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# **Facies Analysis of The Ghar Formation at Selected Wells of South and Southeast Iraq**

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## **ABSTRACT**

Facies analysis of the Ghar Formation at selected wells of south and southeastern Iraq, promote the subdivision of the formation into two main facies. Sandy gravel and carbonates facies that represents terrestrial clastics of arid alluvial fans environment which can also be subdivided into two subfacies; sandy gravel with dolocrete that was deposited in ephemeral braided streams and sand with gravel that represents sheet flood deposits. Other facies is carbonate rich sandstones that represents a transitional environment between fluvial and tidal marine and can be subdivided into several subfacies; fluvial quartzarenite and subarkose, swamp quartzwacke and arkose wacke, tidal carbonate rich sandstones and supratidal carbonate subfacies.

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. A :

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Zagros Basin

.( James and Wynd, 1965)

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(3 )

(Mesopotamian zone)

(Euphrates subzone)

(Zubair subzone)

(Buday and Jassim, 1987)

(Stable shelf)

(Buday,1980)

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Subaqueous

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.( Bull,1972; Heward,1978; Nilsen, 1982; Ethridge, 1985; Collinson, 1986)

.Water laid sediments

(Glennie, 1970)

.(Glennie, 1970; Langford, 1989)

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:A1

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.(2001 )

:A2

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.A1

A2

: (Miall,1978)

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.(Miall, 1978) Gm Sp-log

.(Miall, 1978) Gms

Lime mud

F1

.(Miall, 1978)

.(Miall, 1978) St

P

.(Miall, 1978)

GII G I

(Rust, 1979)

Scott type (Miall, 1978; Miall, 1985)

.Trolham type

A1

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.(Miall,1985)

Gm A1

.(Miall,1978) Gp Gt Gms

Debris flow Gm

Matrix supported

A1

Recycling

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(Glennie,1970)

Lag deposits

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.(Bull,1972; Rust,1979)

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A1

(Glennie,1970)

Ephemeral streams)

A1

.Glennie,1970;Williams,1971; (Collinson,1986

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(Williams,1971)

A1

(Glennie,1970 ;Langford,1989)

A1

A1

Anastomosing streams

(Rust,1979)

A2

Playa

.(Cheadle,1986)

A2

Unconfined streams

Downstream

(Friend,1978 in Miall, 1985; Rust,1979; Reineck and Sheet flood deposits

Singh,1980)

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A2

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.Fine pebbles

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1.5 6  
(16, 13, 6 )  
Transitional environment  
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Deltaic environment

Three dimensional

Estuarine environment

.(Bhattacharya and Walker,1997)

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Tidal dominated delta

Riverine estuarine

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Trace Fossils

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B1

A1

Distal Braided Streams

B1

Rust,1979;)

Braided Plain

.(Miall,1985

:B2

B 1

Mud stone

.Charaphyta

Stagnant Water

Autochthonous

Peat

.(Coleman, 1982)

Deltaic plain

B1

Upper Deltaic plain

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( B3 )

(Coleman and Prior,1982)

(Coleman and Prior,1982)

Lower deltaic plain

Topset

.(Reineck and Singh,1980)

subenvironment deposits

Salina swamps

; Reinson,1997)

Fresh water swamps

.(Clifton,1982; Elliott,1986

**:B3**

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Mud

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(B2

B1

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.Phreatic zone

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.High bioturbation

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B3

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B3

.Subtidal deposits

Intertidal deposits

.Shallowing upward sequence

.Tidal channel deposits

(Coleman, 1982; Elliott, 1986;

.Reinson,1997)

**:B4**

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Encrustal algae

.( ) Supratidal

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: A

: A1

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: A2

: B

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B1

B3

B2

B4

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