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Biostratigraphy of Al-Khasib Formation at Specific Wells in Majnoon Oilfield

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Abstract: ***Khasib Formation has been studied in four wells (Mj – 1, Mj – 3, Mj – 4 and Mj – 5.) within Majnoon oilfield, Southern Iraq.One hundred and sixty thin sections have been studied by microscope in order to determine fauna and observed the microfacies.Twenty five species belonging to the foraminifera genera: Contusotruncana fomica, Dicarenella asymetrica, Dicarenella concavata, Dicarenella primitive, Globotruncana arca, Globotruncana linnena, Globotruncana lapparenti, Globotruncana bulloides, Globotruncana elevate, Helvetoglotruncana helvetica, Hetrohelix glubosa, Hetrohelix moremani, Hetrohelix reussi, Hetrohelix planate, Leavihetrohelix pulchra, Marginotruncana coronata, Marginotruncana marginita, Marginotruncana renzi, Marginotruncana sigali, Muricohedbergilla delrioensis, muricahedbergila planispira, Marginotruncana scheneganси, Whitenella baltica, Whitenella brittonensis, Whitenella paradubia Six range biozones were distinguished. These biozones are: Dicarinella primitiva range zone, Dicarinella concavata range zone, Helvetoglobotruncana Helvetica range zone, Dicarinella asymetrica range zone, Marginotruncana schneegansi range zone and the Globotruncanita elevata range zone.***

Keywords: Lithology, Formation, Platform, Founa

1. Introduction

The Turonian-Lower Companian succession in the Mesopotamian basin is represented by a complete sedimentary cycle of the Khasib, Tanuma, and Sa'adi Formations. This carbonate sequence comprises many shale and marl unites alternating with some porous and fractured carbonate unites in some oil fields (Aqrawi *et al.*, 2010).Khasib Formation characterized by two lithological parts.the lower part Consist of dark shale. Whereas upper part characterized marly limestone. Khasib was mainly deposited within marine carbonate platform shoals and distributed stably in the full field with an average thickness of 40m. Based on the core data, four rock types are defined. Upwards lithology varies from planktonic foram micritc wackestone through green algae packstone to bioclastic and calcarenite grainstone.

2. Location of study area

Majnoon oil field is located in Southern Iraq approximately 60 km Northwestern of Basra Goverment, close to the Iranian border and extending North to Missan province. (4) boreholes have been studied which are Majnoon: well No.1, well No.3, well No. 4, well No. 5. (Fig 1.1)

3. Methodology

To achieve the main aims of current research there are two parts of our works:

3.1 Field work

Field work including collecting of samples (core and cutting) from four boreholes that had been selected from Majnoon oil field.

3.2 Lapratory works:

Studying Biostratigraphy and Microfacies analyses of these sections by thin section examination, which provided from South oil company (S.O.C), these thin sections, have been studied by the aid of analytical microscope in order to determine the fossils and lithological content.

Figure (1-1): Location Map of the study area for Majnoon field Southern Iraq.

4. Biostratigraphy of Khasib Formation

Evolution of Planktonic Foraminifera (Turonian L.Campanian) characterized by increasing richness complex morphotype of planktonic foraminifera (Hart 1999; Premoli silva & Silter 1999).This overall trend shows a short period

of rapid diversification in the Turonian with the appearance of complex morphotype *Marginotruncanids* followed by longer period of recession interrupted in the Santonian by disappearance *Marginotruncanids* and diversification of another group of morphotype complex; the *Globotruncanids* (Petrizzo 2002).the *Globotruncanids* reached their maximum species diversity in the Late Campanian (Gandolfi 1955; Pessagno 1967; Premoli silva & Silter 1999; Pecimotika et al 2014).to analyse these evolutionary patterns in Arabian contex.The early Turonian-L.Campanian planktonic foraminifera assemblage for Khasib Formation in Majnoon Oilfield SE Iraq have been investigated.

4.a Well No. 1: The thickness of Khasib Formation is 45m in this well, see Figure (1.2). Sixteen species of planktonic foraminifera identified as follows:

*Dicarenella asymetrica (*Plt 1, Fig b), *Dicarenella concavata (*Plt.1.Fig c), *Dicarenella primitive (*Plt 1, Fig d), *Globotruncana bulloides (*Plt 2, Fig d), *Globotruncana elevate (*Plt 3, Fig a), *Helvetoglotruncana helvetica (*Plt.3, Fig b), *Hetrohelix glubosa (*PlT 3, Fig c), *Hetrohelix moremani* (Plt.3, Fig d), *Hetrohelix reussi (*Plt 4.Fig a), *Hetrohelix planate (*Plt 4, Fig b), *Marginotruncana schenegansi (*Plt.5, Fige c), *Marginotruncana marginita* (Plt. 4, Fig e), *Marginotruncana renzi (*Plt.5, Fig a), *Marginotruncana sigali (*Plt.5, Fig b), *Muricohedbergilla delrioensis* (Plt 5, Fig d), *muricahedbergila planispira (*Plt.6, Fig a).

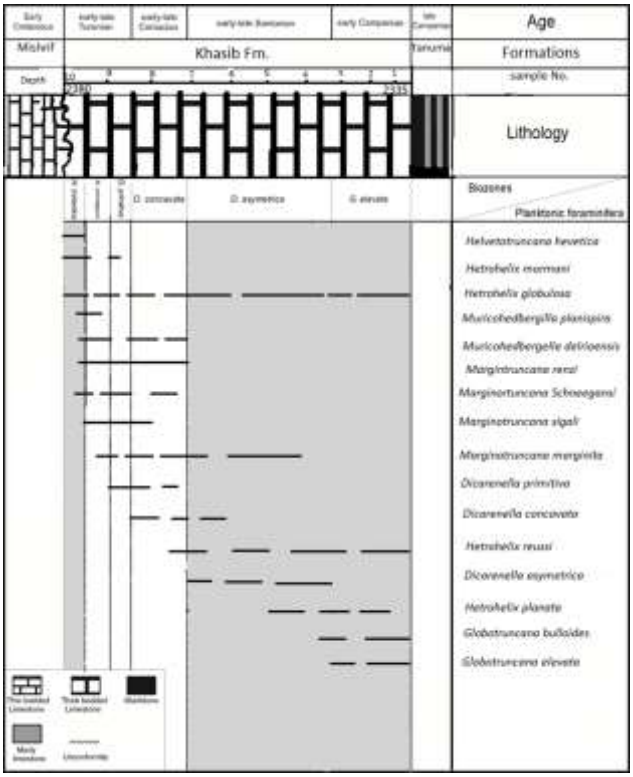

Figure (1.2): Biostratigraphy of Khasib Formation in Majnoon well No.1

4.b Well No.3: The thickness of Khasib Formation is 56m in this well, see Figure (1.3). Twenty two species of Planktonic Foraminifera identified as follow:

*Contusotruncana fomica (*Plt. 1, Fig a), *Dicarenella asymetrical (*Plt. 1, Fig b), *Dicarenella concavata (*Plt.1.Fig c), *Dicarenella primitive (*Plt. 1, Fig d), *Globotruncana arca (*Plt. 2, Fig a), *Globotruncana linnena* (Plt. 2, Fig b), *Globotruncana bulloides (*Plt. 2, Fig d), *Globotruncana elevate (*Plt. 3, Fig a), *Helvetoglotruncana helvetica (*plt.3, Fig b), *Hetrohelix glubosa (*Plt. 3, Fig c), *Hetrohelix moremani* (Plt.3, Fig d), *Hetrohelix reussi (*Plt.4.Fig a), *Hetrohelix planate (*Plt. 4, Fig b), *Marginotruncana coronate (*plt.4, fig d), *Marginotruncana marginita* (Plt.4, Fig e), *Marginotruncana renzi (*Plt.5, Fig a), *Marginotruncana sigali (*Plt.5, Fig b), *Muricohedbergilla delrioensis* (Plt.5, Fig d), *Muricahedbergila planispira (*Plt.6, Fig a), *Marginotruncana schenegansi (*Plt.5, Fig d), *Whitenella baltica (*Plt.6, Fig b), *Whitenella brittonensis* (Plt. 6, Fig c), *Whitenella paradubia (*Plt. 6, Fig d).

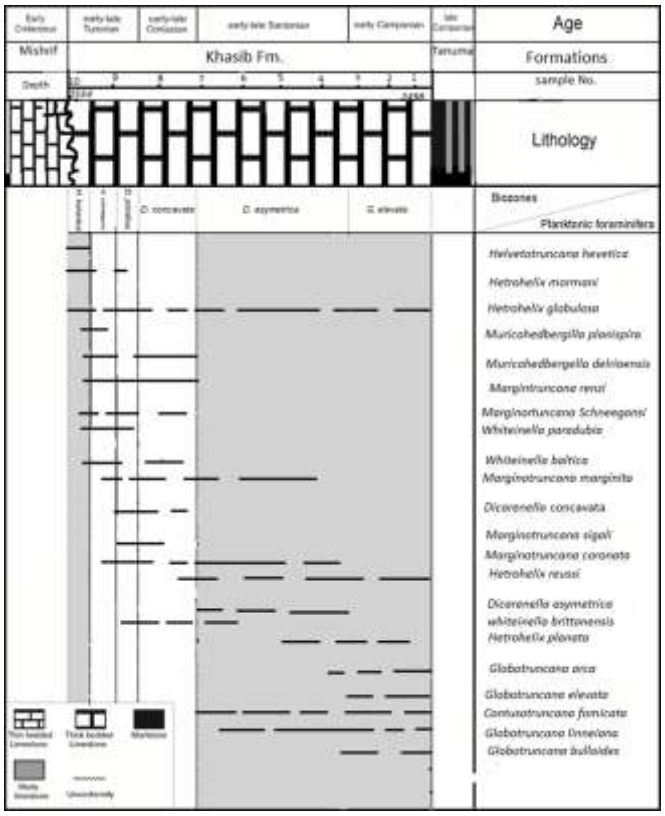

Figure (1.3): Biostratigraphy of Khasib Formation in Majnoon well No. 3

4.c Well No.4: The thickness of Khasib Formation is 50 m in this well, see Figure (1.4). Twenty five of Planktonic foraminifera identified as follows:

*Contusotruncana fomica (*Plt.1, Fig a), *Dicarenella asymetrical (*Plt.1, Fig b), *Dicarenella concavata (*Plt.1, Fig c), *Dicarenella primitive (*Plt.1, Fig d), *Globotruncana arca (*Plt.2, Fig a), *Globotruncana linnena* (Plt.2, Fig b), *Globotruncana lapparenti (*Plt.2, Fig c), *Globotruncana bulloides (*Plt.2, Fig d), *Globotruncana elevate (*Plt.3, Fig a), *Helvetoglotruncana helvetica (*Plt.3, Fig b), *Hetrohelix glubosa (*Plt.3, Fig c), *Hetrohelix moremani* (Plt.3, Fig d), *Hetrohelix reussi (*Plt.4.Fig a), *Hetrohelix planate (*Plt.4, Fig b) *Leavihetrohelix pulchra (*Plt.4, Fig c), *Marginotruncana coronate (*Plt.4, Fig d), *Marginotruncana marginita* (Plt.4, Fig e), *Marginotruncana renzi (*Plt.5, Fig a),

*Marginotruncana sigali (*Plt.5, Fig b), *Muricohedbergilla delrioensis* (Plt.5, Fig d), *Muricahedbergila planispira (*Plt.6, Fig a), *Marginotruncana schenegansi (*Plt.5, Fig c), *Whitenella baltica (*Plt.6, Fig b), *Whitenella brittonensis* (Plt.6, Fig c), *Whitenella paradubia (*Plt.6, Fig d).

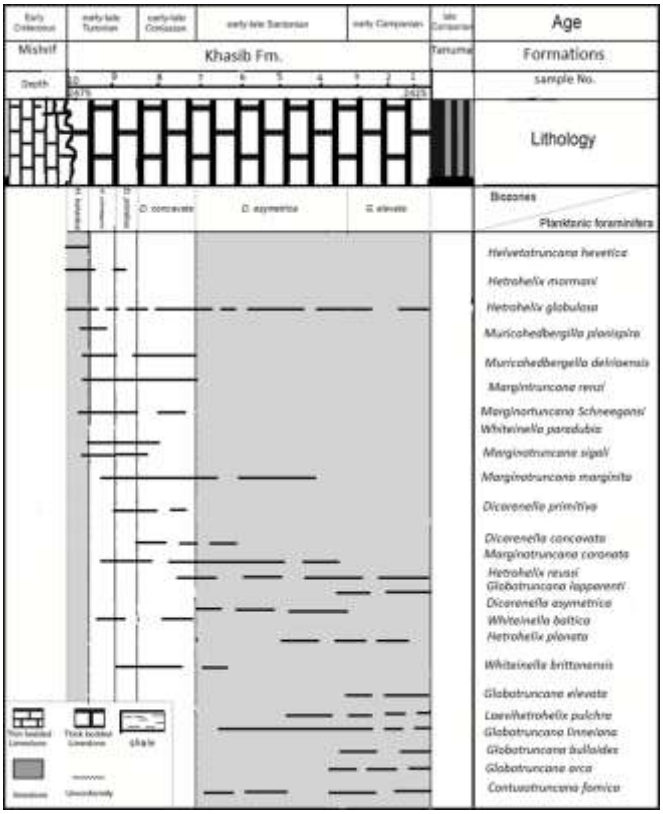

Figure (1.4): Biostratigraphy of Khasib Formation in Majnoon well No.4

4.d Well No.5: The thickness of Khasib Formation is 59m in this well, see Figure (1.5), Twenty four of planktonic Foraminifera identified as follow:
*Contusotruncana fomica (*Plt.1, Fig a), *Dicarenella asymetrical (*Plt.1, Fig b), *Dicarenella concavata (*Plt.1.Fig c), *Dicarenella primitive (*Plt.1, Fig d), *Globotruncana arca (*Plt.2, Fig a), *Globotruncana linnena* (Plt.2, Fig b), *Globotruncana lapparenti (*Plt.2, Fig c), *Globotruncana bulloides (*Plt.2, Fig d), *Globotruncana elevate (*Plt.3, Fig a), *Helvetoglotruncana helvetica (*Plt.3, Fig b), *Hetrohelix glubosa (*Plt.3, Fig c), *Hetrohelix moremani* (Plt.3, Fig d), *Hetrohelix reussi (*Plt.4.Fig a), *Hetrohelix planate (*Plt.4, Fig b) *Leavihetrohelix pulchra (*Plt.4, Fig c), *Marginotruncana schenegansi (*Plt.5, Fig c), *Marginotruncana marginita* (Plt.4, Fig d), *Marginotruncana renzi (*Pl.5, Fig a), *Marginotruncana sigali (*Plt.5, Fig b), *Muricohedbergilla delrioensis* (Plt.5, Fig d), *Muricahedbergila planispira (*Plt.6, Fig a), *Whitenella baltica (*Plt.6, Fig b), *Whitenella brittonensis* (Plt.6, Fig c), *Whitenella paradubia (*Plt.6, Fig d).

Figure (1.5): Biostratigraphy of Khasib Formation in Majnoon well No.5

4.1 Biozone of Khasib Formation

According to Planktonic Foraminifera Six biozones determined in this study.The definitions of these biozones determined according to stratigraphic distribution of these foraminifera.These six biozones are identified as range zones: *Dicarinella primitiva* range zone, *Dicarinella concavata* range zone, *Helvetoglobotruncana Helvetica* range zone, *Dicarinella asymetrical* range zone, *Marginotruncana schneegansi* range zone and *Globotruncanita elevata* range zone. The definitions of the biozones determined according to: Caron (1985), Sliter (1989), Premoli Silva & Sliter (1994), Robaszynski & Caron (1995), Premoli Silva & Verga (2004) and Sari (2006, 2009).

4.1 (a) *Helvetoglobotruncana Helvetica range zone*:

This biozone is defined by the first and last appearance datum (FAD, LAD) of *Helvetoglobotruncana helvetica (*Dalbiez 1955) and represents the oldest foraminiferal biozone identified in the lower part of the pelagic limestones of the Khasib Formation. There are associated planktonic foraminifera in this biozone: *Hetrohelix moremani, Hetrohelix globusa, Whittenlla paradubia, Muricohedbergella planispira, Muricohedbegella delrioensis, Marginotruncana renzi, Whitenella baltica* and *Marginotruncana schneegansi.*

The lower limit of this biozone in SE of Khasib Formation coincides with the facies change at the unconformable contact with the underlying Mishrif Formation. It is uncertain, therefore, the base of the biozone as defined equates to the global FAD of *H. Helvetica*. The thickness of

this zone differs from well to another in MJ (1, 3, 4, 5), in (Mj 1) thickness is about 8 m, in (Mj 3) is about 7.5 m, this.so the previous work suggested that H. helvetica is indicative of the mid-Turonian (Wonders 1980; Salaj 1980, 1997; Robaszynski *et al*. 1984; Caron 1985; Sliter 1989; Abdel-Kireem *et al*. 1995; El Albani *et al*. 1999; Tur *et al*. 2001; Premoli Silva & Verga 2004; Abawi & Mahmood 2005), it is now considered to denote an interval in the early Turonian (Caron *et al*. 2006; Desmares *et al*. 2007; Gebhardt *et al*. 2010; Ogg & Hinnov 2012; Zaghbib-Turki & Soua 2013; Huber & Petrizzo 2014; Vahidinia *et al*. 2014; see Fig. 2.5). The *H. helvetica* biozone also represents the maximum abundance and diversity of whiteinellid planktonic foraminifera, with five species recorded. The most abundant planktonic foraminiferal species in this biozone are *Heterohelix moremani* and *H. globulosa*.

4.1 (b) *Marginotruncana shneegansi* range zone

This range zone between the LAD of *Helvetoglobotruncana helvetica* and the FAD of *Dicarinella primitiva* (Dalbiez 1955).the age of this biozone is early Turonian.Other commonly associated planktonic foraminifera are: (*Hetrohelix moremani, Hetrohelix globusa, Whittenlla paradubia, Muricohedbergella planispira, Muricohedbegella delrioensis, Marginotruncana marginita, Marginotruncana renzi, Whitenella baltica, Marginotruncana sigali, Marginotruncana coronata).*

The biozone is represented different thicknesses in four borehole in Majnoon oilfield, in Mj 1 thickness is about 10 m, in (Mj 3) is about 8 m, in (Mj 4) is about 12 m, at last (Mj 5) is about 11 m. Many previous studies have restricted the earliest occurrence of M. schneegansi to the late Turonian (Premoli Silva & Bolli 1973; Premoli Silva & Boersma 1977; Caron 1978, 1985; Salaj 1980, 1997; Marks 1984a; Robaszynski *et al*. 1984; Abdel-Kireem *et al*. 1995; El Albani *et al*. 1999). However, Robaszynski & Caron (1995) recognized the full biostratigraphical range of this species to incorporate the mid to late Turonian interval. The diversification of *Marginotruncana* and the presence of large, compressed *marginotruncanids* such as *Marginotruncana undulata* also fall within this biozone (Sliter 1989).

4.1 (c) *Dicarinella primitiva* range zone:

This biozone is an range zone between the FAD of *Dicarinella primitiva* and the FAD of *Dicarinella concavata (*Caron 1978).the age of this biozone is latest Turonian., with ten species, is recognised within this biozone (*Hetrohelix moremani, Hetrohelix globusa, Whittenlla paradubia, Muricohedbegella delrioensis, Marginotruncana marginita, Marginotruncana renzi, Whitenella baltica, Marginotruncana sigali, Marginotruncana coronat, Whiteinella brittonensis).*

The *D. primitiva* biozone was not differentiated by Ogg & Hinnov (2012), who instead recorded this interval as the lower part of the *Dicarinella concavata* biozone. However, in the SE Iraq succession.the biozone thickness differs from well to another, in (Mj 1) thickness is about 9.5 m, in (Mj 3) is about 11 m, in (Mj 4) is about 13 m, in (Mj 5) thickness is about 8 m.so the *D. primitiva* provides a most useful subdivision of the late Turonian interval that has also been recognised as a discrete biozone in Africa and Iran (Salaj 1997, Gebhardt 2004; Elamri *et al*. 2014; Vahidinia *et al*. 2014, Premoli Silva & Boersma 1977; Caron 1978, 1985; Robaszynski & Caron 1979; Wonders 1980; Marks 1984a, b; AbdelKireem *et al*. 1995; El Albani *et al*. 1999; Abawi & Mahmood 2005) have equated the first appearance of *D. primitiva* with the base of the Coniacian, later work shows that this taxon first occurs below the Turonian-Coniacian boundary (*Robaszynski et al1990*; Robaszynski & Caron 1995; Salaj 1997; De Cabrera 1999; Zapata *et al*. 2003; Gebhardt 2004; Premoli Silva &Verga 2004; Gebhardt 2008). Indeed, Robaszynski & Caron (1995) recorded the simultaneous occurrence of *D. primitiva* with the late Turonian ammonite Subprionocyclus neptuni. Most recently Elamri *et al*. (2014) recorded *D. primitiva* in northern Tunisia in the late Turonian, whilst Vahidinia *et al*. (2014) recorded the LO of D. primitiva before the LO of D. concavata in NE Iran and they assigned the level to the late Turonian. The maximum diversification of *Marginotruncanids.*

4.1 (d) Dicarinella concavata range zone:

This biozone is defined as a range zone between the FAD of *Dicarinella concavata* and the LAD of Dicarinella asymetrica (Sigal 1955). The age of this biozone is E-L.Coniacian,.the planktonic foraminifera associated with this biozone are: *Hetrohelix globusa, Muricohedbegella delrioensis, Marginotruncana marginita, Marginotruncana renzi, Whitenella baltica, Marginotruncana sigali, Marginotruncana coronat, Whiteinella brittonensis, Marginotruncana schneegansi.*

The biozone occurs through: in (Mj well No. 1) thickness is about 12 m, in (Mj well No.3) is about 14 m, in (Mj well No. 4) is about 11.5 m, in (Mj well No. 5) 13.5 m of Majnoon oilfield.Although several authors (for example Barr 1972; Premoli Silva & Bolli 1973; Premoli Silva & Boersma 1977; Caron 1978, 1985; Marks 1984a; AbdelKireem *et al*. 1995; Mancini *et al*. 1996; El Albani *et al*. 1999; Tur *et al*. 2001; Abawi & Mahmood 2005; Sari 2006, 2009; Farouk & Faris 2012) have equated the earliest occurrence of *D. concavata* with the mid-late Coniacian, Premoli Silva & Sliter (1994) recognised the full biostratigraphical range of this species to extend into the late Turonian in Italy (see also Robaszynski & Caron 1995; Robaszynski 1998; Premoli Silva & Sliter 1999; Robaszynski et al. 2000; Bauer *et al*. 2001; Premoli Silva & Verga 2004; Babazadeh *et al*. 2007; Ogg & Hinnov 2012; Kochhann *et al*. 2014). In Africa, Iran and Caucasus the earliest occurrence of *D. concavata* has been placed at the base of the Coniacian (Salaj 1980, 1984, 1987, 1997; Tur 1996; Gebhardt 2004; Gebhardt 2008; Vahidinia *et al*. 2014), and given the presence of a well-defined *D. primitiva* biozone in the Iraqi succession, the earliest occurrence of *D. concavata* is equated to the base of the Coniacian. The dominant planktonic foraminiferal group in this biozone are *Marginotruncanids.*

4.1 (e) *Dicarenella asymetrica* range zone

The lower and upper boundaries of this biozone are marked

by the FAD and LAD of *Dicarinella asymetrica* (Postuma 1971).The age of this range zone is E-L.Santonian,.the planktonic foraminifera associated in this biozone are: , *Hetrohelix globusa, Marginotruncana coronat, Whiteinella brittonensis, Dicarenella concavata, Hetrohelix reussi, Dicarinella asymetrica, Contusotruncana fomicata, Globotruncana linneiana, Hetrohelix planate, Globotruncana bulloides, Globotruncana arca, Globotruncanita elevata.*

The biozone is represented by around 19 m in (Mj well No.1), and 21 m in (Mj well No.3), in (Mj well No.4) 23 and in (Mj well No.5) about 19.5 m. Although several authors (for example Robaszynski *et al*. 1984; Caron 1985; Honigstein *et al*. 1987; Almogi-Labin *et al*. 1991; Premoli Silva & Sliter 1994, 1999; Ayyad *et al*. 1996; Mancini *et al*. 1996; Robaszynski 1998; Özkan-Altiner & Özcan 1999, Robaszynski *et al*. 2000; Bauer *et al*. 2001; Premoli Silva & Verga 2004; Sari 2006, 2009; Babazadeh *et al*. 2007; Farouk & Faris 2012) have equated the earliest occurrence of *D. asymetrica* with the mid-Santonian, some recent studies have identified this species from the late Coniacian (Lamolda *et al*. 2007; Gale *et al*. 2007). Based on the most recent calibration for the Late Cretaceous planktonic foraminiferal biozonation by Ogg & Hinnov (2012), the first occurrence of the biozonal species is regarded as an approximate indicator for the base of the Santonian (Ogg & Hinnov op. cit., p. 805; Elamri *et al*. 2014; Vahidinia et al. 2014; Kochhann *et al*. 2014; see also Marks 1984b, p. 166; El Albani et al. 1999, fig. 3; De Cabrera et al. 1999, Zapata *et al*. 2003). Lamolda *et al*. (2014) used inoceramid bivalves (Platyceramus undulatoplicatus) to define the base of the Santonian in Olazagutia, northern Spain. Given the absence of supporting bivalve data in the Iraqi succession, the FAD of *D. asymetrica* is taken as the approximate marker for the base of the Santonian. The LAD of *D. asymetrica* also defines the Santonian-Campanian boundary (Marks 1984b; Caron 1985; Honigstein *et al*. 1987; Sliter 1989; Dowsett 1989; Gvirtzman *et al*. 1989; Almogi-Labin *et al*. 1991; Gale et al. 1995; Ayyad *et al*. 1996; Mancini et al. 1996; El Albani *et al*. 1999; Özkan-Altiner & Özcan 1999; Zapata et al. 2003; Sari 2006, 2009; Babazadeh *et al*. 2007; Ogg & Hinnov 2012; Elamri & Zaghbib-Turki 2014; Elamri *et al*. 2014; Kochhann *et al*. 2014). Recently, Sageman *et al*. (2014) based on a set of 40Ar/39Ar, U-Pb and astronomical tuning data from the Cretaceous Niobrara Formation, USA, estimated the Coniacian-Santonian boundary to be at about 86.49 ± 0.44 Ma, close to the interpreted FAD of *D. asymetrica* of Ogg & Hinnov (2012). Moreover, the LAD of *D. asymetrica* is regarded as equivalent to the boundary of the reversed polarity Chron C33r, the latter magnetic marker being considered for defining the base of the Campanian.the International Commission on Stratigraphy, fide Ogg & Hinnov 2012). This Chron boundary also coincides with the base of the Scaphites leei III ammonite biozone of the North American Western Interior (Ogg & Hinnov 2012 and references therein,). *Marginotruncanids* tend to become rare within this biozone, except for *Marginotruncana* coronata and *M. marginata*. In contrast, some five species of *Globotruncana* are recorded towards the top of the biozone where a distinct interval is recognisable, marked by the FAD of *G. bulloides*. In addition, the FAD of *Globotruncanita elevata* and *G. stuartiformis* also fall within this biozone (Fig). The boundary between the *Dicarinella asymetrica* and the succeeding *Globotruncanita elevata* biozone marks the extinction of many mid-Cretaceous planktonic foraminifer species globally (Sliter 1989; Petrizzo 2002; Sari 2006, 2009; Elamri & Zaghbib-Turki 2014; Elamri *et al*. 2014; Kochhann *et al*. 2014; Pecimotika *et al*. 2014). In NE Iraq the local manifestation of this extinction event is the disappearance of *Dicarinella asymetrica*, though a couple of species of *Marginotruncana* (*M. coronata, M. marginata*) also disappear a little earlier in the succession.

4.1 (e) *Globotruncanita elevata* range zone

The age of this range zone is Early Campanian, this biozone recognised in SE Iraq from the LAD of Dicarinella asymetrica to the top of the Khasib Formation, there are seven planktonic foraminifera associated with this biozone: *Hetrohelix reussi, Contusotruncana fomica, Globotruncana linnieiana, Hertohelix planate, Globotruncana bulloides, Globotruncana arca, Globotruncana stuartiformis.*

Which is marked by its conformable contact with the overlying Tanuma Formation: The *G. elevata* biozone is characterised by the dominance and abundance of *Globotruncanids* and *Heterohelicids* with common benthonic foraminifera such as *Lenticulina* and *Textularia* (Pl.7.Fig). Some authors (for example Barr 1972; Wonders 1980; Salaj 1980, 1997) have equated the first appearance of *G. elevata* with different levels within the Santonian in the North African and Mediterranean regions, later work shows that the base of the biozone, as internationally recognised, is coincident with the base of the Campanian (Premoli Silva & Bolli 1973; Robaszynski *et al*. 1984; Dowsett 1984, 1989; Caron 1985; Honigstein *et al*. 1987; Sliter 1989; Almogi-Labin *et al*. 1991; Abdel-Kireem *et al*. 1995; Ayyad *et al*. 1996; Mancini *et al*. 1996; Robaszynski 1998; El Albani *et al*. 1999; ÖzkanAltiner & Özcan 1999; Robaszynski et al. 2000; Zapata et al. 2003; Chacón *et al*. 2004; Abawi & Mahmood 2005; Babazadeh *et al*. 2007; Li *et al*. 2011; Farouk & Faris 2012; Ogg & Hinnov 2012; Elamri & Zaghbib-Turki 2014; Elamri *et al*. 2014; Kochhann *et al*. 2014.

5. Conclusion

Khasib Formation consists of limestone with interbeded of shale. The present study includes biostratigraphy and microfacies analysis for four wells located in Majnoon oilfield, Southern Iraq. The lower contact of Formation is unconformable with Mishrif Formation while upper contact is conformable with Tanuma Formation.Twenty five species of foraminifera were observed:

Contusotruncana fomica, Dicarenella asymetrica, Dicarenella concavata, Dicarenella primitive, Globotruncana arca, Globotruncana linnena, Globotruncana lapparenti, Globotruncana bulloides, Globotruncana elevate, Helvetoglotruncana helvetica, Hetrohelix glubosa, Hetrohelix moremani, Hetrohelix reussi, Hetrohelix planate, Leavihetrohelix pulchra, Marginotruncana coronata, Marginotruncana marginita,

Marginotruncana renzi, *Marginotruncana sigali*, *Muricohedbergilla delrioensis*, *muricahedbergila planispira*, *Marginotruncana schenegansi*, *Whitenella baltica*, *Whitenella brittonensis*, *Whitenella paradubia*

Six biozones were distinguished in Khasib Formation depending on planktonic foraminifera, these biozones are:

Dicarinella primitiva range zone, *Dicarinella concavata* range zone, *Helvetoglobotruncana Helvetica* range zone, *Dicarinella asymetrical* range zone, *Marginotruncana schneegansi* range zone and the *Globotruncanita elevata* range zone.

The age of Formation determined as (E.Turonian-E.Campanian) to these biozone of foraminifera.

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