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Planktonic Foraminiferal Biostratigraphy Of The Serikagni Formation (Early Miocene) Qasab Well No.13, Qasab Area, North Western Iraq

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ABSTRACT
On the basis of Stratigraphy ranges of (11) Planktonic Foraminiferal species and subspecies the Serikagni Formation in Qasab well no.13 between the depth Interval (617-647) m Northeastern Iraq . is divided Formation into three Biozones these are : from the base to the top of the section .

1. *Globoratalia kugleri* **interval Biozone**.
2. *Globoquadrina dehiscens* interval Biozone.
3. *Catapsydrax stainforthi* Total **range** Biozone .

The present Biozones are Correlated with similar ones . The age of Serikagni Formation is Early Miocene. as show in figure(3).

Introduction
The first description of Serikagni Formation was given (Bellen ,1955 in Bellen et al., 1959). its type section near Bara Village on the mountain Sinjar, the Serikagni Formation consists of marl, marly limestone *Globigerinal* chalky limestone. it has awide distribution during age in Iraq, extending into the Mesopotamian Zone. Foothill Zone and into the northern and western part of stable shelf area (Buday and Jassim,1987). previous stratigraphy and paleontologic studies indicated that Serikagni Formation was deposited in deep open marine basin during Lower Miocene age .

The present work represents a detailed study of the planktonic foraminifera biostratigraph of the Serikagni Formation at Qasab well No .13, Qasab area north western Iraq (Fi**. 1**).

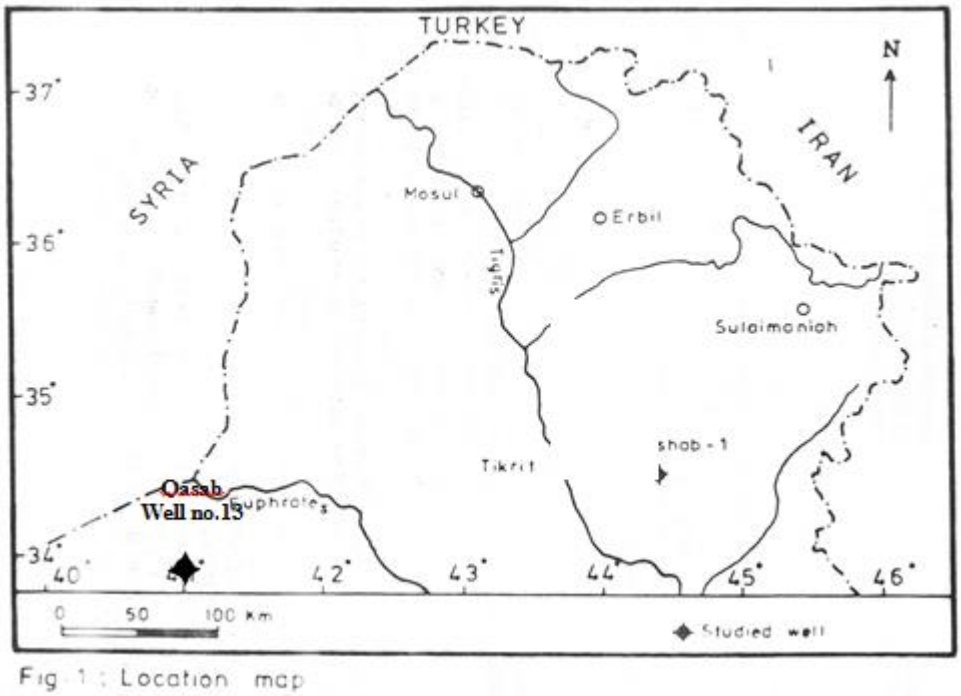


Fig 1 : Location Map

aterials and Lithology

The present study based on (12) samples which were collected from subsurface section of (30) thick of Serkagni Formation near Qasab area , Qasab well no (13) North Western Iraq . fig (1) , The field work showed that Serikagni Formation consist of marl and marly limestone bed , *Globigerinal* chalky limestone . The lower boundary of the Serikagni Formation is unconformable with underling Jaddala Formation (Eocene), The Upper boundary conformable Dhiban Formation .

Biostratigraphy

The studied section of Serikagni Formation yielded rich Planktonic

Foraminiferal assemblage of good preservation (11) Planktonic Foraminifera species and subspecies belonging to (3) genera were identified from the Serikagni Formation .

These Planktonic ic foraminifera assemblage are typical of under tropical t**o** subtropical condition of **depositions**. The stratigraphic distribution of Planktonic forammiferal species and subspecies in Serikagni Formation of Qasab well no.(13) north western Iraq is shown is figure (2) . The stratigraphic distribution of these Planktonic Foraminiferal permits the recognition of three Biozones these from base to top: The present Biozones are correlated with similar ones as shown in figure (3).

1. *Globorotalia kugleri* Intervial Biozone

Definition

interval Zone of adominate taxon between the first appearance of *Globorotalia kugleri* of the base of the Zone, While the first appearance of *Globoquadrina dehiscens* at the top of the Zone.

Age :Early Miocene

Thickness : (10)m from between depth (617-627)m.

Characteristics: The appearance of Genus *Globorotalia* important of stratigraphic event and the *Globorotalia* of adominate of the base of the zone and this genus is represent the boundary transitional between Oligocene to Miocene (Blow, 1969, 1979), Planktonic Forminiferal assemblage that dominate throughout the zone are *Globoquadrina altispira globularis* Bermdez, *Glq. mendicis* Blow, *Globorotalia kugleri* Bolli, *Glr. pseudokugler*, Blow.

Correlation : This Zone is equivalent to the *Globorotalia kugleri* zone of the (Postuma 1971), it is also equivalent to the *Globigerinoids primordius* zone of (Abawi & Maroof, 1992 and Al-Banna et al., 2002 & Al-Banna & Al-Mutwali, 2005). Fig. (**3**).

2. *Globoquadrina dehiscens* intervial Biozone

Definition: the interval zone between the first appearance of *Globoquadrina dehiscens* of the base and the first appearance of *Catapsydrax stainforthi* at the top.

Age: Early Miocene

Thickness : (10)m from between depth (627-637)m.

Characteristics: Planktonic Foraminiferal assemblage that dominatic throughout the Zone are *Globoquadrina dehiscens* (Cushman, Parr & Collins), *Glq. Altispira globularis* Bermudez, *Glq. altispira globosa* Bolli, *Glq. altispira* (Cushman & Jarvis).

Correlation: The present zone is correlated with *Glq. dehiscens praedehiscens* /*Glq. dehiscens* zone of (Blow, 1969, 1979), it is also equivalent to the *Catapsydrax dissimilis* zone of the (Bolli, 1957, 1966), it is also correlated to the lower part of the *Glgs. trilobus* of the (Postuma, 1971), it is also equivalent to the *Glq. dehiscens praedehiscens* /*Glq. dehiscens dehiscens* zone of (Abdul Karim, 1978). Its also equivalent to the lower part of the *Globigerinita stainforthi / Globigerinita dissimilis* zone of (Martinotti, 1981), it is also equivalent to the *Glq. dehiscens praedehiscens* /*Glq. dehiscens dehiscens* of (Khider, 1983 and Abawi & Maroof, 1992), it is also correlated lower part of the *Glgs. tribobus tribobus* zone of (Al-Banna et al., 2002 and Al-Banna and Al-Mutwali, 2005), Fig. (**3**).

3. *Catapsydrax stainforthi* Total range Biozone.

Definition: Total range zone of nominate taxon between the first appearance of *Catapsydrax stainforthi* at the base zone and the initial appearance of *Catapsydrax stainforthi* at the top.

Age : Early Miocene

Thickness: (10)m from between depth (637-647)m.

Characteristic: Planktonic Forammiferal assemblage that dominated throughout the zone are :

Globigerinoides trilobus (Reuss); *Glebigerinoides immature* LeRog; *Globigerinoides obliquus obliquue* Bolli, *Catapsydrax stainforthi* Bolli.

Correlation: This Zone is correlated with the *Globigerina insueta-Catapsydrax dissimilis* Zone of (Blow, 1969, 1979); it is also equivalent of the *Catapsydrax stainforthi* Zone of Bolli, 1957, 1966), it is also equivalent the Upper part of the *Globigerinoides trilobus* Zone of (Postuma, 1971); it is also correlated the *Catapsydrax stainforthi / Catapsydrax dissimilis* Zone of (Abdul Karim, 1978); it is also correlated with the *Catapsydrax stainforthi / Catapsydrax dissimilis* Zone of (Abawi & Maroof, 1992); it is also equivalent to the Upper part of the *Glgs. trilobus trilobus* of (Al-Banna et al., 2002, Al-Banna & Al-Mutwali, 2005). Fig. (3).

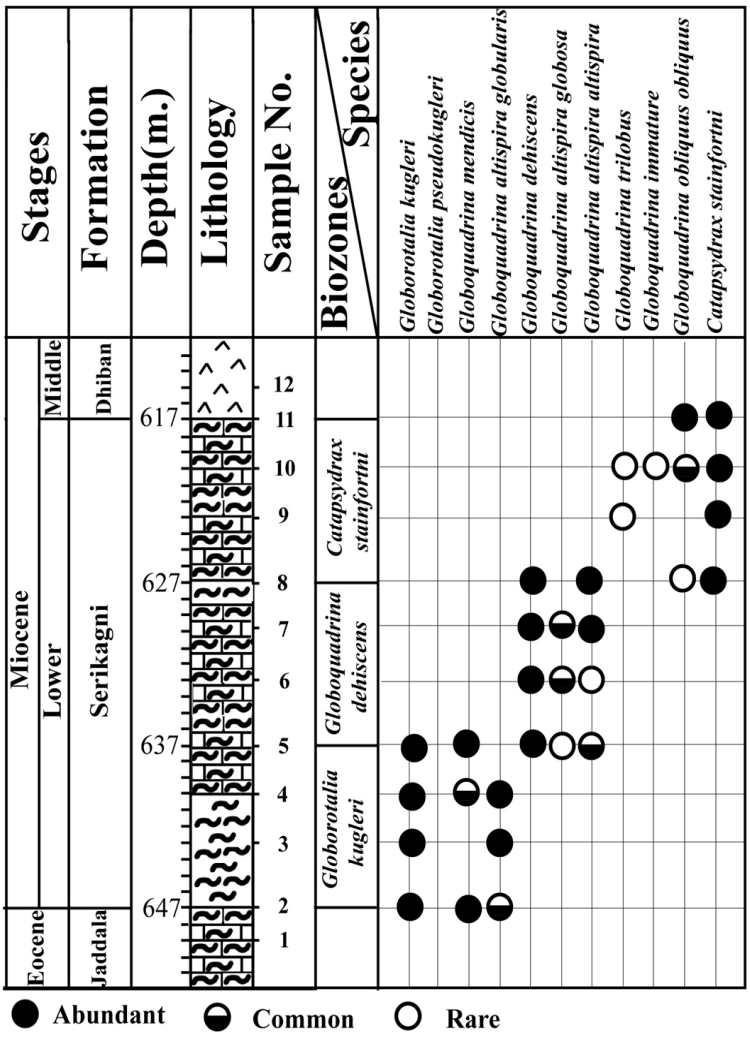


Fig.2: Lithologic section and distribution of Planktonic Foraminifera in the Serikagni Formation in Makhmur well No.13

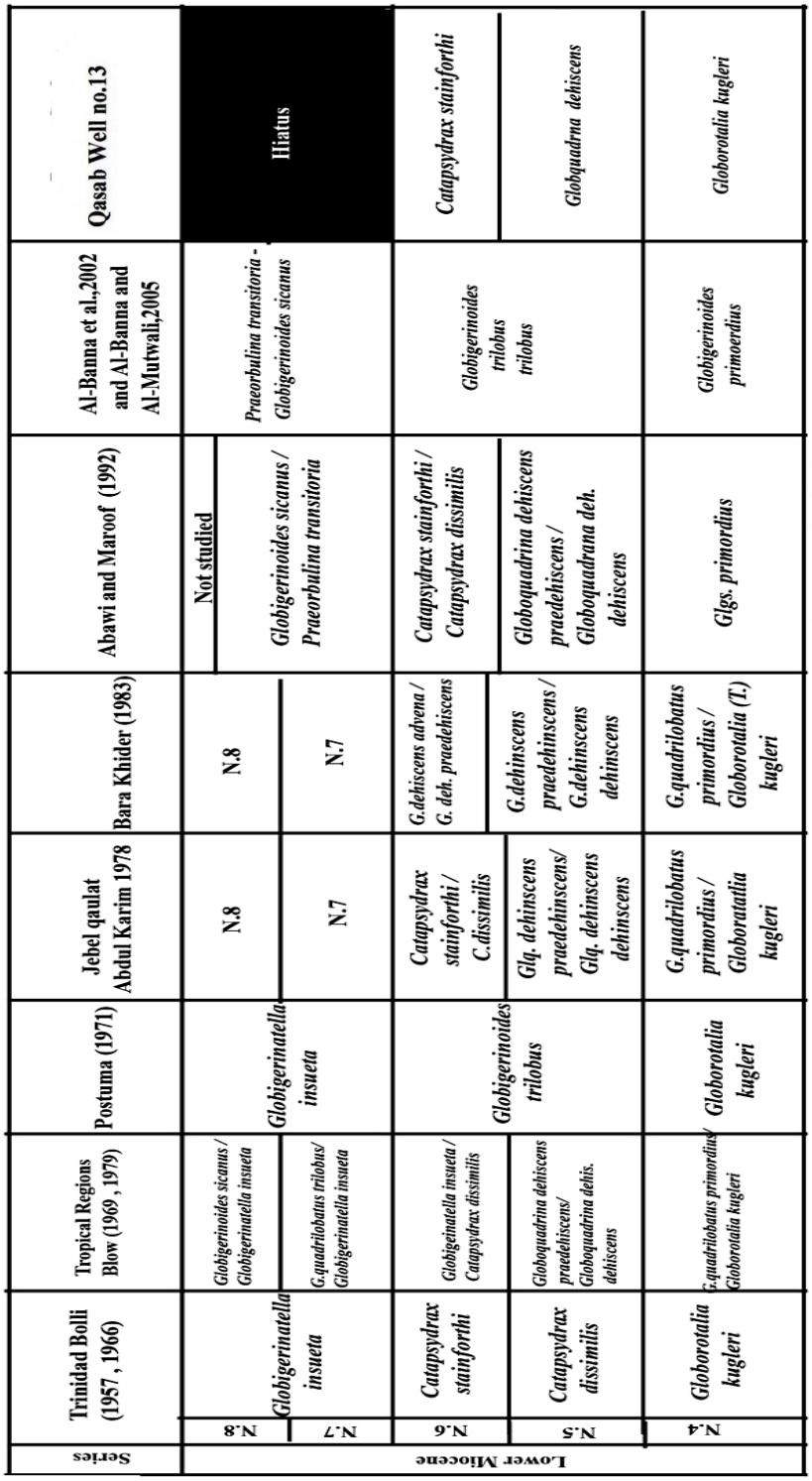


Fig.3: Correlated Biozones of Serikagni Formation in Qasab Well no.13

Conclusion

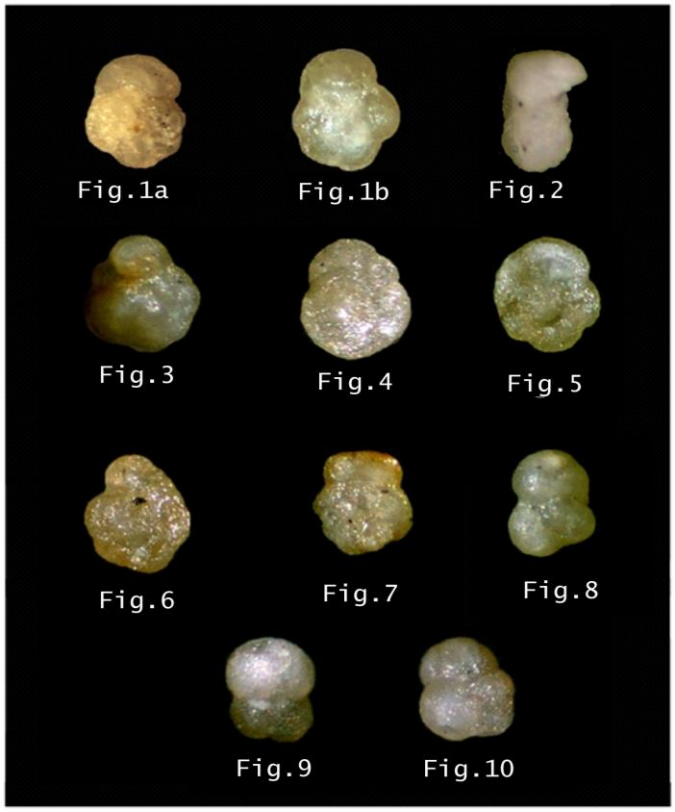
The Serikagni Formation in Qasab well no. 13 has been biostratigraphically divided depending on the ranges of Planktonic Foraminiferal species and subspecies into three Biozones, *Globorotalia kugleri*, *Globoquadrina dehiscens* and *Catapsydrax stainforthi* Zones.

The present Biozones are correlated with similar ones, these Zones clearly reveal E**arly Miocene**.

Plate

Fig. 1a - *Globorotalia kugleri* Bolli, Spiral Side, Serikagni Fm. Sample No. (3) , X 100, Qas. 13.
Fig. 1b - *Globorotalia kugleri*, Umbilical Side, Serikagni Fm. Sample No. (3) , X 100 , Qas. 13.
Fig. 2 - *Globorotalia pseudokugheri* Blow, Serikagni Fm. Sample No. (4) , X 100 , Qas. 13.
Fig 3 – *Globoquadrina dehiscens* (Cushhman , Pair and Lins) Umbilical Side , Serikagni Fm. Sample No. (4) , X 100 , Qas. 13.
Fig 4 – *Globoquadrina altispirs* (Cushman and Jarvis) Spiral Side , Serrikagni Fm. Sample No. (8) , X 100 , Qas. 13.
Fig 5 – *Globoquadrina globularis* Bermudez, Spiral Side , Serikagni Fm. Sample No. (8) , X 100 , Qas. 13.
Fig 6 – *Globoquadrina trilobus* (Postuma), Spiral Side, Serikagni Fm. Sample No. (9) , X 100 Qas. 13.
Fig 7 – *Globoquadrina immature* Releg , Spiral Side , Serikagni Fm. Sample No. (10) X 100 , Qas. 13.
Fig 8 – *Globoquadrina Oblique* Bolli , Umbilical Side , Serikagni Fm. Sample No. (10) , X 100 Qas. 13.
Fig 9 – *Catapsgdrax stainforthi* , Bolli , Umbilical Side , Serikagni Fm. Sample No. (11) , Qas. 13.
Fig10 - *Catapsgdrax stainforthi* , Bolli Spiral Side , Serikagni Fm , sample No. (11) , Qas. 13.

PLATE 2



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الملخص

اعتماداً على المدى الجيولوجي (11) نوع تحت نوع من انواع الفورامنيفرا الطافية في تكوين سريكاكني في بئر قصب (13) بين الاعماق (617-647)م شمال غرب العراق . تم تقسيم التكوين الى ثلاثة انطقة حياتية من الاسفل (الاقدم) الى الاعلى (الاحدث).

1. *Globoratalia kugleri interval Biozone*
2.*Globoquadrina dehiscens interval*
3. *Catapsydrax stainforthi Total range Biozone*

تم مضاهاة الانطقة الحياتية في الدراسة الحالية مع دراسات سابقة داخل وخارج القطر . استنادا الى ذلك حدد عمر تكوين السريكاكني بالمايوسين الاسفل كما في الشكل (3).