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Interactive comment on "3-D-geomechanical-numerical model of the contemporary crustal stress state in the Alberta Basin" *by* K. Reiter and O. Heidbach

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We thank the referee for his/her friendly and very constructive comments and suggestions, which helped to improve this manuscript. In the following we will answer referees questions:

Point 1: The used finite element code is Abaqus/Standard v.6.11, which is now mentioned in section 3.1.3. (Model discretization into finite elements)

Point 2: The used geological modelling software is GOCAD. This is now mentioned and explained in more detail by adding a new paragraph in section 3.1.2. (Model geometry)

Point 3: The issue of several stress sources on different scales is introduced in section 2.1. (Model assumption) However, in section 6.4 (Model application for deep geothermal reservoirs) the variation of the stress regime within the model due to second order stress sources are discussed.

Point 4: We included section 6.2 (Reliability of the predicted 3D stress field) in the discussion chapter, to discuss model uncertainties in more detail now.

Interactive comment on Solid Earth Discuss., 6, 2423, 2014.