

Paleozoic Stratigraphy

There are several principal areas in Iraq where Paleozoic sediments are known: Thrust Zone, over the top of the Rutbah uplift in western Iraq and in deep wells of Khleissia, Akkas, Kand and Mityaha in the central and northern Iraq. The Paleozoic succession of Iraq includes several formations such as:

- 1- Khabour Quartzite-shale Formation (Ordovician).
- 2- Akkas Shale-Sand Formation (Silurian).
- 3- Pirispiki Red bed Formation (Late Devonian-Early Carboniferous).
- 4- Kaista Silty shale- Argillaceous Limestone Formation (Late Devonian).
- 5- Ora Shale Formation (Late Devonian- Early Carboniferous).
- 6- Harur Limestone-Shale Formation (Early Carboniferous).
- 7- ChiaZairi Cherty, Marly limestone, Dolomite, Evaporite Formation (Middle – Late Permian).
- 8- Gaara Cross bedded sandstone and Clay Formation (Middle Permian).

Exercise

- 1- Draw the correlation between different sections of Paleozoic strata by using (Fig. 1) and (Table 1) in making the columnar sections and lateral changing in formations.
- 2- What is the reason of repeating *hiatus* (Non- deposition) in Paleozoic record?
- 3- How do you interpret the lateral changing in *facies* and *thickness*?
- 4- Where is the location of *shore line* during the deposition of clastic facies in Paleozoic?
- 5- What is the type of *unconformity* between (Chalky and Kaista) and (Akkas and Kaista), why?

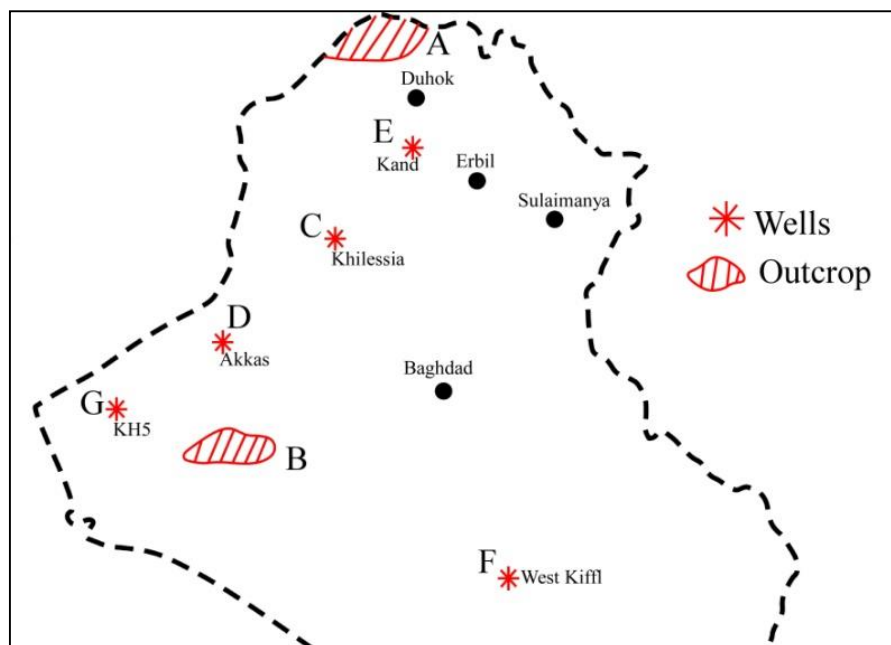


Fig. (1): Location of Paleozoic formations.

Period	Series	Age (M.Y)	Cycles	Stable Shelf	Unstable Shelf	Miogeosyncline	Fns.	Lithologic Description	Out Crop		Wells (Thickness in meter)					
									A	B	C	D	E	F	G	
Permian	L	290	L. Carb.-L. Perm	Gaara Fm			ChiaZairi	Composed of three units: i-340 m. thin bedded Lst. And silicified Lst. ii- 80 m. recrystallized breccia and marl. iii- 330 m. thin bedded cherty &oolitic Lst.	750				630			
	E															
Carbonif.	L	355	L. Dev.-E. Carb.	Harur	Harur	Harur	Gaara	Coarse-grained cross bedded S.st, with vary coloured sandy and kaolinitic clays, containing lenses of limestone or partly hematitic ores.		250				72	854	
	E															
Devonian	L	440	L. Dev.-E. Carb.	Ora	Ora	Ora	Harur	Thin to medium bedded black limestone interbedded with thin to medium bedded black micaceous shale mainly in lower and upper parts.	60		463	85	93			
	M			Kaista	Kaista	Kaista	Ora									
	E						Chalky Prisipki									
Sillurian	L	438	Sillurian	AkKas			Kaista	Composed of siltstone, silty shale and some quartzite in lower parts that grade up into argillaceous limestone	70		256	393				
	E															
Ordovici.	L	510	Camb. - Ordovi- Cycle	Khabour	Khabour	Khabour	Prisipki & Chalki	Massive, cross bedded quartzites, marly sandstone, siltstone and rare shale, with lenticular intercalation of conglomerate containing green igneous rocks.	80							
	E															
Cambrian	L	570	Camb. - Ordovi- Cycle	?	?	?	Akkas	Lower part composed of compacted fissile black shale and graptolite. Upper part composed of shale and silt, with fine sand.			130	863				
	M															
	E									Khabour	Thinly bedded fine grained S.st.(quartzite), and silty micaceous shale with dolomite and L.st. intercalations. Found in Khleisia which indicate more marine condition.	800		1247	1932	

Table (1): Correlation, Lithologic description, and Thickness of Paleozoic Formations.

