Mylene meeting 31/10/19

Coal authority meeting – main feedback and interest is in recharge and licensing

Chris mentioned solar contribution and how to determine what this contribution is depending on depth and extraction

(Latest gmsh doesn’t work with gina)

Ian Watson input is the model development steps

Mylene has used gmsh to create a model of the initial development step. Discussion around the developed mesh

* Inclusion of borehole
* Source term application
* Multiple seam model
  + Playing with material properties

Action item for CMCD and AFH to get model working so Mylene can investigate contribution of solar

Mylene to work on different scenarios

CMCD – suggestion to work also on sources of heat - would make the paper fuller

* Rock type
* Decay
* Geochemical interactions
* Influence of faults

MYlene – concern for lack of data for this – limitations of data (where sampled with respect to geology etc)

CMCD – try to keep broad enough that we are not just answering questions from the Coal Authority

Discussion of literature models

* Guo et al 2018 – dual porosity model – interesting to know how they exchange heat between dual porosity models?
* Raymond and Therrien 2008 – using 1 D pipe flow and 3D laminar flow in matrix – AFH, CMCD to make OGS work in this respect

SG – David Manning input

* shallow borehole temperature data
* start to make contacts to have access to data and then try to incorporate this in at a later date
* visit to open cast mine to see variability of rock mass

AFH comment on heat modelling in 2D, CMCD suggested a methodology to address this.