

الإستهلال

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شكر وعرهان

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لإنجاز هذا العمل

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نتقدم بجزيل الشكر لكل من ساهم في وصول هذا
البحث ونخص بالشكر الدكتور /

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الذي تفضل بالإشراف على هذا البحث الى ان
رأي النور فله كل الشكر و التقدير.

Abstract

This research presents an overview of petrophysical research and exploration achievements of low resistivity pay (LRP) zone in Hadida oil field in Block VI is located in the southwest of Sudan, in the northwest of the Muglad basin, and covers an area of 59,000 sq. km. Hadida Field is located in the northwest of Block 6, between Nugara and Sufyan field.

It includes geological characteristics and characteristics of well log response of the low resistivity pay zones, as well as the problems in recognizing and evaluating low resistivity pay zones by well logs. The main methodology which established in this research to identify the LRP zone is to use the Software Interactive petrophysics (IP) to identify the pay zone (Well Log) in general and then make a well correlation between geological column data (Masterlog) and well log.

According to the planetology studies in core, one can classified two Low resistivity pay zones in Hadida, the first interval is Bentiu Formation which classified as Aptian-Cenomanian age. The second interval is Abu Gabra Formation which classified as Neocomian age.

Clay minerals distribution are the primary cause of the low resistivity in Bentiu sand and it formed during and after deposition. They are distributed in the formation as laminar shale. Shale volume ,fine grain and High invasion are the primary cause of the low resistivity in Abu Gabra zone.

The petrophysical research concerning recognition and evaluation of the low resistivity pays, based on their genetic types.

التجريد

يقدم هذا البحث نظرة بتروفيزيائية عامة لما تم انجازه من عمل استكشافي لطبقات النفط ذات المقاومة المنخفضة في حقل حديدة النفطي الواقع في مربع(6) في الجنوب الغربي من السودان ويقع ضمن حوض المجلد ويغطي مساحة 59000 كيلومتر مربع ويقع بين حقلي نقارة وسفيان.

يتضمن البحث الخصائص الجيولوجية وخصائص تسجيلات الابار للطبقات ذات المقاومة المنخفضة ومعرفة وتقييم طبقات المقاومة المنخفضة .

الطريقة الرئيسية المعتمدة للتعرف علي الطبقات ذات المقاومة المنخفضة هو استخدام برنامج(IP) لتسجيل البئر ثم عمل مضاهاة بين العمود الجيولوجي والتسجيل البئري.

تبعاً للدراسات الاحاثية التي اخزت من اللباب الصخري يمكن تصنيف طبقتين من طبقات المقاومة المنخفضة النطاق الاول هو تكوين بانتيو في العمر السيموني والنطاق الثاني هو تكوين ابوجابرة في العمر اليوسيني.

معادن الطين وتوزيعها هو السبب الاساسي لانخفاض المقاومة في تكوين بانتيو وتشكل الطين اثناء و بعد الترسيب في شكل طبقات رقيقة .

حجم الطين والحبيبات الناعمة و الرشح العالي هو السبب الاساسي لانخفاض المقاومة في تكوين ابوجابرة .

هذا البحث يقوم بتعريف و تقييم طبقات المقاومة المنخفضة اعتمادا علي الخصائص الوراثية.

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