

# Resolution Analysis in the Bakken Shale

Sarah Coyle

THE UNIVERSITY OF TEXAS AT AUSTIN

SCHOOL OF GEOSCIENCES

Sarah Coyle
 University of Texas
 BS Geophysics 2012 (expected)
 Minor in Brazilian Portuguese

 Graduate School in Geophysics Fall 2012

 Undergraduate Research Assistant for Dr. Kyle Spikes Jan 2012



### Resolution Analysis in the Bakken Shale

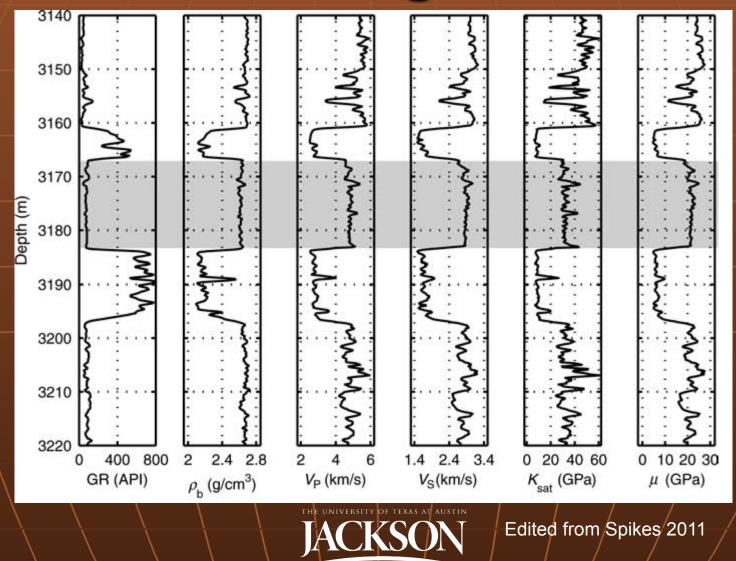
 Approach: seismic modeling to understand the trade-off between thickness and resolution in the Bakken Shale



#### Sanish Field Mountrail County, North Dakota

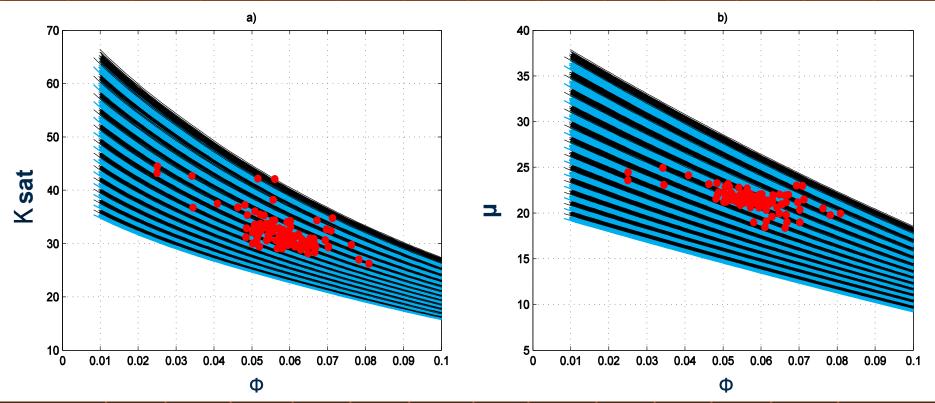


#### Well Log Data



SCHOOL OF GEOSCIENCES

## Self consistent bulk and shear moduli vs. Porosity





Edited from Spikes 2011

 Generation of a set of tuning curves that may provide a guide for mapping rock properties from seismic data along with uncertainty due to resolution limits

 Improved velocity models for locating fracture zones



## Thank you! (Obrigada!)

