بسم الله الرحمن الرحيم

الاستـهلال

قال تعالى:

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صدق الله العظيم

(طه 114)

Dedication

This research is dedicated to our wonderful parents, for their encouragement and inspiration.

They help us in every stage in our study through good and bad moments.

For our teachers and colleagues we dedicate this research.

Thanks to all brothers, sisters and friends for their assistance.

Thank you for everything.

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This is the end of our journey in obtaining B.sc. We have not+- traveled in a vacuum in this journey. At the end of our research we would like to thank all people those who made this research possible and unforgettable experience for us.

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Abstract

This research presents an analytical study of all variables that affect hydraulic fracture width calculation.

The equations that govern hydraulic fracturing width were formulated. Then a program using MatLab was developed, implemented and checked. The program was then applied to analyze specific case studies.

The results obtained using the programe were compared with the results from the reference previous studies. The comparison shows good agreement between the two sets of results.

المستخلص

هذا البحث يقدم دراسة تحليلية للمتغيرات التي توثر في حساب عرض الشق في عمليات التشقيق الهيدروليكي.

النظريات العلمية و المعادلات التفاضلية التي تحكم التشقيق الهيدروليكي، صيغت في شكل يتناسب للتحليل . ثم تم تطوير برنامج لتحليل عرض الشق باستخدام برنامج الماتلاب وتنفيذه والتحقق منه. وقد تم تطبيق البرنامج لتحليل دراسة حالات بعينها . وقورنت النتائج التي تم الحصول عليها باستخدام البرنامج مع نتائج مرجعيه لدراسات سابقة، وقد اكدت المقارنة توافق جيد بين النتائج.

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