

**UNIVERSITI TEKNOLOGI MARA**

**X BROWN FIELD SAND MANAGEMENT:  
ACOUSTIC SAND MONITORING**

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## **ABSTRACT**

The title of this research is “Brown Field Sand Management: Acoustic Sand Monitoring”. The field is a 40 years old oilfield with a history of sand production problem. Recently the production surveillance has employed a 3<sup>rd</sup> party to do an acoustic sand monitoring to see the sand trending. The objective of this paper was to use the acoustic sand monitoring data to calculate the sand rate. From the acoustic data the sand rate for each wells was obtained. From the sand rate the Pound Per Thousand Barrel (PPTB) value for each well are calculated. Based on these values choke size are suggested for choke optimization. Based on the results only well B58s are suggested to be bean down while other wells are suggested to be bean up.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 BACKGROUND OF STUDY**

This paper will mainly focus on sand management of a brown field type reservoir. For the purpose of confidentiality the field will be refer to as field X. Field X has been producing for nearly 40 years with extensive sand production history (Vincy, Basri, and Arifin, 2013). Sand management can be regarded as an operating concept where production is regulated through monitoring, controlling the pressures of well, fluid production rates and the influx of sand (Tronvol, Dusseault, Sanfilipo and Santarelli, 2001). Uncontrolled sand production can lead to destruction of surface equipment such as pipelines, separator or choke. The most effective sand management strategy requires an integrated approach which can lead to significant increase in production with minimal sand problem.

One of the main problem in sand management is deciding the optimum choke size where the wells are producing at optimum productivity rate with no or minimal sand production. Haugsdal (2007) said that producing at lower rates means a lower drawdown which lead to low sand production but since there is a demand that must be cater for the client so producing at such low rates is unacceptable and is consider as counter-productive.