**PRE-INDUSTRIAL SETUP**

**############# 21.03.2017**

USE base-config WITH 8 OCEAN-LEVELS: cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES.config

WITHOUT Fe

GENERAL SETUP: as befre with artificial world

user-config generally: no gas-transfer, no weathering, no CaCO3 burial → test conservation of mass

OMEN-SED: here now, no secondary redox! - all remineralised

0) Biotic, No OMEN-SED

job 9804

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_00\_worbe2.S36x36\_nogas\_noweather\_open\_NoOMEN 10000

1) k = 0.01

job 9805

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_01\_worbe2.S36x36\_nogas\_noweather\_open\_k\_0.01 10000

2) k = 0.05

job 9806

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_02\_worbe2.S36x36\_nogas\_noweather\_open\_k\_0.05 10000

3) k = 0.1

job 9807

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_03\_worbe2.S36x36\_nogas\_noweather\_open\_k\_0.1 10000

4) k = 1.0

job 9808

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_04\_worbe2.S36x36\_nogas\_noweather\_open\_k\_1.0 10000

5) k = 4.0

job 9809

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_05\_worbe2.S36x36\_nogas\_noweather\_open\_k\_4.0 10000

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**NOW with 16 ocean levels**

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base-config: **cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES.config**

0) Biotic, No OMEN-SED

job 9812

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_00\_worjh2\_nogas\_noweather\_open\_NoOMEN 10000

1) k = 0.01 -----> **499.5 years netcdf error: NetCDF: Numeric conversion not representable**

**trace string: putvar2d fsedocn\_O2**

job 9813

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_01\_worjh2\_nogas\_noweather\_open\_k\_0.01 10000

2) k = 0.05

job 9814

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_02\_worjh2\_nogas\_noweather\_open\_k\_0.05 10000

3) k = 0.1

job 9815

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_03\_worjh2\_nogas\_noweather\_open\_k\_0.1 10000

4) k = 1.0

job 9816

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_04\_worjh2\_nogas\_noweather\_open\_k\_1.0 10000

5) k = 4.0

job 9817

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_05\_worjh2\_nogas\_noweather\_open\_k\_4.0 10000

**############# 22.03.2017**

--------- **RUN ocean 16 level** with k = 0.01 for 495 years because crashed after 499.5 years (see yesterday run 1) )

6) k = 0.01

(problem was: 499.5 years netcdf error: NetCDF: Numeric conversion not representable; trace string: putvar2d fsedocn\_O2)

job 9839

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2203\_06\_worjh2\_nogas\_noweather\_open\_k\_0.01\_495years 495

**--------- RUN YESTERDAY 8 ocean level runs for 20,000 years as not in equilibrium**

0) Biotic, No OMEN-SED

job 9840

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2203\_00\_worbe2.S36x36\_nogas\_noweather\_open\_NoOMEN\_20kyrs 20000

1) k = 0.01

job 9841

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2203\_01\_worbe2.S36x36\_nogas\_noweather\_open\_k\_0.01\_20kyrs 20000

2) k = 0.05

job 9842

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2203\_02\_worbe2.S36x36\_nogas\_noweather\_open\_k\_0.05\_20kyrs 20000

3) k = 0.1

job 9843

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2203\_03\_worbe2.S36x36\_nogas\_noweather\_open\_k\_0.1\_20kyrs 20000

4) k = 1.0

job 9844

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2203\_04\_worbe2.S36x36\_nogas\_noweather\_open\_k\_1.0\_20kyrs 20000

5) k = 4.0

job 9845

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worbe2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2203\_05\_worbe2.S36x36\_nogas\_noweather\_open\_k\_4.0\_20kyrs 20000

**############# 27.03.2017**

--------- **RUN ocean 16 level** with k = 0.01 for 490 years because very postive BW concentrations already after 495 years establised (see 22.03. run 6) )

(problem was: 499.5 years netcdf error: NetCDF: Numeric conversion not representable; trace string: putvar2d fsedocn\_O2)

1) k = 0.01

job 10036

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2703\_01\_worjh2\_nogas\_noweather\_open\_k\_0.01\_490years 490

2) as 1) k = 0.01 run for 480 years, in case O2 already weird at 490 years

job 10037

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2703\_02\_worjh2\_nogas\_noweather\_open\_k\_0.01\_480years 480

3) k = 0.01 – now check for bottom water [O2] > 1 microM (or micro mol kg-1) = 1E-9 mol/cm^3

job 10038

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2703\_03\_worjh2\_nogas\_noweather\_open\_k\_0.01\_O2\_1E-9 10000

4) k = 0.01 – now check for bottom water [O2] > 10 microM (or micro mol kg-1) = 10E-9 mol/cm^3

job 10039

qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh cgenie.eb\_go\_gs\_ac\_bg\_sg\_rg.worjh2.BASES DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2703\_04\_worjh2\_nogas\_noweather\_open\_k\_0.01\_O2\_10E-9 10000

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*Next one use maybe, this includes GEMLITE, can I just say false to switch it off?*

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*NOW with FE and 16 ocean levels (but DOM: without GEMLITE):*

*base-config:* ***DOMcgenie.eb\_go\_gs\_ac\_bg\_sg\_rg\_gl.worjh2.BASESFe.config***

*0) Biotic, No OMEN-SED*

*job*

*qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh DOMcgenie.eb\_go\_gs\_ac\_bg\_sg\_rg\_gl.worjh2.BASESFe DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_00\_worjh2.S36x36\_nogas\_noweather\_open\_NoOMEN\_Fe 10000*

*1) k = 0.01*

*job*

*qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh DOMcgenie.eb\_go\_gs\_ac\_bg\_sg\_rg\_gl.worjh2.BASESFe DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_01\_worjh2.S36x36\_nogas\_noweather\_open\_k\_0.01\_Fe 10000*

*2) k = 0.05*

*job*

*qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh DOMcgenie.eb\_go\_gs\_ac\_bg\_sg\_rg\_gl.worjh2.BASESFe DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_02\_worjh2.S36x36\_nogas\_noweather\_open\_k\_0.05\_Fe 10000*

*3) k = 0.1*

*job*

*qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh DOMcgenie.eb\_go\_gs\_ac\_bg\_sg\_rg\_gl.worjh2.BASESFe DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_03\_worjh2.S36x36\_nogas\_noweather\_open\_k\_0.1\_Fe 10000*

*4) k = 1.0*

*job*

*qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh DOMcgenie.eb\_go\_gs\_ac\_bg\_sg\_rg\_gl.worjh2.BASESFe DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_04\_worjh2.S36x36\_nogas\_noweather\_open\_k\_1.0\_Fe 10000*

*5) k = 4.0*

*job*

*qsub -j y -o cgenie\_output -V -S /bin/bash runmuffin.sh DOMcgenie.eb\_go\_gs\_ac\_bg\_sg\_rg\_gl.worjh2.BASESFe DOM/09\_OMEN\_GENIE\_PreInd\_March2017 2103\_05\_worjh2.S36x36\_nogas\_noweather\_open\_k\_4.0\_Fe 10000*