

القسم / الهندسة النفطية	كلية الهندسة – جامعة مصراتة	فصل الربيع 2015/2014
الزمن / ثلاث (3) ساعات		الامتحان النهائي لمقرر / تسجيلات آبار هـ ن 413
استاذ المادة / أ. يوسف حيمه		التاريخ / 4 / 8 / 2015 م
رقم الطالب:		أسم الطالب:

Q1: What are the primary objectives of formation evaluation? (5 pts)

Q2: Define : (5 pts)

- Absolute Porosity
- Effective Porosity

Q3: What are the main factors that affect Permeability? (5 pts)

Q4: What are the main uses of resistivity logs ? (5 pts)

Q5:

The Dual Induction Focused log curves through water-bearing zone ( 5870 ft – 5970 ft ).  
Given fresh water drilling mud.(Log -1) (10 pts)

- A) Why Deep Induction curve read a low resistivity?
- B) Why Medium Induction curve read intermediate resistivity?
- C) Why Spherically Focused curve read high resistivity?
- D) What does indicate the separation between the resistivity curves?
- E) What does indicate the overlay of the resistivity curves?

Q6: from SP curve(Log\_2) (15 pts)

- a) Pick SSP value
- b) Pick PSP value
- c) Calculate shale volume in %
- d) Given :

$$R_{mf} = 0.51 @ 135^{\circ} \text{ F (BHT)}$$

$$R_m = 0.91 @ 135^{\circ} \text{ F (BHT)}$$

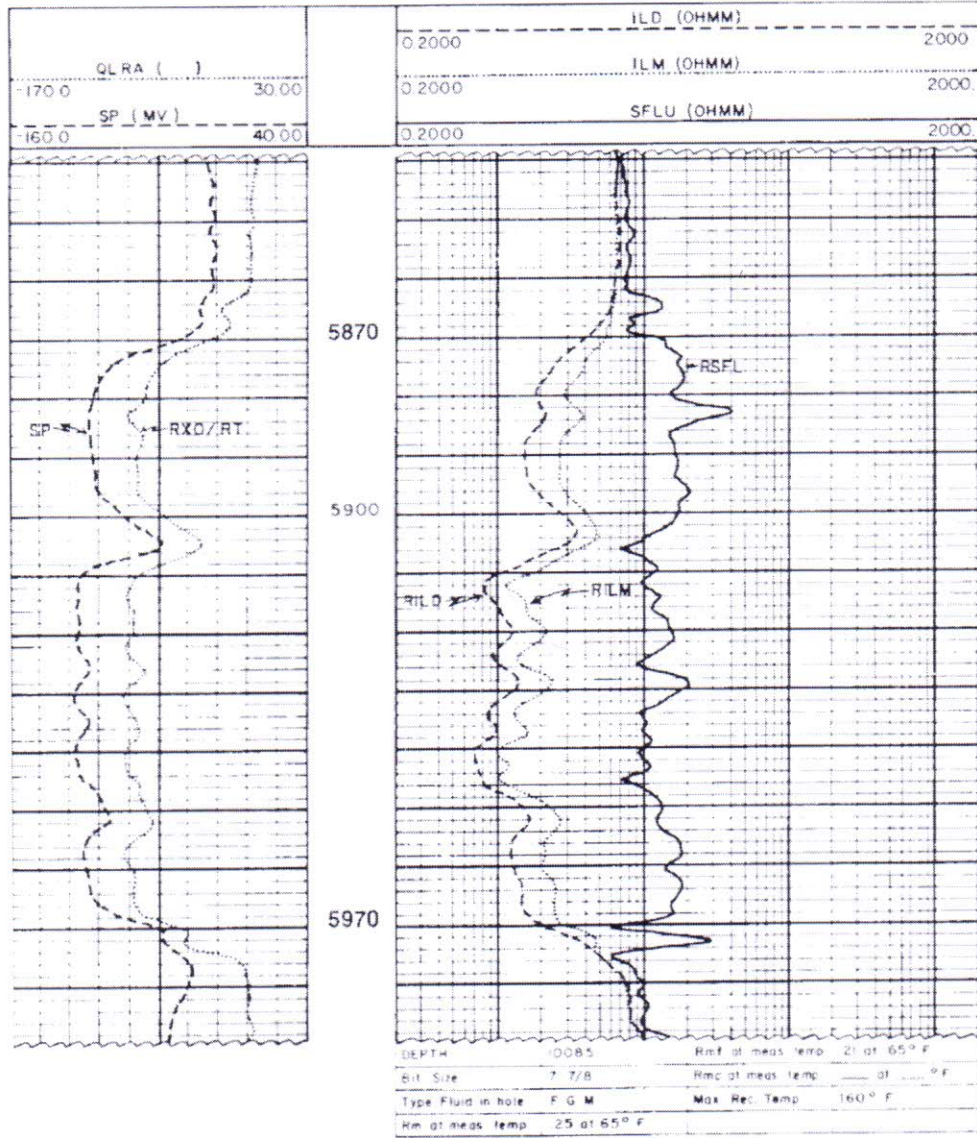
$$\text{Surface Temperature } 60^{\circ} \text{ F}$$

$$\text{Total Depth} = 8000 \text{ ft}$$

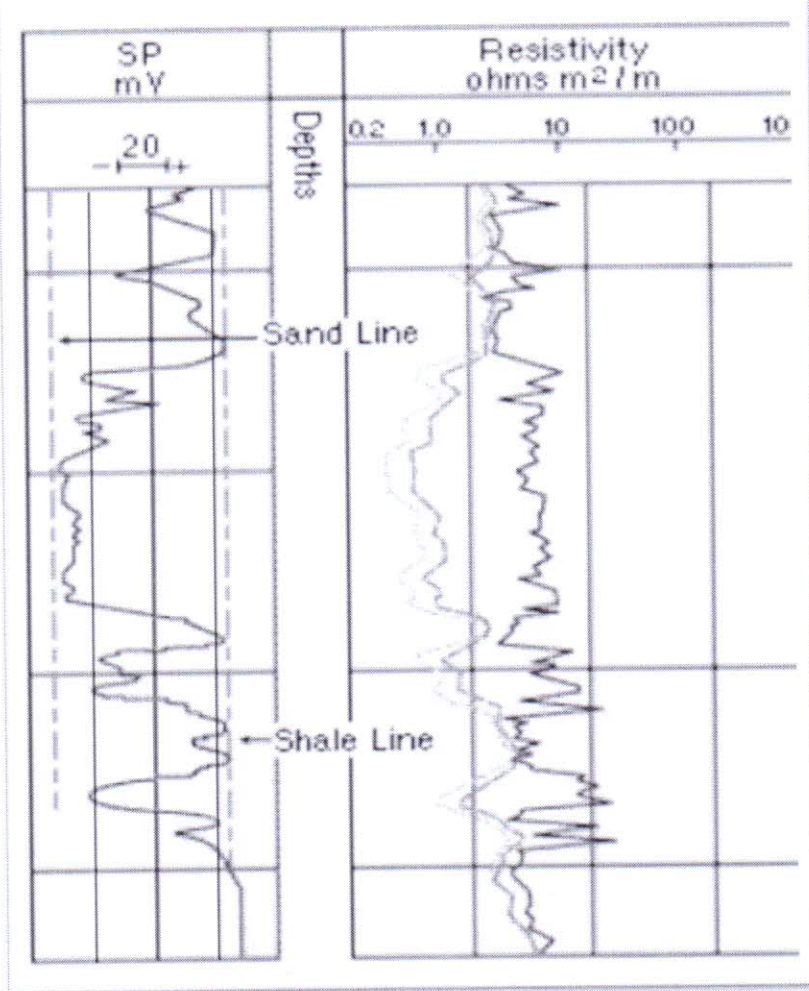
Calculate the resistivity of water ( $R_w$ ) using Sp charts?

Q7: use log-3 to pick values and determine ratios for Tornado chart @1988 ft (15 pts)

Log\_1



Log\_2



Log\_3

