

GEOP 320
SPRING 2010
QUIZ # 5&6
(Take Home)
(Due on 18/5/2010)

Download the MS-EXCEL workbook named RMS-VEL(3L).XLS from the link in the course website:

- (1) Fill in Table 1 for layer 2 noting that the intercept of the polynomial should be left unconstrained. Use all offsets when fitting.
- (2) Fill in Table 2 for layer 2 noting that the intercept of the polynomial should be constrained to be equal to the true T_{02}^2 . Use all offsets when fitting.
- (3) What happens to the error in estimating Z_2 using different polynomials as you go from part (1) to part (2) above? Why? (*You should only compare same polynomial order!*)
- (4) Which of these polynomial-fitting approaches corresponds to finding the RMS velocity?
- (5) Which of these polynomial-fitting approaches corresponds to finding the stacking velocity?
- (6) Which of these polynomial-fitting approaches would you recommend to calculate the depth to any reflector? Why?

