They form four quite abnormal N–S directed rows of rocks consisting of chalk-like Navet Formation of Middle Eocene age. A lesser mass of Navet Formation was found in a bore-hole of the Forest Field in Trinidad inside the diapiroid core of mud-flow consisting mainly of Miocene Cruse clays. We, therefore, can assume that likewise the entire area between the Soldado Rock and the Pelican Rocks represents a diapiroidal mass of abnormally thick Miocene turbidites containing submarine slip-masses of older rocks.

F. RECAPITULATION OF THE SAMPLE LISTS OF VARIOUS BEDS[7])

Bed 1

P.J.1152(C-5), glauconitic limestone with oysters
K.10705(C-5), recrystallized glauconitic limestone with mollusks and Smaller Foraminifera
K.10706(C-5), recrystallized glauconitic mollusk–algae limestone with Smaller Foraminifera
K.10704(C-5), recrystallized coquina; some Smaller Foraminifera

Bed 2

K.2948(C-5), silt with *Amphistegina*
K.2949(C-5), MAURY's mollusk bed (Bed 2, 1912)
K.9454(B-4), mollusk–algae limestone with common large oysters and scattered microfossils, also some small Larger Foraminifera
Z.444B(B-4), lumachelle with some *Amphistegina* and Dasyclad algae
E.L.1575 and P.J.1165(B-4), limestone with echinoids (*Salenia*)
P.J.1143(C-5), limestone with poorly preserved mollusks

Slump masses and erratic blocks originating from the Paleocene

K.1317(D-5), mollusk–algae limestone with Smaller Foraminifera (as K.10705 and 10706, Bed 1)
K.2849(F-3), limestone with karren, full of mollusks
K.2875(G-3), limestone with *Venericardia*
P.J.1145(B-3), limestone with fragments of large oysters
P.J.1163(B-5), massive limestone with large oysters
P.J.1164(C-5), id.
P.J.1166(B-3), id.
K.1317a(F-4), coquina as in Bed 2
K.2653(E-4), id.
K.3736(F-3), id.
K.3742(B-5), id.
K.3873(F-2), id.
K.10713(B-3), id.
K.11445(B-3), id.
P.J.1148(F-3), id.
P.J.1149(F-4), id.
P.J.1150(E-4), id.
P.J.1151(E-4), id.
P.J.1158(E-4), id.

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[7]) Roughly in stratigraphical order, from bottom to top.

The initials preceding the numbers refer to the following collectors: T.L.L. = Trinidad Leaseholds Ltd.; K. = H. G. Kugler; Rz. = H. H. Renz; Cd. = C. M. B. Caudri; K.S. = K. Schmid; Z. or F.Z. = F. Zyndel; Gr. = T. F. Grimsdale; E. L. = E. Lehner; J.S. = J. B. Saunders; P.J. = P. Jung.

P.J.1167(B-3), id.
K.S.25(G-3), greenish-grey, white-spotted markasitic *Amphistegina*–algae limestone, with traces of Dasyclad algae
K.3876, pars (F-3), Dasyclad algae limestone
K.10711(D-3), id.
K.10724, pars (D-1), id.
J.S.1949 (D-1), id.
J.S.1954 (C-1), id.
K.2851(E-4), typical Athecocyclina limestone, with algae and with abundant echinoids, mollusks and Smaller Foraminifera in separate pockets
P.J.1159(E-4), «Athecocyclina limestone», locally without Larger Foraminifera: glauconitic sandy Globigerina limestone
P.J.1160(E-4), as P.J.1159
K.3740, pars (E-4), «Athecocyclina limestone», echinoid–algae limestone, locally without Larger Foraminifera (as Cd.22 and 23); pebble in a block of Ranikothalia limestone!
K.1318(F-3), typical Athecocyclina limestone (as K.2851)
K.2850(F-3), limestone, silty, glauconitic, knobbly weathering
Cd.21(F-3), «Athecocyclina limestone», locally a glauconitic Globigerina limestone as P.J.1159
K.1319(F-3), as Cd.21
Cd.22(G-3), typical Athecocyclina limestone with abundant Globigerinidae, echinoids and very small algae
Cd.23(G-3), as Cd.22, but locally without Larger Foraminifera
K.3876, pars (F-3), algae limestone resembling Cd.22
K.10720(B-2), typical Athecocyclina limestone with some *Ranikothalia* and common *Neodiscocyclina*
K.906(C-4), Ranikothalia limestone, slumped into Bed 3
K.10702(D-4), Ranikothalia limestone, slumped into Bed 3
Rz.252(C-4), id.
K.10701(D-4), id.
T.L.L.125(C-4), id.
K.2951B, pars (D-4), pebble of Ranikothalia limestone in Bed 4
K.3694(D-2), Ranikothalia limestone
K.3739(G-3), Ranikothalia–Neodiscocyclina grimsdalei limestone
K.3876, pars (F-3), id.
K.3740, pars (E-4), Ranikothalia–Neodiscocyclina grimsdalei limestone containing pebbles of algae limestone with Smaller Foraminifera and echinoids like the Athecocyclina limestone Cd.23
K.10708(D-3), Ranikothalia–Neodiscocyclina grimsdalei limestone
K.10725(B-3), id.
K.10717(B-2), Neodiscocyclina grimsdalei limestone with abundant *Ranikothalia*
Rz.248(F-3), Neodiscocyclina grimsdalei limestone with common *Ranikothalia*
K.10710(D-3), id.
K.10724, pars (D-1), Neodiscocyclina grimsdalei limestone
K.9453(G-3), pure Neodiscocyclina grimsdalei limestone

Bed 11

Lower part:

Gr.627(C-3), "greensand" (pure glauconite) with abundant *Proporocyclina tobleri*
K.3693(D-3), Proporocyclina tobleri limestone with abundant megafossils, amongst others echinoids (cf. *Linthia*) and oysters
K.10712(C-3), Proporocyclina tobleri limestone
K.10709(D-3), glauconite, interbedded in Proporocyclina tobleri limestone
K.10715(B-3), limestone block with poor *Proporocyclina* fauna tumbled down from the cliff of Bed 11 onto Bed 10
K.3878(D-3), friable highly glauconitic Proporocyclina tobleri limestone with rich fauna

Upper part:

K.3696(B-2), "greensand" (glauconite with *Proporocyclina tobleri* and "*Terebratula*")
K.10719(B-2), Proporocyclina tobleri limestone
K.1496(B-1), type sample of RUTSCH's "Boca de Serpiente" mollusk fauna; *Tubulostium*. No foraminifera
J.S.1955(B-1), highly fossiliferous and glauconitic limestone (Neodiscocyclina mauryae limestone)
P.J.1157(B-1), glauconitic rock with hematitic crust
K.10721(C-1), friable glauconitic orbitoid limestone
K.10722(C-1), friable glauconitic limestone (as K.10721, but less fossiliferous)
E.L.1440(C-1), friable glauconitic limestone with foraminifera and some mollusks. *Tubulostium*

Bed 3

K.2950(C-4), marl, in itself nearly barren (very rare Late Eocene Larger and Smaller Foraminifera), but containing a very rich reworked Paleocene foraminiferal fauna
K.2951(C-4), marl; as K.2950
Rz.254(D-4), barren silt
Rz.255(D-4), marl; as K.2950
Rz.256(D-4), barren silt

Bed 4

K.2951B(D-4), marly rubble with a very rich foraminiferal fauna, predominantly reworked from the Paleocene; sparse Late Eocene assemblage
Rz.253(D-4), weathered fossiliferous earth with mixed Paleocene and Late Eocene foraminifera
Rz.256(C-4), barren silt
K.1321(B-3), hard limestone breccia full of Larger Foraminifera and fragments of Ranikothalia limestone and of highly recrystallized dense algae limestone
Rz.245(D-5), barren marl
K.2877(G-3), hard barren silt
K.3739(G-3), lense of highly crystallized limestone full of Paleocene detritus (calcite rhombohedrons), with poor Late Eocene fauna
K.3743(C-5), crumbly marl with echinoid and mollusk fragments, small solitary corals and a few Larger Foraminifera
K.S.24(G-3), grey-and-brown spotted limestone (as K.S.23) with reworked Paleocene fauna only
K.S.23(G-3), grey-and-brown spotted limestone with predominantly Paleocene fauna but also rare *Lepidocyclina*
Rz.247(F-3), lens of grey glauconitic limestone with a rich fauna of Late Eocene Larger and Smaller Foraminifera

Bed 10

J.S.1220(B-3), marl with a predominantly shallow water fauna of Smaller Foraminifera
K.1500(B-3), friable glauconitic limestone with oysters and a rich microfauna
P.J.1144(B-3), rubbly limestone with echinoids
J.S.1024(B-3), echinoid marl with Smaller Foraminifera
K.3677(E-1), marl with extremely rich foraminiferal fauna; undisturbed sediment containing entire populations of Larger Foraminifera, amongst others *Lepidocyclina pustulosa* (detached block fallen off the cliff of Bed 10 onto Bed 9)
Rz.250(D-1), marly glauconitic limestone
Rz.251(B-3), id.
K.903(B-3), friable foraminiferal limestone
P.J.1153(B-3), rubbly limestone with echinoids
K.10707(D-3), glauconitic marl
J.S.1032(B-3), silt interbedded with rubbly limestone, with Larger and Smaller Foraminifera
P.J.1154(B-3), limestone with algal nodules and mollusks
K.3689(A-3), foraminiferal limestone

K.3690(B-3), glauconitic marl
K.3691(B-3), id.
K.10716(B-3), marl full of badly preserved Larger Foraminifera and small megafossils, amongst others *Terebratulina*
J.S.1956(A-3), dense foraminiferal limestone
K.10718(B-3), glauconitic marl with recrystallized foraminifera
J.S.1026(B-2), sandy marl with Smaller Foraminifera
K.3692(C-3), highly fossilferous glauconitic marl with small megafossils, amongst others *Terebratulina kugleri*
K.2652(D-1), glauconitic orbitoid marl
J.S.1950(D-1), Operculinoides marl

Bed 5

K.2956(D-4), barren calcareous quartzose sandstone
K.1495(D-4), barren non-calcareous quartzose sandstone

Bed 6

K.2955(D-4), barren silt

Bed 7

K.2954(D-4), marl with poor Larger Foraminifera fauna but rich in Smaller Foraminifera ("Hantkenina marl")
K.2855(F-3), glauconitic marl full of Larger Foraminifera

Bed 8

K.2953(D-4), barren silt with clay layers and carbonaceous specks

Bed 9

K.905(D-3), sandstone lens, barren
E.L.1441(D-3), barren sandstone
K.1499(E-2), marl with very rich Larger Foraminifera fauna
K.2952(D-3), barren silt
E.L.1571(E-1), id.
K.2856(E-2), id.
Rz.249(E-1), id.
K.3678(E-1), barren silty limestone
E.L.1441(E-1), barren sandstone

Bed 9a (Asterocyclina marl)

P.J.1161(E-4), crumbly, somewhat silty marl; nearly barren
K.3737(E-4), calcareous silt with Paleocene blocks; very poor mixed fauna
J.S.1030(F-3), marl with Smaller Foraminifera
P.J.1146(E-4), marl with poor fauna, chiefly of Smaller Foraminifera
K.2651(E-4), marly clay with glauconite: very rich fauna of Smaller and Larger Foraminifera
J.S.1029(E-4), marl with Smaller Foraminifera
P.J.1147(E-4), marl (as P.J.1146)
K.2854(= Gr.33) (E-5), marl with a very rich Larger Foraminifera fauna (typical Asterocyclina marl) and relatively few Smaller Foraminifera
J.S.1224(E-4), marl with Smaller Foraminifera
J.S.1223(D-5), marl rich in Smaller Foraminifera and with a fair amount of small and partly juvenile Larger Foraminifera

K.2650(D-5), marly clay with abundant Smaller Foraminifera; Larger Foraminifera very rare
K.1316(D-5), calcareous silt with a very rich Larger Foraminifera fauna and relatively few Smaller Foraminifera
K.3741(D-5), marl with few Smaller Foraminifera and very rare Larger Foraminifera
P.J.1162(D-5), marl as P.J.1146 and P.J.1147, but fauna characterized by the relative abundance of Miliolids, *Glandulina* and *Haplophragmoides*

Blocks of unknown origin in Bed 4

K.3676(F-3), amongst other blocks: fine-grained dark-coloured crystalline limestone
K.10714(B-3), barren quartzitic sandstone
Cd.24(G-3), recrystallized coral limestone
K.S.27(G-3), barren silt nodule with orientated dark organic or crystalline elements

G. ANNOTATIONS TO THE DISTRIBUTION CHART

(see plate II)

1. In 1938, KUGLER added to his sample numbers the letter "b" or "B" in order to distinguish them from a set of duplicate field numbers from a totally different area. VAUGHAN & COLE (1941) reproduced KUGLER's map *with* this additional "B", but throughout the text the letter was omitted. We have done the same here (also on the map) but with one exception: K.2951B (Bed 4) is distinct from K.2951 (Bed 3).

2. In the chart, the order of the various beds is chosen not in accordance with their position in the field but with the age determination of the fauna they contain. Bed 11 is inserted between the Paleocene and the Upper Eocene; Bed 10 is considered as the fully developed deeper-water version of the transgressive Bed 4 and is followed by the younger sequence of Beds 5 to 9a.

Within each bed, the samples are arranged roughly in stratigraphical order, that is: from South to North for Beds 2 and 3, 7 to 9, and 10 and 11. For the chaotic deposit of Bed 4 and for Bed 9a, which latter was belatedly recognized as a separate unit and was not as consistently measured in the field as the rest, the sequence was chosen in a rather arbitrary way, from NW to SE, at right angles to the strike which is more or less parallel to the shore line.

3. The stratigraphical position of K.S.25 is uncertain. Lithologically, the sample is quite different from any of the others; only the possible presence of Dasyclad algae would hint at a Paleocene age.

4. Reworking of older forms into the Upper Eocene is not just a surmise: it is clearly demonstrated in samples such as K.10716 and Rz.250, where the derived specimens are strikingly different in colour and preservation from the autochthonous fauna, both in the Larger and in the Smaller Foraminifera.

No reworked Larger Foraminifera have been observed in sample K.3677 (Bed 10), but the planktonic forams are mainly Middle Eocene.

For convenience, the non-foraminifera are all entered in the chart as "autochthonous". In reality, also these groups are a mixture of older and younger forms.

5. The faunas in samples K.3689, 3691, 3693 and 3696, as marked in the chart, are incomplete. Only the species mentioned by VAUGHAN & COLE for these localities have been entered; we had no duplicate material in our own collection.