**University of Oum Boughi Departement of Geology**

**1st Term 2023 - 2024**

**Exam in Sedimentary Geology Platform (BSSA)/ Typical correction**

Question 1 (6 marks)

1. What are the different horizons (as reservoirs) we met in the Cambrian

R a, R2 and lesser is R3 with well developped petrophysical characteristics

1. In which basins are mainly located principally these horizons (Cambrian Horizons)

R located in the Eastern part of the Saharan Platform (e.g HMD)

1. What are the main reservoirs set during the Mesosoic and well delopped, specially, in the Central Province

and Eastern one.

R TAGI (Lower Triassic shaly sandstones) Triassic carbonates and their equivalents and Upper Triassic shaly sandstones (TAGS)

1. ~~What are the type of traps we may meet in the Saharan platform: according to an order possible~~

~~R Dominant are structural , stratigraphic (Illizi Devonian F4 – F6), mixte and reefs and hydrodynamic~~

Question 2:**(2 marks)**

The Ordovician is a reservoir not well developped but producing by which process:

* ~~Primary porosity or~~
* ~~Primary and secondary porosity or~~
* another process essentially fracturing system

R Fracturing system

Question 3:**(6 marks)**

1. The silurian lithological facies may play different roles in H-C exploration what are these roles and why

Reservoir Source Rock and Sealing (cap rock) or sealing and

R it consits on alternating sandstone (reservoir), clay or shale (considered as source rock as well as cap rock or seal)

Source Rock essentially

Source rock and possibly Cap rock

~~Source rock possible reservoir rock and Caprock~~

1. Devonian: enumurate some highly developmentreservoirs (basins)and how do we call these H – C producing levels (Scratch the false answers)

* ~~Timimoun Ahnet basins Reggane basin Bechar basin~~
* Ahnet basin Reggane basin and Hassi Berkine basin,
* ~~Illizi basin Triassic basin Tihomboka Basin Rhoud Nouss basin~~
* ~~F5 F3 F2~~
* ~~F1 F6 F5 F3 F2~~
* F4 F5 F6

1. Which main basins are storing the best Carboniferous reservoirs.

R~~In the Eastern province or Eastern and~~**Western Province**~~or Western and Triassic provinces or Eastern and the Triassic provinces or Western Province or Western and~~ and Eastern Province ?

* Ahnet Basin Timimoun Basin Tindouf Basin

1. ~~What are the main reservoirs set during the Mesosoic and well delopped, specially, in the Central Province~~

~~and Eastern one.~~

~~R TAGI (Lower Triassic shaly sandstones) Triassic carbonates and their equivalents and Upper Triassic shaly sandstones (TAGS)~~

Question 4: **( 3 marks)**

1. What are the main systems playing double and sometimes triple roles in the reservoir generation accumulation and cap rock (in the Saharan Platform at least 2 examples and why)

* Silurian (Source rock essentially) Cap rock essentially
* Devonian, Ordovician mainly as reservoir and cap rock

1. List some tectonic effects of the Hercynian phases in the saharan platform and H C accumulation.

Response

* ~~Sedimentation subsidence and fracturation with (structural reservoir generation)~~
* ~~Erosion fracturation (source rock generation)~~
* Erosion unconformity deformation and Structuration (structural traps generation)

Question 5**(2 mark)**

1. The South East Constantinois is known as interesting in H-C exploration and production area which basin or basins are producing and at which levels with important order .

Reponse. Botena basin, Timgad basin, BordjSoukies basin, Hodna basin, or Sahara platform basins with levels

Especially Coniacian Santonian and lesser Cenomanian Turonian