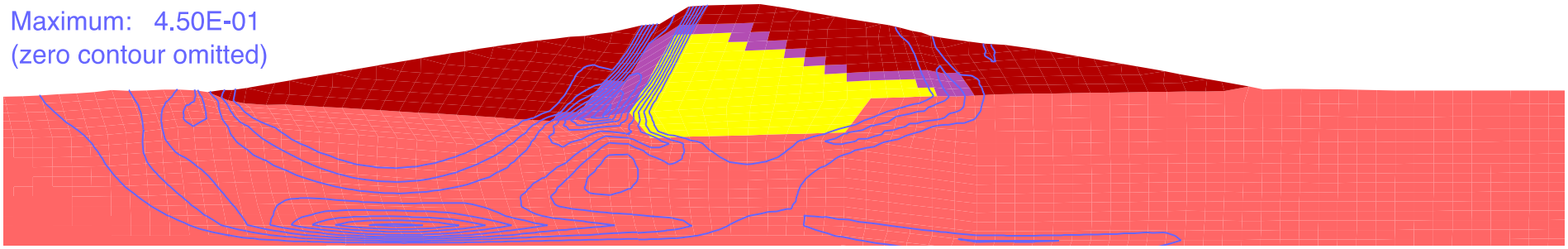
Max. shear strain increment

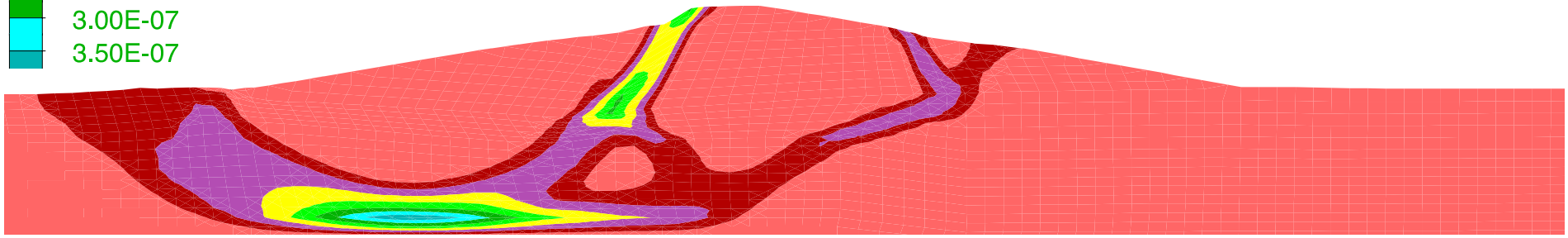
Contour interval= 5.00E-02
Minimum: 0.00E+00
Maximum: 4.50E-01
(zero contour omitted)



Contour interval lines

Max. shear strain-rate

5.00E-08
1.00E-07
1.50E-07
2.00E-07
2.50E-07
3.00E-07
3.50E-07



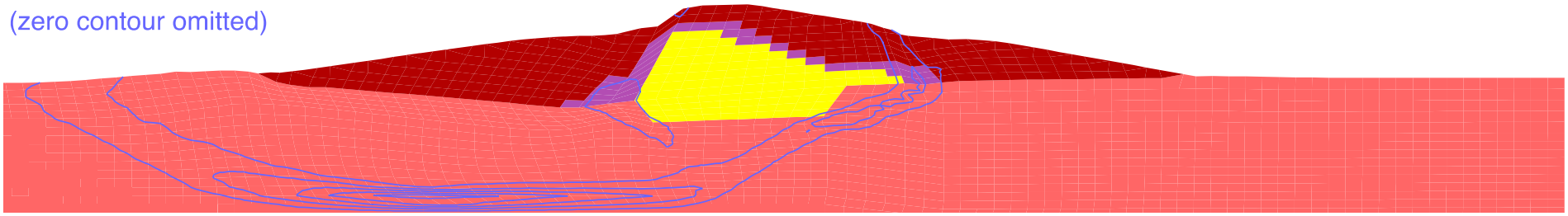
Contour intervals

Notes:
1. Units in year$^{-1}$
2. Foundation layer is shown until bedrock
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

| | | |
|---|---|---|
| srk consulting | MAC RESOURCES | North Dam Creep Deformation Analysis |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | **Shear Strain Rates Ten Years After Dam Construction** |
| | | Date: 8/17/2016 \| Approved: AL \| Figure: **8** |

Max. shear strain-rate

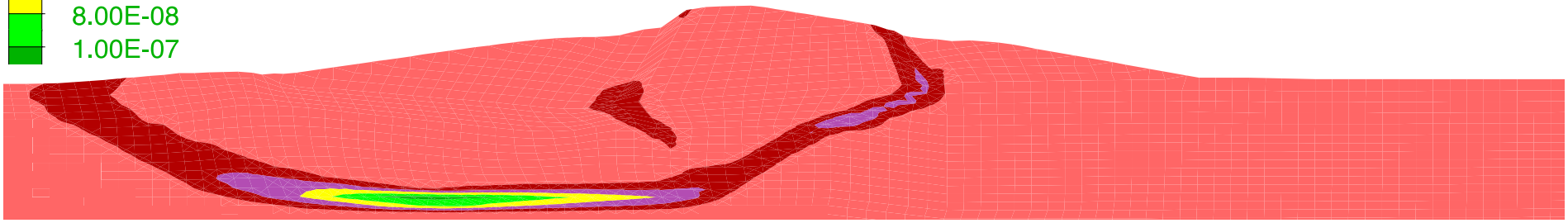
Contour interval= 2.00E-08
Minimum: 0.00E+00
Maximum: 1.00E-07
(zero contour omitted)



Contour interval lines

Max. shear strain-rate

2.00E-08
4.00E-08
6.00E-08
8.00E-08
1.00E-07



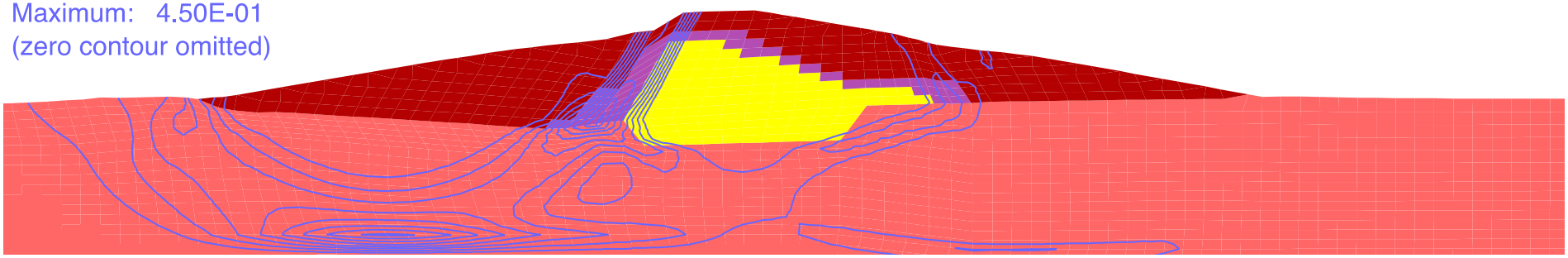
Contour intervals

Notes:
1. Units in year$^{-1}$
2. Foundation layer is shown until bedrock
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

| | | |
|---|---|---|
| srk consulting | MAC RESOURCES | North Dam Creep Deformation Analysis |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | **Shear Strain Rates<br>30 Years After Dam Construction** |
| | | Date: 8/17/2016 \| Approved: AL \| Figure: **9** |

Max. shear strain increment

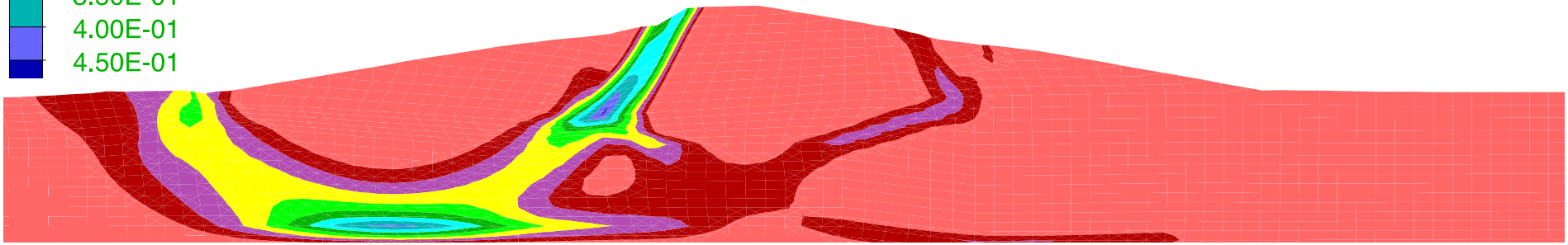
Contour interval= 5.00E-02
Minimum: 0.00E+00
Maximum: 4.50E-01
(zero contour omitted)



Contour interval lines

Max. shear strain increment

- 5.00E-02
- 1.00E-01
- 1.50E-01
- 2.00E-01
- 2.50E-01
- 3.00E-01
- 3.50E-01
- 4.00E-01
- 4.50E-01



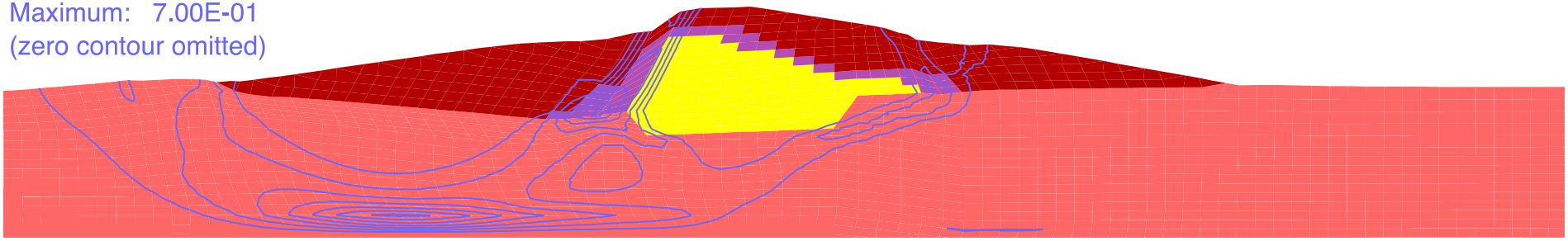
Contour intervals

Notes:
1. Units in meters/meters
2. Foundation layer is shown until bedrock
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

| | | |
|---|---|---|
| srk consulting | MAC RESOURCES | North Dam Creep Deformation Analysis |
| | | **Shear Strains Ten Years After Dam Construction** |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | Date: 8/17/2016 \| Approved: AL \| Figure: **10** |

Max. shear strain increment

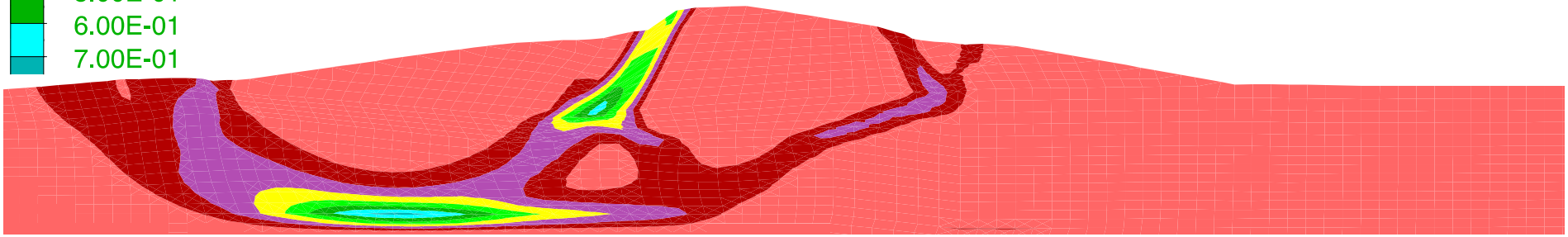
Contour interval= 1.00E-01
Minimum: 0.00E+00
Maximum: 7.00E-01
(zero contour omitted)



Contour interval lines

Max. shear strain increment

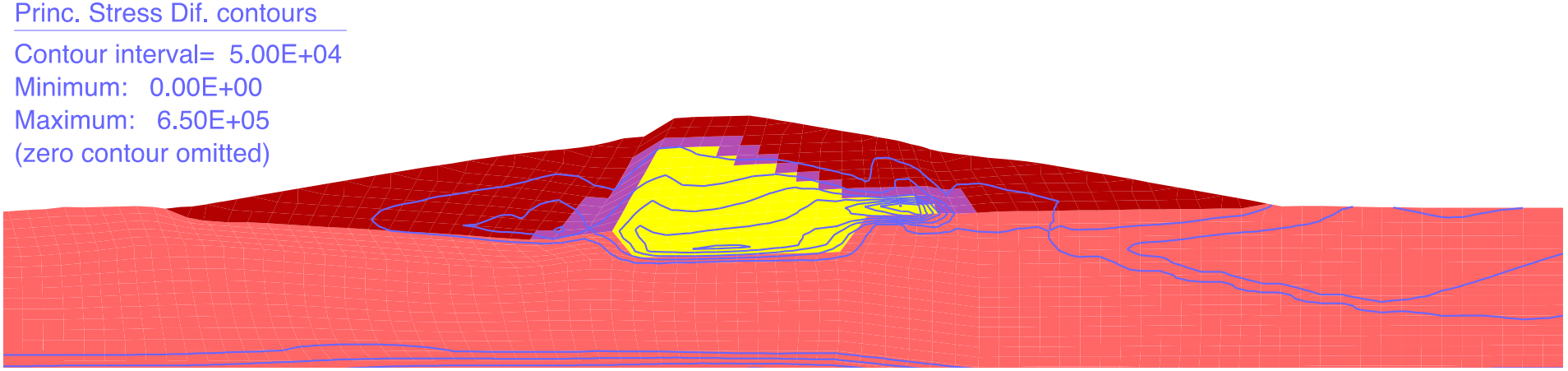
1.00E-01
2.00E-01
3.00E-01
4.00E-01
5.00E-01
6.00E-01
7.00E-01



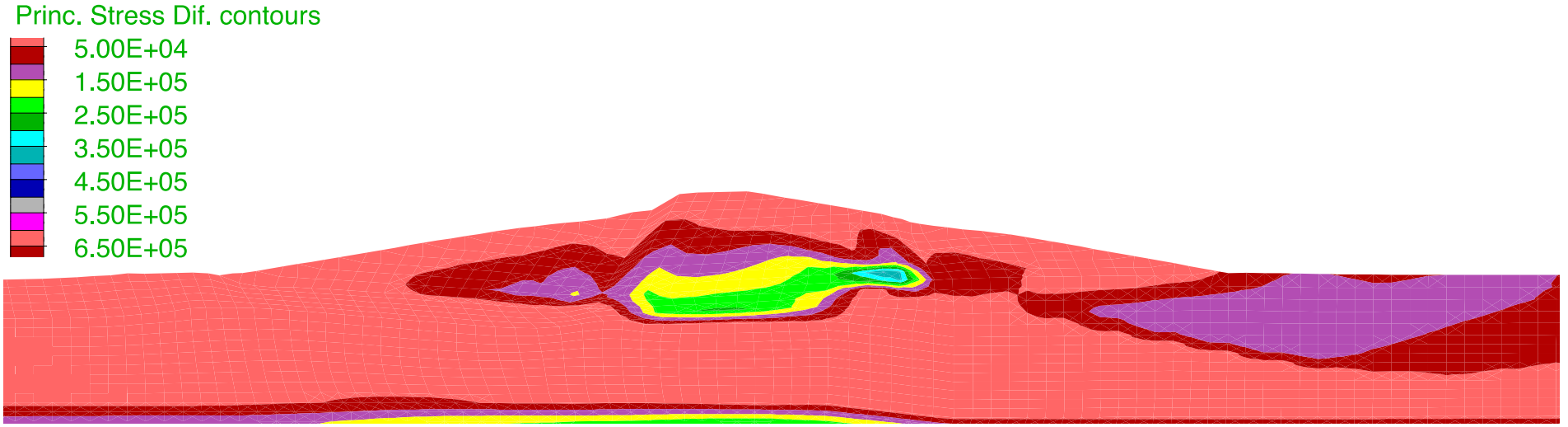
Contour intervals

Notes:
1. Units in meters/meters
2. Foundation layer is shown until bedrock
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

| | | |
|---|---|---|
| srk consulting | MAC RESOURCES | North Dam Creep Deformation Analysis |
| | | **Shear Strains 30 Years After Dam Construction** |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | Date: 8/17/2016 \| Approved: AL \| Figure: **11** |




Contour interval lines



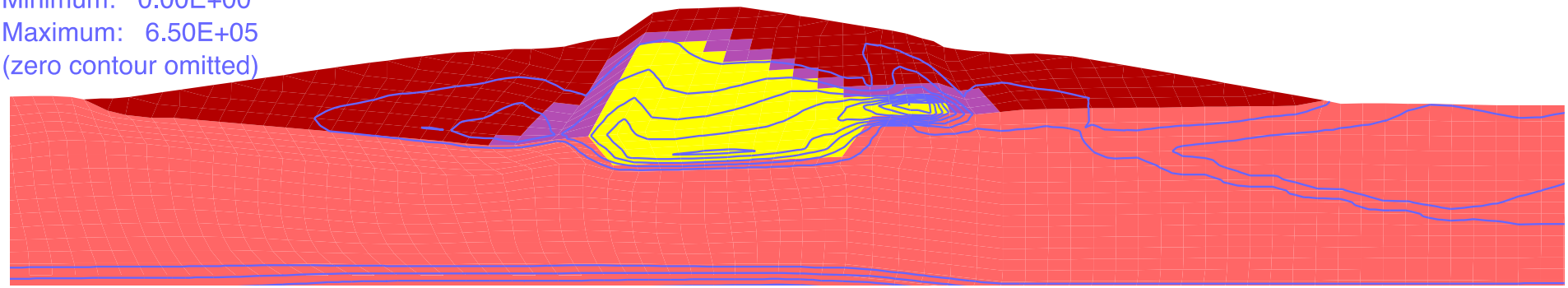

Contour intervals

Notes:
1. Units in Pascals
2. Foundation layer is shown until bedrock
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

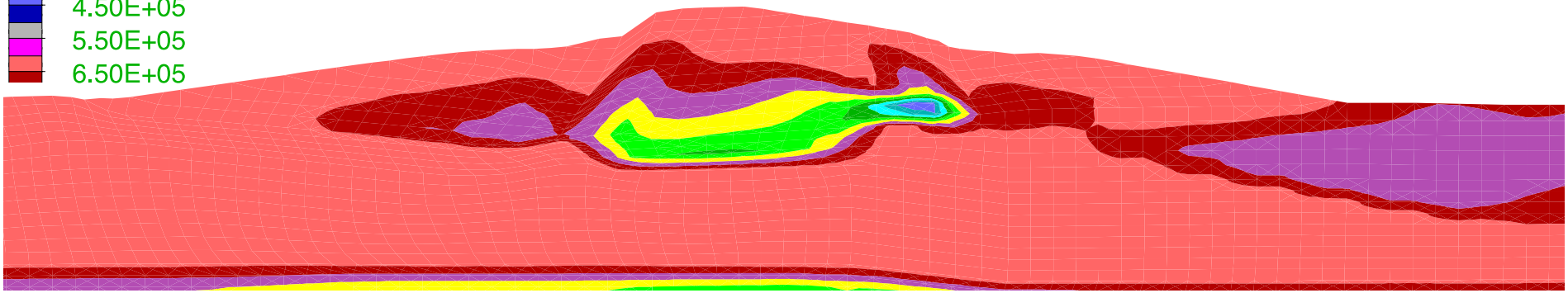
| | | |
|---|---|---|
| srk consulting | MAC RESOURCES | North Dam Creep Deformation Analysis |
| | | **Principal Stresses Difference Ten Years After Dam Construction** |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | Date: 8/17/2016 \| Approved: AL \| Figure: **12** |

Princ. Stress Dif. contours

Contour interval= 5.00E+04
Minimum: 0.00E+00
Maximum: 6.50E+05
(zero contour omitted)



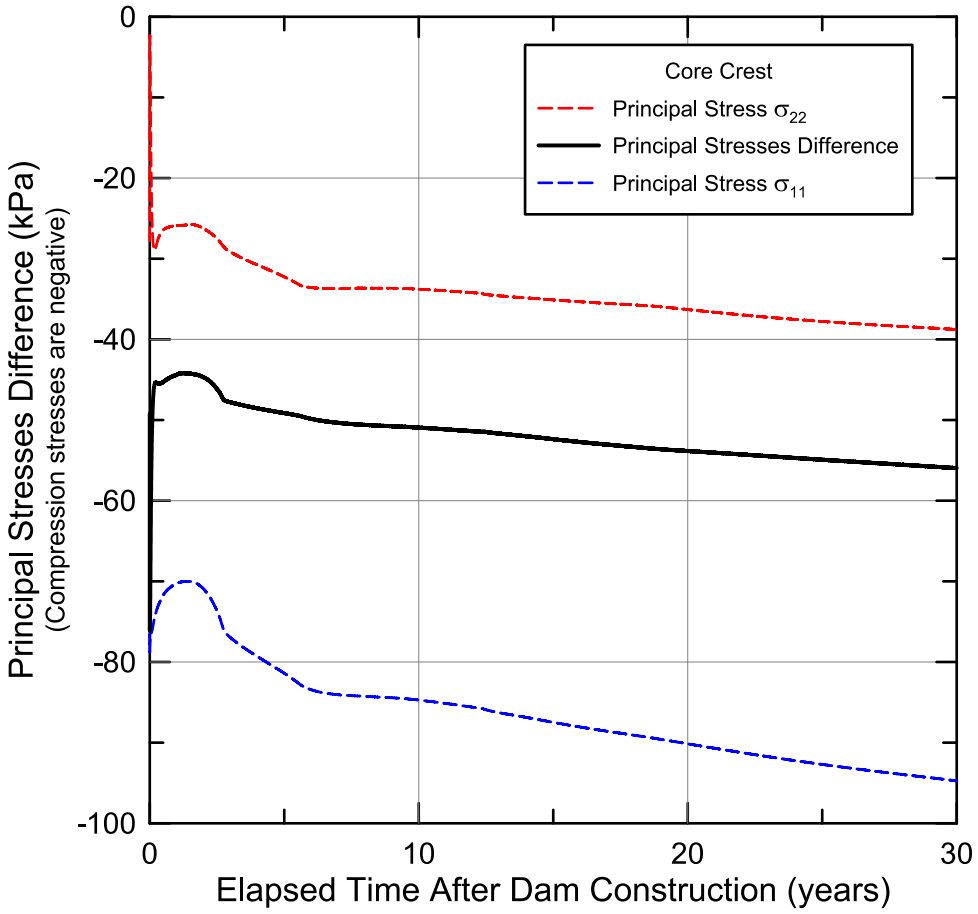
Contour interval lines

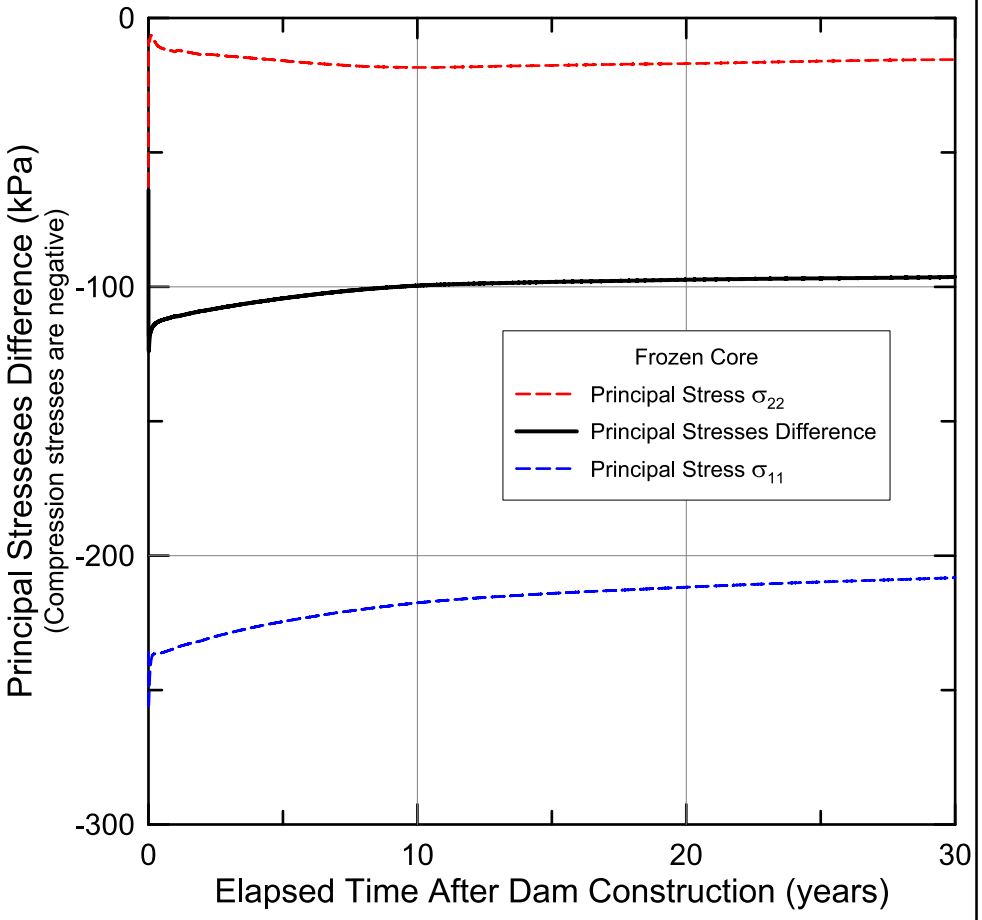



Contour intervals

Notes:
1. Units in Pascals
2. Foundation layer is shown until bedrock
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

| | | |
|---|---|---|
| srk consulting | MAC RESOURCES | North Dam Creep Deformation Analysis |
| | | **Predicted Stresses Difference 30 Years After Dam Construction** |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | Date: 8/17/2016 \| Approved: AL \| Figure: **13** |



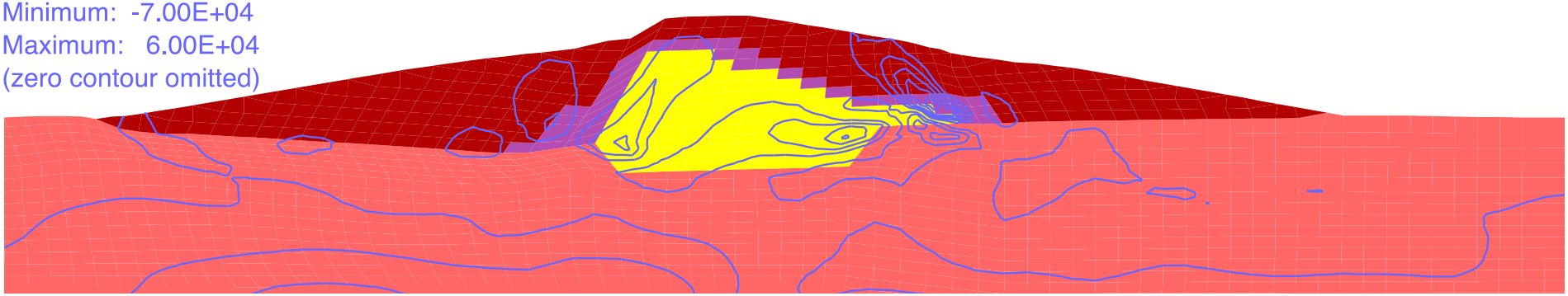




Notes:
1. Core crest is point A in Figure 5
2. Frozen core is point B in Figure 5
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

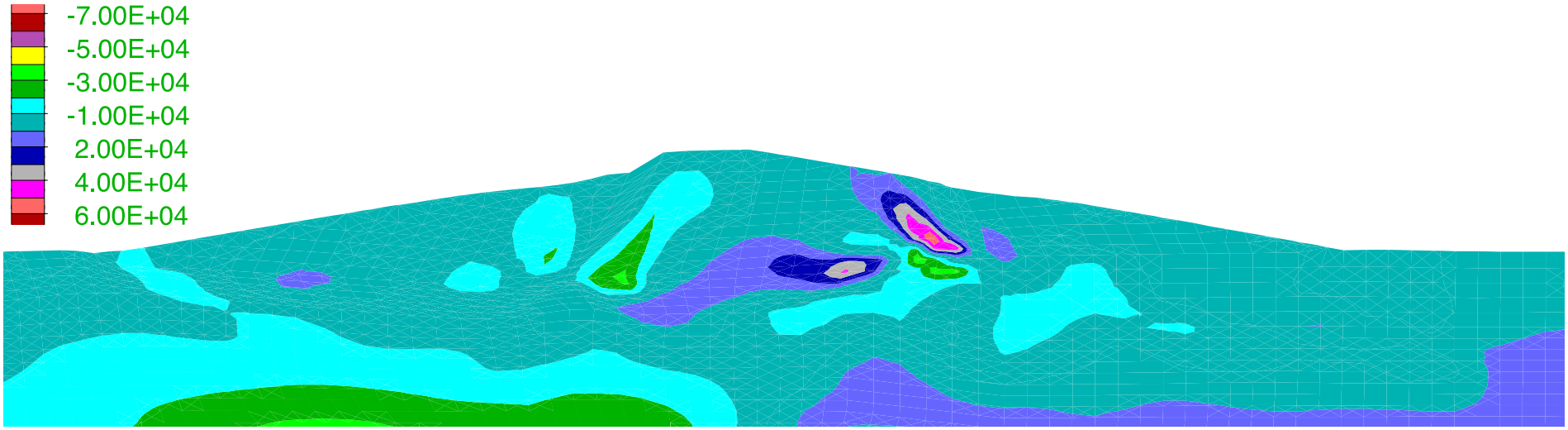
| | | |
|---|---|---|
| srk consulting | TMAC RESOURCES | North Dam Creep Deformation Analysis |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | **History of Principal Stresses Difference of two Points in the Core** |
| | | Date: 8/17/2016 \| Approved: AL \| Figure: **14** |

XY-stress contours

Contour interval= 1.00E+04
Minimum: -7.00E+04
Maximum: 6.00E+04
(zero contour omitted)



Contour interval lines




Contour intervals

Notes:
1. Units in Pascals
2. Foundation layer is shown until bedrock
3. Results for a salinity of 39 ppt in the clayey silt foundation and a threshold stress of $\sigma_{th}$=30 kPa

| | | |
|---|---|---|
| srk consulting | MAC RESOURCES | North Dam Creep Deformation Analysis |
| | | **Shear Stresses Ten Years After Dam Construction** |
| Job No: 1CT022.004<br>Filename: NorthDam_CreepAnalysis.pptx | HOPE BAY PROJECT | Date: 8/17/2016 \| Approved: AL \| Figure: **15** |