

600- 15 Cuttings composed mainly of fragments of the coquina limestone mentioned above, and some conglomeratic sand and sandy limestone fragments, as above.

615- 30 Like the preceding; some Bryozoan fragments also present in the coquina rock.

630- 45 Like the preceding.

645- 60 Sample composed almost entirely of the coquina limestone composed of molds of some small forams (mainly miliolids) and fragments of molds of larger fossil forms; a few Bryozoan fragments present; one fragment of Asterocyclina sp. (a form common in top of Ocala in Northern Florida).

660- 75 Like the preceding; a specimen of Lepidocyclina ocalana.

675- 90 Like the preceding; a few worn specimens of Operculina sp.

690-705 Like the preceding; a number of eroded specimens of Lepidocyclina ocalana present.

705- 20 Cuttings of fossil coquina limestone, as above, and numerous fragments of hard, light gray, irregularly sandy limestone, carrying many molds and fragments of molds of small microscopic fossils; a small amount of conglomerate (quartz pebbles and a few phosphatic pebbles), possibly cavings.

720- 35 Cuttings of hard, cream-colored limestone, highly impregnated with molds and sections of miliolids and a few other smaller foraminifera and fragments of molds of some microscopic fossils; some Bryozoans noted; a few Pectin fragments; fragments of Lepidocyclina ocalana and Lepidocyclina georgeana, and Operculina ocalana present; a few fragments of Asterocyclina sp., as above; a few specimens of smaller foraminifera, as -

Cysine globule
Lemerckine jacksonensis
Cyroidine sp. (close to Cuban form)
Robulus slato-limbata
Miliola sexorum
A number of Ostracods

735- 50 Like the preceding; a few specimens of Heterostgina ocalana present also.

750- 65 Like the preceding; a few fragments of blue-green, somewhat sandy, clay shale present.

765- 80 Hard, fossiliferous, white limestone, as above; fauna same as for the preceding sample.

780- 95 Cuttings of white and light gray, porous, highly fossiliferous limestone; the fossil material, though abundant, is generally preserved in the form of smooth molds, and therefore only a small percent of the forms present can be identified; fauna present same as for the preceding samples; some very large Echinoid spines are common in this material.

795-810 Like the preceding; fauna same, but Operculines rare.

810- 25 Like the preceding.

825- 40 Similar to the preceding, but with many porous portions of the limestone filled with moderately coarse crystals of calcite and about 25% of the material more chalky than the preceding and also sandy; fossil material somewhat less abundant and very poorly preserved.

840- 55 Cuttings composed almost entirely of brownish-gray, rather coarsely crystalline, porous limestone; a few fragments of white, chalky limestone, as above.

855- 70 Like the preceding.

870- 85 Cuttings composed mainly of a light gray, very coarse quartz sand; a few fragments of the brown, crystalline limestone, as above, and a few fragments of the white, chalky limestone from higher depths.

885-900 Like the preceding, with many fragments of a deep cream-colored, porous, moderately finely crystalline limestone.

900- 15 Cuttings mainly composed of the crystalline limestone; fragments, as in the preceding; a small amount of limestone fragments and coarse sand, probably cavings.

915- 30 Similar to the preceding; about half of the limestone fragments dense and crypto-crystalline at this depth.

930- 45 Cuttings composed mainly of the coarse quartz sand, as at 870-885; a small amount of the light brown, crystalline limestone present.

945- 65 (Missing)

965- 80 Sand, as above, also many fragments of a dense, light brown, crypto-crystalline limestone, and many fragments of a light gray chalk (the chalk takes its color from being highly impregnated with fine particles of sand and very small dark-colored calcite crystals); a number of shell fragments present.

980- 95 Cuttings of coarse conglomerate of clear, white and light gray quartz pebbles, many fragments of crypto-crystalline and porous, granular crystalline, light brown lime; a few small fragments and an occasional fragment of hard, red sandy clay.

995-1010 Like the preceding

1010- 25 Cuttings mainly composed of fragments of brown, porous and coarsely granular to dense and crypto-crystalline limestone; some quartz pebbles, as above, and a few fragments of some heavy-shelled bivalve (apparently coming from the limestone).

1025- 40 Like the preceding.

1045- 55 Cuttings of coarsely crystalline, dark brown, porous limestone.

1055- 70 Limestone like that noted in the preceding sample, color at this depth partly brown and partly greenish- tan.

1070- 85 Like the preceding

1085-1100 Cuttings of material as above, also about 25% fragments of white, chalky limestone which contains about 25% scattered calcite crystals; some of the fragments show fragments of fossil molds, including a Peidocyclina (?) sp.

1100- 15 Like the preceding.

1115- 30 Cuttings composed mainly of fragments of the highly fossiliferous, partially crystalline, limestone, as above; many Bryozoan fragments noted in some of the fragments, others composed mainly of a mass of irregularly placed small cyclindrical bodies; a fragment of a Pectin noted; a number of Quinqueloclines also imbedded in some of the nodules; a well preserved specimen of Pseudorbitolina.

1130- 45 Nodules of fossiliferous limestone like the preceding, and about 50% fragments of porous, coarsely crystalline, light brown limestone.

1145- 60 Cuttings of a hard, white, chalky limestone, showing poor and vague molds of micro-fossils and fossil fragments; many of the fragments light gray in color and partially to completely crystallized; a section of Lepidocyclina sp. present.

1160- 75 Cuttings of a hard, cream-colored limestone, showing many poor impressions and a few sections and molds of micro-fossils and microscopic fossil material too poorly preserved to be identified; some fragments filled with molds of a small Orbitoid, in which the external markings and interior structure is obliterated.

1175- 90 Similar to the preceding; molds of the Orbitoid mentioned above fairly abundant; numerous specimes of Lepidocyclina sp. cf. pseudo-marginate present at this depth; a few specimens of Amphistigina cf. cubbenis variety; a few specimens of Robulus slato-limbata.

1190-1205 Cuttings of a chalky and partially crystalline, fossiliferous limestone; fragments of Bryozoans common, Lepidocyclina cf. Pseudomarginata very common; a small amount of Selenite present in the more crystalline fragments of the limestone.

1205- 20 Like the preceding; some increase in the amount of selenite present.

1220- 55 Like the preceding; species common, same as for the immediately preceding samples; Bryozoan fragments very common; a number of Ostracoda present.

1225- 50 Similar to the preceding; limestone somewhat more dense and not so highly fossiliferous; some selenite present, as above.

1250- 65 Like the preceding.

1265- 80 Cuttings partially composed of hard, white, chalky, fossiliferous limestone (fossil material mainly very poor, vague and fragmentary molds); about 50% of the material rather coarsely crystalline, brown

1265- 80 (continued)
limestone, which contains a small amount of selenite; a few specimens of Lepidocyclina cf. pseudomarginata; some badly worn specimens of Operculina sp.

1280- 95 Like the preceding.

1295-1510 Cuttings of a hard, white, chalky and in part coarsely crystalline, limestone; a few Bryozoan fragments; some selenite inclusions in the limestone; a few specimens of Lepidocyclina cf. pseudomarginata present.

1510- 25 Similar to the preceding; selenite inclusions common at this depth; only an occasional fossil noted; a few fragmentary sections of Asterocyclina sp.

1525- 40 Like the preceding.

1540- 55 Like the preceding.

1555- 70 Cuttings composed mainly of light greenish-brown, rather coarsely crystalline and slightly chalky; some inclusions of selenite present, as in the preceding samples; an occasional impression of a fossil fragment noted; chalky sections of the small Asterocyclina sp. first noted at 1510-1525 and of the Lepidocyclina sp.

1570- 85 Cuttings of hard, chalky, porous limestone, containing a small amount of selenite; the material was probably originally highly micro-fossiliferous, but only vague traces, impressions and fragmentary molds now indicate the original presence of fossil material; some of the limestone fragments contain scattered crystals of calcite; some fragments of the greenish-brown, crystalline limestone, as above, carrying sections of the small Asterocyclina sp., mentioned above, and Lepido-cyclina sp.

1585-1400 Cuttings of white, chalky limestone, irregularly highly impregnated with moderately coarse, brown crystals of calcite and showing traces of an original high fossil content; many molds of a small disk-shaped form (Operculina ?) present.

1400- 15 Like the preceding; one well preserved specimen of Asterocyclina sp., as above, noted in one of the more chalky fragments of the limestone.

1415- 30 Like the preceding; a number of well preserved specimens of Asterocyclina sp. present.

1430- 45 Sample mainly composed of fragments of rather coarsely crystalline, brown limestone, with some chalky inclusions and many small inclusions of selenites; a few fragments of the chalky, fossiliferous limestone, as above; a few traces of micro-fossil fragments in some of the crystalline limestone fragments; a section of a small Lepidocyclina noted.

1445- 60 Like the preceding; a number of fragments of gypsum also present.

1460- 75 Cuttings of a hard, white, chalky fossiliferous limestone; and a few fragments of the brown, gypsiferous, crystalline limestone, as above

1460- 75 (Continued)
many specimens of Asterocyclina sp., as above, Operculina sp., and some Ostracod carapaces.

1475- 90 Like the preceding; a few sections of Discocyclina sp.

1490-1505 Cuttings of a moderately soft, chalky, highly fossiliferous limestone; most abundant forms present were -

Operculina (new species.)
Lepidocyclina (?) sp.
Asterocyclina sp. (as above)
Amphistegina sp.
Heliocostigina sp.
Many Bryozoan fragments, and
a few Ostracoda.

1505- 20 Like the preceding.

1520- 35 Cuttings of material and fauna, as above, and about 75% fragments of a brown, coarsely crystalline limestone, showing some small chalk inclusions and a few chalky sections of micro-fossils, species the same as for the preceding chalky horizon; some selenite inclusions in the crystalline limestone and a number of fragments of gypsum; fossils much less abundant at this depth than in the immediately preceding samples.

1535- 50 Cuttings of a hard, chalky, fossiliferous limestone; the fossil material generally very poorly preserved in the form of worn and fragmentary molds and impressions; some specimens of Asterocyclina sp., as above; a few sections of Discocyclina sp.; numerous small inclusions of selenite in the more porous portions of the material; numerous fragments of vein calcite; some Bryozoan fragments and a few molds of small Pelecypods and Gastropods present.

1550- 65 Like the preceding.

1565- 80 Cuttings of hard, white limestone, practically a ccquina of molds and fragments of microscopic fossil forms; Operculina sp. present; as above, fragments of small bivalves, Bryozoans, a few fragments of Asterocyclina sp., as above, many sections of a small Miliolid, a few specimens of Eponides cf. quayabalinses; a number of fairly large selenite inclusions present in the limestone.

1580- 95 Similar to the preceding; some traces of glauconite noted in the limestone.

1595-1610 Cuttings of a dense, hard, white, slightly glauconitic limestone, as above, and about 50% fragments of a brown, rather coarsely crystalline limestone or partly chalky and partly crystalline; the white limestone shows traces of an original high microfossil content; a number of fragments of a large bivalve present.

1610- 35 Cuttings mainly composed of fragments of a hard, white, fossiliferous and somewhat glauconitic limestone; fossil material too poorly preserved to be identified as a rule; a number of fragments of a large, heavy-shelled bivalve (Ostrea?) and a few Bryozoan fragments recognised.

1625- 40 Similar to the preceding; some moderately large selenite inclusions in the limestone, also present; a fragment of a Pectine; a few Bryozoan fragments, and a few fragments of a large Echinoid noted.

1640- 55 Like the preceding.

1655- 70 Similar to the preceding, but limestone only very slightly glauconitic; a few specimens of Operculina sp., as at 1490-1505, etc., a few specimens of Asterigerina sp.

1670- 85- Like the preceding; a few fragments of white and light gray chert present.

1685-1700 Like the preceding.

S-U-M-M-A-R-Y

Samples from 120-55 to 585-600 - Miocene (lumped as Alum Bluff in Georgia) and including the Hawthorne and possibly a little of the Tampa of Florida.

Materials consist of coarse sands, some green and greenish-gray sandy clays, and some granular and sandy limestones.

The fauna consists of fragments of shallow or brackish water bivalves, many fragments of Barnes sp., some fish teeth and fragments of crab claws.

Phosphatic pebbles common in this material.

Although the Glendon (Lower Oligocene) is mapped as probably present in this area, nothing which could be definitely referred to this formation was noted in the samples. I have seen it in wells to the southwest, coming in below a section like that found at 120-55 to 585-600, but it apparently is absent in the area in which you are drilling.

585-870: Ocala, Jackson, - Eocene.

A hard, white to cream-colored, highly fossiliferous limestone, carrying species characteristic of that formation, some of which, although common in sub-surface phases of the Ocala, have never been figured or described.

870-1100: Claiborne, or possibly Lower Jackson. Possibly the equivalent of the Coskinolina Zone of Florida, although no determinable fossils were found on which a definite determination could be based; I am inclined to throw it into the Claiborne (Middle Eocene).

1100-1700: Claiborne (Middle Eocene), and the equivalent of the Dictyoconus Zone of Florida, carrying a number of species characteristic of that horizon, although the Dictyoconus is not present. Most of the species in this horizon, like many in the buried sections of the Ocala,

SUMMARY (Continued)

have never been figured or describedm and, therefore, are not listed - at least, specifically.

Material consists of a an irregularly highly calcitic and somewhat gypsiferous, fossiliferous limestone. Below 1565-1580, the limestone is also slightly glauconitic, and 1670-1685 and 1685-1700 show a small amount of chert.

The three divisions which should be of importance for comparative purposes with any future wells drilled, were noted in this Claiborne section as follows:

1085-1100 to 1510-1525: Fauna characterized by Lepidocyclina cf. pseudomarginate.

1510-1525 to 1580-1596: Fauna characterized by Astericyclina, new species.

1580-1596 to 1695-1700: Limestone glauconitic and carrying Discocyclina species, Operculina and Ostrea sp., and some other forms not listed.

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SAMPLES (Continued)

1700- 15 Cuttings of white, chalky, highly gypsiferous limestone, no fossils noted.

1715- 30 Cuttings of a hard, gypsiferous, white, chalky, somewhat porous, micro-fossiliferous limestone; many Bryozoan fragments; some specimens of Discocyclina cf., many molds of smaller foraminifera (Asterigerina, the most common form noted); some fragments of a large bivalve, Ostrea sp. (?), large Echinoid spines, some fragments of Operculina sp. as noted in preceding sample (previous report).

1730- 45 Cuttings of a coarsely granular, highly gypsiferous, white, chalky limestone; no fossils noted.

1745- 60 Like the preceding.

1760- 75 Cuttings of a granular dolomitic and highly gypsiferous limestone, a few fragments of white, chalky, somewhat fossiliferous limestone as noted at slightly higher depths.

1775- 90 Like the preceding.

1790-1805- Very highly gypsiferous, white, coarsely crystalline limestone.

1805- 20 Cuttings of white, chalky, irregularly coarsely crystalline and gypsiferous limestone; a few fragmentary impressions of micro-fossils (including Bryozoans) noted in the limestone.

1820- 35 Cuttings almost pure gypsum.

1855- 50 Cuttings of white, hard, chalky, somewhat porous limestones, some of the fragments partially crystalline and somewhat gypsiferous; some traces of fossil fragments noted in the limestone, Bryozoans the most abundant forms noted.

1850- 65 Material about 50% white, somewhat fossiliferous, chalky limestone, and 50% white, gypsiferous, crystalline limestone.

1865- 80 Material mainly gypsum.

1880- 95 Cuttings composed almost entirely of coarse, light grey sand and a few fragments of the fossiliferous (Bryozoan bearing) limestone, also a few fragments of the crystalline, highly gypsiferous limestone noted above; some chert present in the sandstone and some specimens of Bryozoans and small foraminifera washing from the limestone.

1895-1910 Like the preceding.

1910- 25 Like the preceding.

1925- 40 Sand as above and about 50% fragments of the Bryozoan limestone and fossils fragments from same, as noted just above (1880-1895); this fossiliferous limestone material possibly cavings; some white chert also present; fragments of the Bryozoans, Pleurotrea sp. is the most abundant fossil present, a few molds of a small Brechiopods also noted and some molds of smaller foraminifera, among which are -

Asterigerina sp.
Cibicidis sp.,

the most abundant forms noted.

1940- 55 Green sandy clay. Washed; Large residue of a highly glauconitic, moderately fine, somewhat uneven-grained sandstone; a few of the sandstone fragments pyritic and micaceous as well as glauconitic; many fragments of the Bryozoan limestone similar to those noted in the preceding samples present; a part of the limestone fragments are apparently nodular in the sandstone; many fragments of white chert as above.

1955- 70 Materials similar to the preceding; numerous Bryozoan fragments as above, also a number of worn fragments of Ostreea sp., and molds of Discorbis n. sp. and Discocyclina cf. clerki; Echinoid spines also fairly common at this depth.

1970- 85 Cuttings composed mainly of fragments of highly glauconitic and slightly chalky, fine-grained, light grey sandstone; a few fragments of light greenish-grey, finely micaceous clay-shale; many specimens of Discocyclina cf. clerki and Bryozoans, as above; some white chert also, as in the preceding sample.

1985-2000 Similar to the preceding, but less glauconitic and more chalky.

2000- 15 Cuttings of very uneven-grained quarts sand and about 25% glauconitic and many fragments of light greenish-grey glauconitic and micaceous clay-shale; a small amount of fragments of the Bryozoan limestone, as above (probably cavings); a few Ostracod carapaces and specimens of Lenticulina rotulets, apparently indigenous to this horizon.

2015– 30 Cuttings of glauconitic sandstone, coarse fragments of glauconitic and coarse sand; many fragments of light greenish-grey, somewhat glauconitic and micaceous bentonitic clay; some fragments of the chalky limestone carrying abundant Bryozoans (this probably cavings); some specimens of Discocyclina cf. clerki; a few specimens of smaller foraminifera also present and apparently coming from the clay and sand horizon; a few fragments of Ostraea sp. also present.

2030– 45 Similar to the preceding, some of the chalky fragments at this depth apparently representing chalky nodules or thin vein chalky lenses in the sandstone and sandy clay horizon; fauna present the same as for the preceding samples of this sand and clay section.

2045– 60 Cuttings of glauconitic, sandy and somewhat micaceous, greenish-gray clay and argillaceous and glauconitic sandstone; some fragments of sandy and glauconitic chalk (the latter apparently nodular or lenticular in the clay and sandstone), a few fragments of white chert as in all of the preceding samples; some Ostracoda and a few specimens of smaller foraminifera present; a number of specimens of Vaginulina n. sp. common at this depth.

2060– 75 Cuttings composed of greenish-grey, highly sandy and glauconitic, fossiliferous clay; fragments of light gray, dense, fossiliferous limestone; and some fragments of cream-colored, chalky, limestone, carrying many Bryozoan fragments (this chalky material probably coming down the hole); many fragments of white and some light grey chert; fragments of Echinoid spines and some fragments of a bivalve resembling Ostraea sp. as in the preceding sample; some Ostracod carapaces; a number of specimens of Lenticulina retulata, and numerous specimens of a small Brachiopod.

2075– 90 Cuttings composed mainly of fragments of a hard, chalky, cream-colored, sandy, slightly glauconitic and micro-fossiliferous limestone; many specimens of the small ribbed Brachiopod as above; some fragments of Ostraea ? sp.; fragments of the same type of Echinoid spines also as noted above; some fragments of white chert as above.

2090–2105 Like the preceding.

2105– 20 Cuttings of glauconitic and sandy, calcareous, green clay, and about 50% quartz sand and a very few specimens of smaller foraminifera present.

2120– 35 Like the preceding.

2135– 50 Cuttings composed mainly of hard, white, moderately coarsely sandy and slightly glauconitic limestone; a few fragments of grey glauconitic, soft, micaceous clay; a few fragments of a heavy shelled bivalve (resembling Ostrea sp.) and a few molds of small gastropods noted; some fragments of white chert; about 25% quartz sand and some glauconite as above.

2150– 65 Like the preceding.

2165– 80 Sample composed of about 75% coarse quartz sand and glauconite, with many small fragments of glauconitic and somewhat chalky clay and a few fragments of hard, white, sandy and glauconitic limestone showing some traces of fossils; a number of fragments of some bivalve (Ostraea (?) sp., a few specimens of a small Cibicides sp., the only foram noted.

2180- 95 Sample about 90% quartz sand (very uneven-grained, coarse to very fine); some fragments of highly sandy and glauconitic limestone and some grey micaceous clay also present; a few fragments of the Ostrea ? sp. present; character of the material at this depth suggests very shallow water conditions during deposition.

2195-2210 Sample mainly uneven-grained, quartz sand, as above, with fragments of a light greenish-grey, highly dandy clay; a few fragments of highly sandy and glauconitic, white limestone, as above.

2210- 25 Like the preceding.

2225- 40 Sand like the preceidng; a few fragments of white chert, some fragments of white, highly sandy and somewhat glauconitic limestone; some fragments of brown-grey, micaceous clay, which is also occasionally glauconitic, and some fragments of a light greenish-grey, highly sandy and slightly micaceous clay; a few fragments of Ostrea ? sp. and of Echinoid spines, also mentioned from higher depths in this report; a few fragments of light green, finely sandy and highly micaceous clay.

2240- 55 Cuttingd composed of a white, sandy and occasionally glauconitic limestone; material seems to be composed of irregularly shaped fragments of a white, chalky lime and sand, locally cemented together; about 25% sand, as above, and some fragments of grey, somewhat glauconitic clay; a few large nodules of bright green glauconite present and about 10% small nodules of glauconite in the fine screenings.

2255- 70 Like the preceding.

2270- 85 Cuttings of a hard, white, somewhat glauconitic limestone, showing many sections of small, calcitized fragments of shell material (fragmentary when deposited), some fragments of the greenish-grey, somewhat glauconitic clay, as above; about 25% sand and glauconite, as above.

2285-2300 Like the preceding.

2300- 15 Similar to the preceding, but the limestone irregularly sandy; some grey and greenish-grey clay fragments, as above; a mold of Ostracod and Textularia sp. noted in the limestone fragments.

2315- 30 Some fragments of the white limestone, as above, but many fragments of a grey, finely micaceous and irregularly glauconitic clay coming in, and about 50% very uneven-grained sand and glauconite, as above.

2317-2322 Core A.
Core of light grey, highly glauconitic and chalky, slightly micaceous, fine-grained sandstone. Washed; Large residue of fragments of the materials; numerous specimens of Eponides lotus, characteristic of the Wilcox, and numerous other species of smaller foraminifera also common that formation.

2322-2330 Core B.
Similar to the preceding, but less firmly consolidated.

2330- 45 Cuttings of glauconite and sandy, white to light tan-colored, limestone, some fragments of grey, somewhat glauconitic clay, carrying specimens of the small Cibicides sp., mentioned at 2165-2180, and a number of Ostracods; about 50% sand and glauconite, as above; the limestone occasionally carries specimens of Lenticulina rotulata, Ostracods and Asterigerina sp., as noted from higher portions of this glauconitic and sandy section.

2345- 60 Like the preceding.

2354-2364 Core C.
Core of cream-colored, moderately hard, fine-grained, somewhat glauconitic and calcareous sandstone; some Bryozoan fragments and some small fragments of shell material; no forams noted.

2360- 74 Similar to 2330-45 and 2345-60 with the limestone at this depth more finely sandy and more finely and highly glauconitic, tan in color; a few vague traces of micro-fossils noted in some of the limestone fragments; a number of smaller foraminifera present.

2364-2375 Core #1
Similar to the preceding, glauconite rare; a few forams and a number of Ostracods present; determinable species Wilcox in character.

2375- 90 Like the material studied at 2360-74.

2390-2405 Mainly sand, as above, with some fragments of limestone as in the immediately preceding samples; and many fragments of grey, micaceous clay.

2405- 20 Cuttings of highly sandy and glauconitic limestone; many fragments of grey, micaceous clay, and about 75% very uneven-grained, quartz sand, as above; a few forams and Ostracods as above; the common Ostracod species present is Cythereis (?) alabamensis - a common Wilcox species.

2420- 35 Like the preceding.

2435- 50 Like the preceding.

2450- 65 Cuttings of a highly calcareous and slightly glauconitic sandstone, showing a few traces of shell fragments, some fragments of grey and light greenish-grey, micaceous and somewhat glauconitic clay, about 50% very uneven-grained quartz sand and many small glauconite nodules; a few specimens of smaller foraminifera and Ostracods, as above.

2465- 80 Similar to the preceding; a considerable portion of the sample at this depth composed of cavings from various depths up to the hole.

2480- 95 Cuttings composed mainly of quartz sand (varying from very coarse to very fine in size of grain; some fragments of grey, micaceous clay, grey sandy and glauconitic clay, calcareous sandstone and glauconitic and highly sandy, white to green, limestone.

2495-2510 Like the preceding.

2510– 25 Cuttings composed of about 50% fragments of a highly sandy, white limestone and some fragments of dark grey and light greenish-grey clay, about 50% uneven-grained, quartz sand and nodular, glauconite, as above; some cavings.

2525– 40 Cuttings composed mainly of very uneven-grained quartz sand, as above, and fragments of various types of clay and limestone found with the depths covered by this report, and some fragments of obviously coming from still higher depths.

2540– 55 Cuttings mainly coarse sand, as above, with many fragments of argillaceous, cream-colored, slightly micaceous and slightly glauconitic sandstone; some sandy white limestone and a few fragments of grey, micaceous clay.

2548-2558 Core #2
Core of micaceous and somewhat glauconitic, light green, very finely sandy clay. Washed; Moderately small residue of fine, angular, platy sand; many flakes of mica and a small amount of glauconite; no fossils noted.

2555– 70 Like the material studied in 2540–2555; some cavings.

2558-2565 Core #3
Core of highly micaceous and slightly glauconitic, sandy grey clay. Washed: Small residue of sand, mica and a little glauconite washing from the clay; no fossils noted.

2570– 85 Like the materials studied in 2555–2570.

2585–2600 No change.

2600– 15 No change.

2615– 30 Before washing, grey sand and grey clay. Washed: Large residue composed mainly of very uneven-grained (coarse to very fine) quartz sand and some small nodules of glauconite; some fragments of grey clay, and fragments of several types of limestone and sandy limestone noted from higher depths in this report.

2630– 45 Similar to the preceding, with a few worn fragments of Ostraea sp.

2645– 60 Washed residue almost entirely sand, with a few fragments of various types of limestone, sandstone and clay similar to that mentioned from higher depths in this report; a few fragments of bright red-brown, sandy clay (possibly surface material).

2660– 75 Cuttings of grey sand and clay. Washed residue consisted mainly of sand, as above, about 25% of the material composed of fragments of several types of grey clay, fragments of white, sandy and somewhat glauconitic limestone, some fragments of argillaceous sandstone, a few small fragments of Ostrea ? sp. and some other materials obviously cavings.

2675– 90 Similar to the preceding, with some fragments of a dark grey, highly sandy and micaceous clay present; the glauconite content of the washed residue has gradually decreased through the last twenty samples, and at this depth is rare.

2690-2705 Cuttings of grey clay and sand, leaving a washed residue mainly composed of very uneven-grained, light grey sand; a small amount of fragments of several types of sand and sandy limestone (probably cavings) and several types of grey clay and sandy clay, some of which probably represent the materials being drilled.

2705- 20 Similar to the preceding, with numerous fragments of the dark grey, micaceous and argillaceous sandstone, first noted at 2675-2690.

2720- 35 Like the preceding.

2735-2750 Like the preceding.

2750- 65 Material at this depth mainly sand, as above, and some few fragments of various materials from higher depths; also numerous fragments of a dark brownish-grey, micaceous and slightly carbonaceous, thinly laminated clay, which probably represents the material being drilled.

2765- 80 Like the preceding.

2780- 95 Like the preceding.

2795-2810 Similar to the preceding; a few very minute forams noted in the dark brownish-grey shale first noted at 2750-2765, Ripley species.

2810- 25 Like the preceding.

2825- 40 Like the preceding.

2840- 55 Similar to the preceding, with many fragments of a fine, angular argillaceous and somewhat micaceous, brownish-grey sandstone; a number of pyritee nodules.

2855- 70 Like the preceding; a number of specimens of Globotruncets arca var., Bolivina incressata noted; Gumbelina globulosa also common.

2870- 85 Cuttings of white, calcareous and slightly micaceous sandstone and a little sandy limestone, some fragments of the dark brownish-grey shale, as above; a number of pyrite nodules; about 5% loose quarts sand; some forams washing from the sandstone and the shale fragments, Globotruncata araca variety the most abundant form present; a few Ostracods also present.

2885-2900 Cuttings composed mainly of fragments of very fine-grained, angular, light grey, argillaceous and somewhat micaceous sandstone, some fragments of dark brownish-grey, micaceous shale, as above, a number of pyrite nodules; a few fragments of white limestone and glauconitic limestone, apparently coming from higher depths; a small amount of glauconite, also apparently cavings; smaller foreminifera fairly common at this depth, species characteristic of the Upper Ripley, or high Navarro common.

2900- 15 Like the preceding.

2915- 30 Cuttings of light grey, fine, angular, slightly argillaceous and somewhat micaceous sandstone; many fragments of dark, brownish-grey, micaceous shale; many sandy pyrite nodules, micro-fauna at this depth somewhat different from that noted in preceding samples, but still Ripley in character.

2930- 45 About 50% of washed material sandstone and clay-shale, as above, and 50% uneven-grained quartz sand; some forams present, as above.

2945- 60 Similar to the preceding; a small portion of the materials present at this depth obviously cavings.

2960- 75 Like the preceding.

2975- 90 Like the preceding.

2990-3005 Cuttings composed mainly of light grey, very uneven-grained sand, many fragments of dark grey, micaceous clay-shale, some fragments of fine, angular, micaceous sandstone, numerous sandy pyrite nodules; fragments of several types of limestone from much higher depths in the hole; a small amount of glauconite, possibly from savings.

3005- 20 Similar to the preceding; a considerable amount of the material at this depth apparently cavings; some Ripley forams present, as above.

3020- 35 Like the preceding.

3035- 50 Cuttings of light grey, calcareous and micaceous, very fine-grained sandstone, and very finely sandy limestone; many fragments of the grey, micaceous shale; about 50% fine, sharply angular, clear quartz sand; a small amount of glauconite; and a few forams, as above.

3050- 65 Cuttings of uneven-grained (mainly fine and angular) clear quartz sand, and about 20% glauconite, numerous fragments of a highly glauconitic, calcareous, and somewhat micaceous sandstone, or sandy marl; and numerous fragments of the dark brownish-grey, micaceous clay-shale; a small amount of limestone cavings; some dark greenish-grey, micaceous clay-shale; a number of forams and Ostracods present.

3065- 80 Cuttings composed of about 50% fine, clear quartz sand and 50% flaky fragments of dark grey, micaceous clay-shale, light tan-grey, micaceous clay-shale, fine-grained, micaceous and argillaceous sandstone; a few forams, Globotrunca arca (typical form) very common.

3080- 95 Cuttings composed mainly of uneven-grained, clear quartz sand (very coarse to fine), a few fragments of dark grey and light greyish-tan, flaky, micaceous clay-shale; a few glauconite nodules and some fragments of limestone from much higher depths in the hole.

3095-3110 Like the preceding.

3110- 25 Like the preceding.

3125- 40 No change

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S-U-M-M-A-R-Y

1700-1900 Samples still apparently Claiborne in age; consist mainly of fragments of white, gypsiferous limestone, carrying a few fossils common in the lowest division of the Clairborne covered by the previous report.

1900-2750 Wilcox and (Midway (?)) Materials between these depths consist mainly of glauconitic, sandy and somewhat micaceous, greenish-grey clays and argillaceous and glauconitic sandstone, with occasional thin lenses of sandy and glauconitic, chalky limestone; white to light grey chert also generally present.

Fauna in the upper part of the section characterized by Discocyclina cf. clerki; and in the lower portions by a number of species of smaller foraminifera, Wilcox in age. No marked break was noted in the general lithology representing this section and no Midway species of forams or Ostracods were observed, although a number of typical Wilcox species of both forams and Ostracods were present and often common at intervals throughout the section. It is possible that no Midway was deposited here, or that some of the non-fossiliferous or vaguely fossiliferous calcareous beds near the base of the section may represent this horizon.

2750-5125 Ripley, Upper Cretaceous. Section consists of dark grey to brownish-grey, flaky, micaceous clay shales and fine, angular, micaceous and argillaceous sandstones; numerous pyrite nodules common throughout; one glauconitic lens present at 5050-5065: forams are present, though not abundant throughout; species present, characteristic of the Ripley or Upper Navarro of other areas.

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5129-5155 Core #4
Core of moderately hard, gray, sandy clay. Washed: Small residue of fine quartz sand, a few glauconite and pyrite nodules; no fossils noted.

5140- 55 Cuttings mainly composed of very uneven-grained, clear quartz sand and a out 25% flaky fragments of dark brownish-grey clay shale, fragments of fine-grained angular and somewhat micaceous light tan-colored sandstone and many fragments of white limestone (obviously cavings); a few Navarro species of foraminifera.

5155- 70 Like the preceding cutting sample.

5156-5164 Core #5.
Core of extremely finely sandy and slightly glauconitic grey, marly shale. Washed: Leaves a very small residue of small fragments of the marl and fine sand washing from some; an occasional foram present.

5170- 85 Cuttings composed mainly of very uneven-grained (coarse to very fine), light grey sand; a few fragments of white limestone from much higher depths in the hole, and some fragments of dark brownish-grey clay.

5185-5200 Similar to the preceding; some fragments of the fine-grained, light tan-colored, micaceous sandstone; most of this material apparently cavings.

5200- 15 Like the preceding.

5215- 30 Like the preceding.

5230- 45 Like the preceding, with the addition of some fragments of several types of grey to tan, finely sandy, micaceous clay.

5245- 60 Like the preceding.

5252-5262 Core #6.
Core of grey, sandy and micaceous clay. Washed: Small residue of more sandy fragments of the clay; no fossils noted.

5260- 75 Cuttings mainly sandy, as described from previous cutting samples in this report, and fragments of several types of grey, micaceous clay and grey, highly sandy and micaceous clay; many fragments of white limestone from much higher depths.

5275- 90 Like the preceding.

5290-5305 Like the preceding with the addition of a number of fragments of light grey, highly glauconitic and marly clay.

5305- 20 Cuttings of sand, as above, and about 20% fragments of light grey, micaceous and highly sandy, hard clay and hard light grey, argillaceous and micaceous sandstone, fragments of dark grey, flaky, micaceous clay and some fragments of white limestone (apparently cavings), and small nodules of yellowish-green glauconite.

5320- 35 Like the preceding.

5335- 50 Cuttings at this depth, in addition to the sand and some lime fragments, as above, contain about 10% fragments of flaky, dark grey, micaceous clay and fragments of a hard, calcareous, very fine-grained, somewhat micaceous sandstone and some hard, light grey, highly sandy and micaceous clay.

5350- 65 Cuttings here, in addition to the usual sand content, etc., carry many fragments of a moderately hard, micaceous, highly and very finely sandy, light grey clay and argillaceous, very fine-grained, micaceous sandstone; a few forams noted in this material, Globotruncata arca and Gumbelina plummerae were the most common species present.

5365- 80 Like the preceding.

5380- 95 Cuttings of sand and some limestone, as above, and fragments of several types of grey clay, sandy clay and argillaceous sandstone; all generally more or less micaceous; a small amount of yellowish-green glauconite and an occasional foram present.

5395-5410 Cuttings of uneven-grained sand and some limestone, as above, also numerous fragments of dark grey, flaky and somewhat micaceous clay-shale, which probably represents the material being drilled at this depth; numerous fragments of light grey, very fine-grained, micaceous sandstone also present.

5410- 25 Similar to the preceding, with a few fragments of light grey, slightly microfossiliferous marl.

5425- 40 Cuttings of sand and grey-green, soft marl. Washed: Residue similar to the preceding, with a slight increase in the marl fragments present.

5440- 55 Like the preceding.

5455- 70 Cuttings composed mainly of moderately fine, angular, clear quartz sand and flaky fragments of brownish-grey, somewhat micaceous and irregularly microfossiliferous marly shale; a few fragments of white limestone (apparently cavings) and a small amount of glauconite; forams fairly abundant; common forams noted were:

Gumbelina plummerae
Globigerina cretacea
Globotruncata arca
Gyroidina alabamensis
Nodosaria sp. (fragments)
Planulina taylorensis
Planoglobulina acervulinoides
Renticulina rotulata var.
Clavulina plummerae

Ostracods -
Cytherides plumeri
Cythere foersteriana

On the basis of both the forams and the Ostracods present, this sample would be correlated with the Taylor (about the equivalent of the Pecan Gap of Texas).

3470- 85 Like the preceding.

3485-3500 Similar to the preceding, with the fragments of brown, marly shale more abundant than the sand at this depth; a few fragments of Inoceramus sp., forams and Ostracods fauna like the preceding.

3500- 15 Like the preceding, Inoceramus fragments somewhat more abundant; forams less abundant.

3515- 30 Cuttings composed mainly of fragments of moderately hard, grey, somewhat micaceous marl; a few Inoceramus fragments and a few fragments of Ostraea sp., forams much less abundant, Globigerina Cretacea variety, Globotruncata arca and Robulus sp. (Taylor form) were the common forams noted.

3530- 45 Similar to the preceding, with a number of small fragments of light grey, glauconitic, fine-grained sandstone also present, and numerous nodular fragments of bright green glauconite.

3545- 60 Cuttings composed mainly of fragments of dark brownish-grey, slightly micaceous, marl; a small amount of uneven-grained quartz sand; and many small nodules of light green glauconite; forams and Ostracods fairly rare; species as noted from 3515-3530.

3560- 75 Like the preceding.

3575- 90 Similar to the preceding; forams more abundant, species common, the same as above; Ostracods also the same with the addition of many specimens of Cythere sphenoides and Bairdia rotunda, varieties of Globotrundata arca common at this depth; also a large variety of Globigerina cretacea and Heterostomella cunesta.

3590-3605 Similar to the preceding; with some fragments of very fine-grained, somewhat glauconitic and calcareous sandstone also present.

3605- 20 Like the preceding, with a number of fragments of light greenish-grey, very finely glauconitic and slightly micaceous clay also present; fragments of the sandstone noted in the preceding samples very abundant in the fine screenings; no change noted in the fauna present.

3620- 35 Similar to the preceding, an increase in the number of light grey, micaceous sandstone fragments present, about 25% glauconite in the fine screenings.

3635- 50 Cuttings composed mainly of fragments of grey, marly shale, with some fragments of light grey, very fine-grained, somewhat micaceous sandstone; numerous Inoceramus fragments and some fragments of light grey, glauconitic, chalky and somewhat sandy marl, glauconite about 25% of the fine screenings; no marked change in the fauna noted.

3650- 65 Like the preceding.

5665- 80 Similar to the preceding, but glauconite less abundant; fauna at this depth composed mainly of the following -

Robulus sp. (Taylor form)
Globotruncata arca
Globotruncata fornicata
Globigerina cretacea variety
Marginulina cf. silicula
Clavulina sp.

Ostracods -

Cythere foersterianna var.
Cythere sphenoides
Cytherella bullata

5680- 95 Material similar to the preceding, and about 75% apparently cavings, partly coarse quartz sand.

5695-5710 Cuttings composed mainly of fragments of dark grey marl; many Inoceramus fragments with about 50% uneven-grained quarts sand and scattered fragments of white limestone (possibly cavings); some forams and Ostracods as at 5665- 80.

5710- 25 Like the preceding, forams and Ostracods much less abundant.

5725- 40 Cuttings composed mainly of fragments of dark grey clay shale (slightly micaceous), a few Inoceramus fragments and a small amount of glauconite; about 10% sand and fragments of various materials apparently coming from higher depths in the hole; micro-fauna present, consists mainly of small varieties of Globigerina cretacea and Globotruncata arca, a small variety of Planulina taylorensis and Cyroidina depressa var.

5740- 55 Like the preceding.

5755- 70 Cuttings mainly uneven-grained (coarse to very fine), light grey quarts sand, about 25% grey shale, as above, and a few fragments of white limestone and fine-grained sandstone (possibly coming from higher depths); one fragment of Vaginulina cf. simmondsi, a lower Taylor variety.

5770- 85 Like the preceding.

5785-5800 Cuttings of grey, somewhat micaceous clay-shale, many Inoceramus fragments, a small amount of sand, as above, and stray fragments of fine-grained, micaceous sandstone and grey glauconitic, chalky marl and about 1% glauconite; a few forams, species as listed from 5725-40.

5800- 15 Like the preceding.

5815- 30 Grey shale, as above, with about 50% coarse to very fine quartz sand and many white limestone fragments (both the sand and the limestone probably cavings), several specimens of Vaginulina cf. simmondsi (lower Taylor variety) apparently washing from the shale.

5830- 45 Like the preceding.

3845- 60 Cuttings of brownish-grey shale and 50% (coarse to very fine) clear quarts sand, small fragments of white lime (apparently from higher depths) and a small amount of glauconite; a few Inoceramus fragments and a few fragments of a small Ostrea sp., forams comparatively rare; no marked change in the fauna, which is still Taylor in character.

3860- 75 Like the preceding.

3875- 90 Like the preceding, small variety of Globigerina cretacea and Gumbelina globulosa, the most abundant forams present.

3890-3905 Like the preceding.

3905- 20 Like the preceding.

3920- 35 Similar to the preceding, with the sand and lime content somewhat reduced.

3935- 50 No change.

3950- 65 No change.

3965- 80 Cuttings of brownish-grey shale, as above, and some loose sand and lime fragments also as in the preceding samples; in addition, this depth shows numerous fragments of a white, sandy and glauconitic, chalky limestone and some fragments of a light tan-colored, fine-grained sandstone; numerous Inoceramus fragments and a few specimens of Vaginulina sp. Cushman, a characteristic upper Austin form.

3980- 95 Like the preceding, but no Vaginulinas sp. Cushman present; very few forams.

3995-4010 Cuttings about 90% light grey sand (coarse to very fine) and some fragments of fine-grained, light grey sandstone and white, micaceous sandstone; a number of fragments of pyritised lignite and some pyrite nodules; a very small amount of brownish-grey shale and grey marly shale, as noted in preceding samples.

4010- 25 Like the preceding.

4025- 40 Cuttings mainly loose sand, as above, and many fragments of moderately fine-grained, white, angular, micaceous sandstone, some fragments of shale, etc., probably cavings.

4040- 55 Mainly sand and white, micaceous sandstone, as above, some fragments of Ostraea sp., a small amount of brown shale and marly, light grey shale, as above.

4055- 70 Like the preceding.

4070- 85 Cuttings of sand and sandstone, as above, and about 25% fragments of grey and brownish-grey shale; a few fragments of a heavy-shelled Ostrea sp., as above.

4055-4060 Core #7. - 1
Core of grey, argillaceous and micaceous, soft sandstone.
Washed: Large residue of fine, even-grained, white sand and some white mica; no fossils noted.

4060-4070 Core #8. - 2
Core of sandstone, similar to the preceding, (core) but darker in color. Washed: Large residue of uneven-grained, white sand (grains coarse to fine in size) and a few indurated nodules of grey clay.

4085-4100 Cuttings composed mainly of loose, uneven-grained sand and some fragments of white, micaceous sandstone, as above, about 5% fragments of brownish-grey shale and a few fragments of light greenish-grey clay-shale (probably cavings).

4070-4080 Core #9.
Core of white, soft, argillaceous sandstone. Washed: Large residue of very uneven-grained (very coarse to fine) white sand, a few pink grains present, a few fragments of carbonaceous material and an occasional fragment of Ostraea sp., a few indurated fragments of the clay matrix.

4100- 15 Cuttings composed mainly of uneven-grained, white sand and fragments of fine-grained, white, micaceous sandstone; a few fragments of Ostrea sp.; about 10% of the residue composed of fragments of several types of grey and brownish-grey, flaky clay-shale, and some fragments of light green, calcareous clay and white glauconitic, possibly nodular, limestone.

4115- 30 Like the preceding.

4130- 45 Cuttings almost entirely coarse, white sand and a few fragments of Ostrea sp., a few fragments of grey clay-shale, as above.

4145- 60 Cuttings composed mainly of very uneven-grainnd (coarse to very fine) white sand, with some pink granite, a few fragments of fine-grained, white micaceous sandstone, and a small amount of grey clay-shale, a few fragments of pyritized lignite.

4160- 75 Like the preceding.

4175- 90 Like the preceding.

4190-4205 Like the preceding.

4205- 20 Small sample, like the preceding in character.

4220- 35 Like the preceding, with the addition of some fragments of light greenish-grey, micaceous and somewhat sandy clay.

4235- 50 Cuttings mainly uneven-grained, clear quarts sand (few pink grains), a few fragments of carbonaceous material and some dark grey and brownish-grey shale fragments (probably cavings).

4238-4245 Core #10 - 1.
Core of hard, grey clay, somewhat micaceous and slightly sandy, showing some small fragments of carbonaceous material. The material is also slightly glauconitic and calcareous and contains a number of fragments of Ostrea sp.

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S-U-M-M-A-R-Y

5129-5455 Ripley (Navarro Division)
Samples composed mainly of grey, sandy and micaceous clays and fine-grained, light tan-colored, micaceous sandstone, materials either non-fossiliferous or sparsely fossiliferous, slightly pyritic and occasionally slightly glauconitic.

5440-5965 Taylor Division.
Materials mainly dark brownish-grey and some light grey, slightly micaceous, fossiliferous marly shale; both forams and Ostracods common throughout (note species lists), species present typical of the Taylor in buried sections across the entire Gulf coast; the top of this Division corresponds faunally to the top of the Selma in buried sections to the south and west; Inoceramus fragments and fragments of a small Ostrea sp. fairly common throughout.

5950-4245 Eutaw
The top of this Division carries some grey marly clays which are similar in character to those noted in the previous Division, but also carries specimens of a distinctive species of Vaginulina, which has a very narrow and definite time range and marks the Upper Austin horizons not only in Texas but in northern Florida and eastern Alabama buried sections, as well, and usually accompanied by a number of other typical Austin species.

These beds hereon followed almost immediately by a section composed mainly of white, uneven-grained sand (a few pink grains), white micaceous sandstone and light grey to light greenish-grey, micaceous and sandy (occasionally slightly glauconitic) clays; fragments of a heavy-shelled Ostrea sp. and some fragments of lignite and pyritized lignite frequently noted.

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4250- 65 Cuttings composed principally of uneven-grained, clear quartz sand, with about 25% fragments of fine-grained, white, micaceous sandstone, some fragments of light greenish-grey, micaceous clay and fragments of several types of grey and brownish-grey shale; and some white limestone, obviously coming from from much higher depths in the hole.

4246-4255 Core #11 - 2
Core of light grey, argillaceous and highly micaceous, fine, angular-grained sandstone and some paper-thin lenses of black carbonaceous shale.

4265- 80 Cuttings like those described from 4250-4265, with some fragments of the sandstone described from Core #11.

4280- 95 Cuttings of a hard, grey, calcareous sandstone, carrying abundant fragments of Ostraea sp., fragments of white, micaceous sandstone, as above, loose sand and some shale fragments as in the higher cuttings of samples covered by this report.

4253-4262 Core #12.
Core of hard, grey, calcareous, somewhat micaceous sandstone and dark grey sandy and micaceous shale, both carrying abundant fragments of a small, heavy-shelled Ostraea sp.

Cuttings of materials as described from the preceding sample, also loose, uneven-grained quartz sand and some shale fragments from higher depths.

Cuttings composed mainly of fragments of dark brownish-grey, somewhat micaceous and slightly carbonaceous clay-shale; some fragments of the calcareous and fossiliferous sandstone as above, numerous fragments of Ostraea sp.; some cavings as in the previous cuttings samples reported on; a few forams, consisting of Cumbelina globulosa, Globigerina cretacea, a small var., and a variety of Planulina taylorensis.

Like the preceding.

Cuttings composed mainly of fragments of a coarse-grained, light gray, calcareous sandstone, carrying some fragments of Ostrea sp., some fragments of clay-shale, as in the preceding sample, and some cavings.

4269-4275 Core #13.
Core of light grey, fine, angular, etched, highly micaceous, soft, argillaceous sandstone.

4525-4540 Core #14.
Sandstone similar to the preceding, but more finely consolidated and containing lenses of brownish-grey micaceous shale.

Cuttings composed mainly of fragments of dark brownish-grey, somewhat carbonaceous, clay-shale, and very uneven-grained (coarse to fine) quartz sand; some fragments of various material noted at higher depths.

Cuttings, as above, and about 50% fragments of a pink, granatoid rock, resembling Alaskite, composed of quartz, biotite and feldspar.

Like the preceding.

Fragments of the pink granatoid rock first noted at 4355-4370

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S-U-M-M-A-R-Y

Samples covered by this report divided as follows:

4235–4570	Eutaw, Upper Cretaceous (probably Austin) in age; consisting of argillaceous and some calcareous, white to light grey, micaceous sandstone, and some dark, white brownish-grey shale; fragments of Ostrea sp. frequently abundant; a very small amount of carbonaceous material also present.
4570–4575	Granitoid rock, resembling Alaskite.

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