

Entreprise Société
 Cap-Breton d'expansion du
 Corporation Cap-Breton
Canada

Innovative Management Techniques to deal with Mine Water Issues in the Sydney Coal Field Nova Scotia, Canada

Sydney, Nova Scotia
September 9, 2010

ENTERPRISE SOCIÉTÉ
 CAPE-BRETON D'EXPANSION DU
 CORPORATION CAP-BRETON

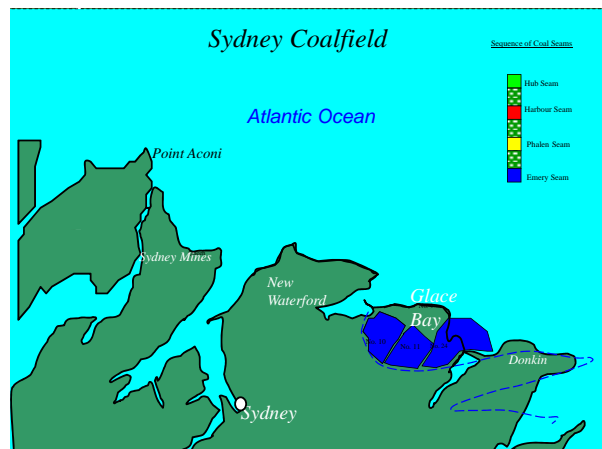
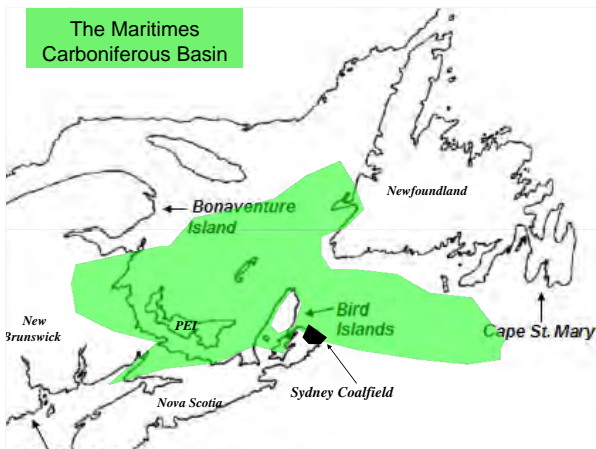
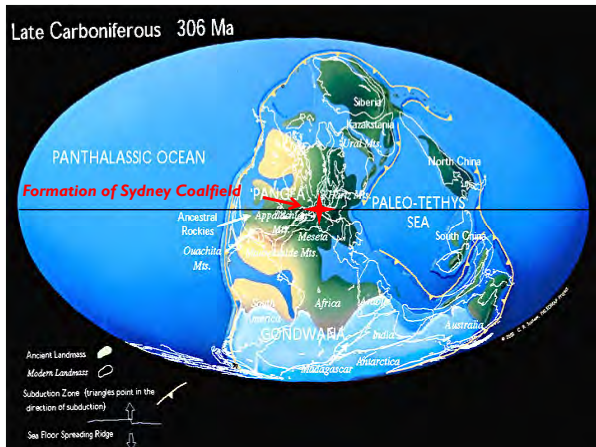
Canada

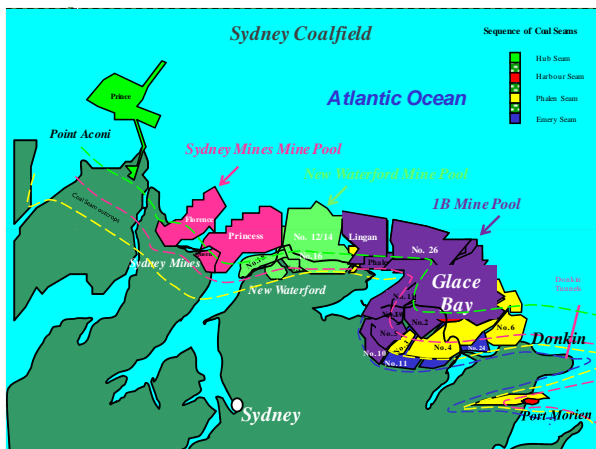
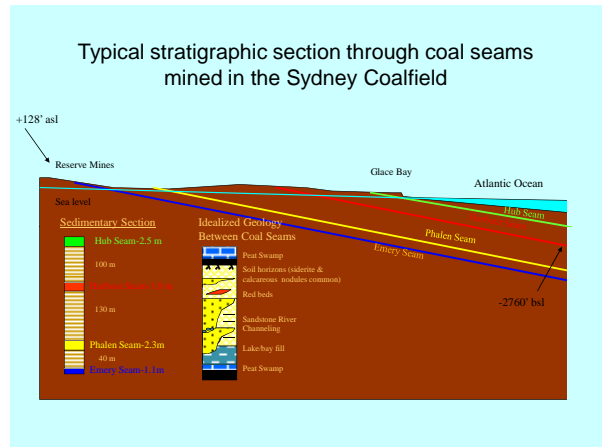
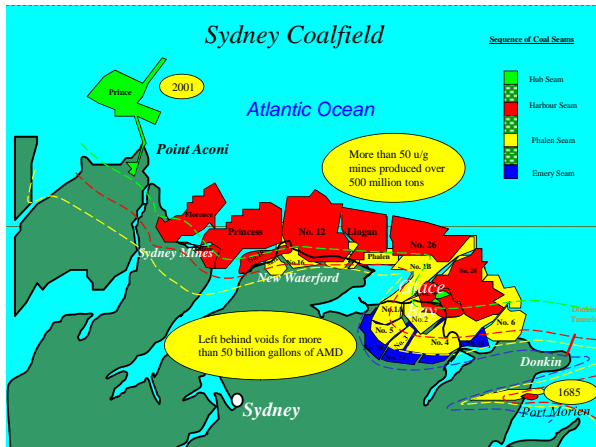
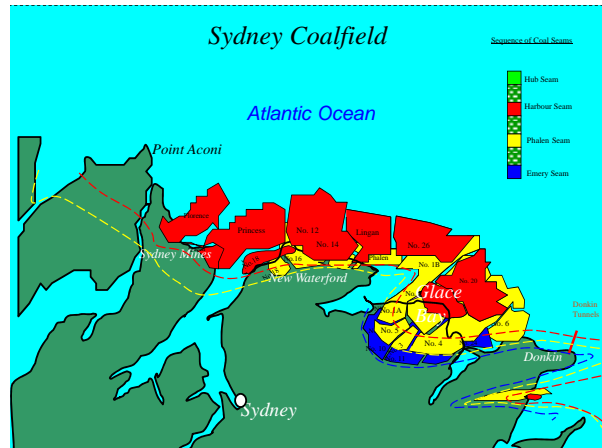
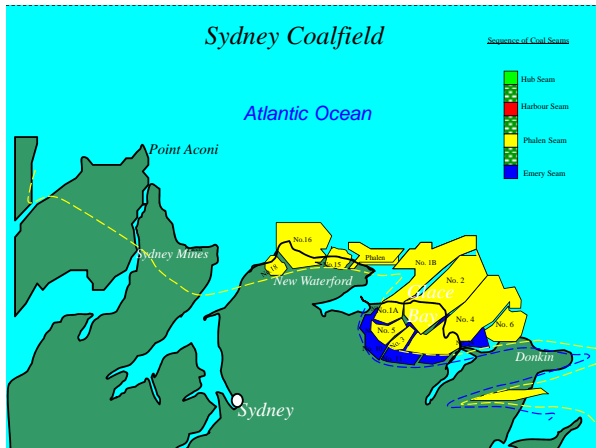
Outline of Presentation

- The formation of the Sydney Coalfield
- Location of the Sydney Coalfield
- Brief summary of operations in the Coalfield
- The 3 major mine pools and the issues
- Conclusions - what does the future hold ?

ENTERPRISE SOCIÉTÉ
 CAPE-BRETON D'EXPANSION DU
 CORPORATION CAP-BRETON

Canada





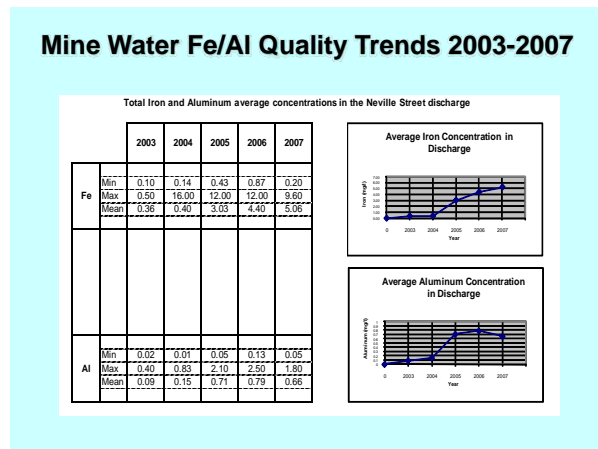
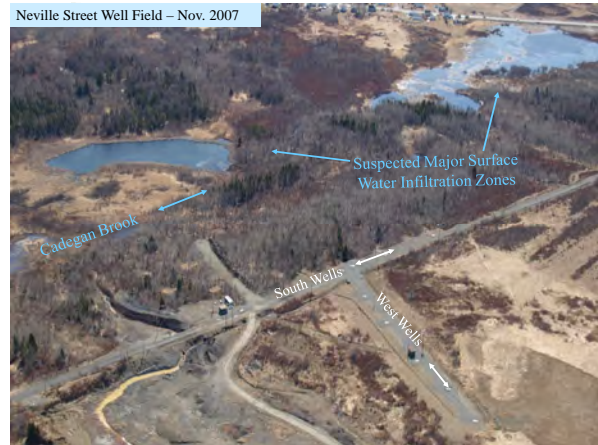
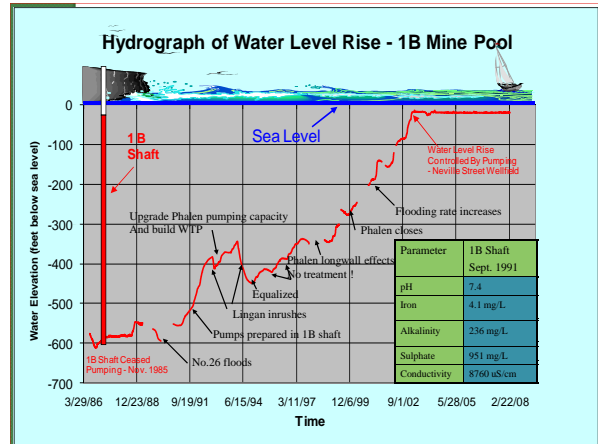
The 1B Mine Pool

- Ten interconnected mines (1876–1998)
- More than 20 billion gallons of mine water
- Flooding began in 1985, equilibrium by 2003
- Treated 1.1 billion US gal with a PTS in 2009
- Issues with the two operating mines in 1992
- Needed to pump down the mine pool

ENTERPRISE
CAPE BRETON
CORPORATION

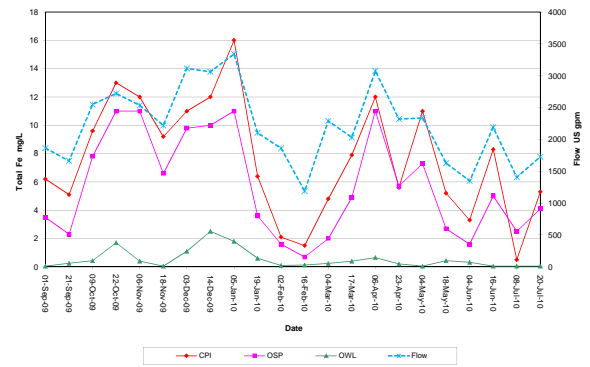
SOCIÉTÉ
D'EXPANSION DU
CAP-BRETON

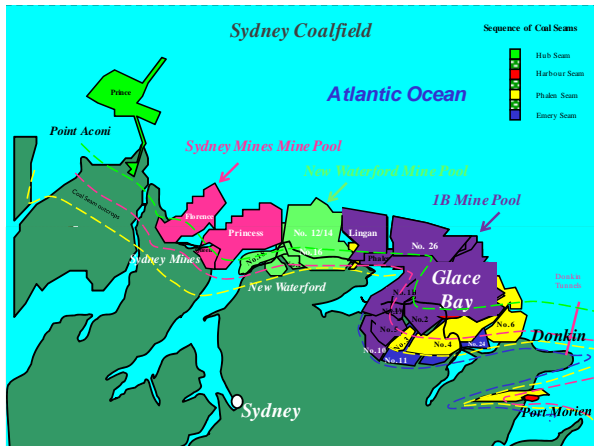
Canada





Neville Street Passive Treatment System: Total Iron at CPI, OSP, OWL



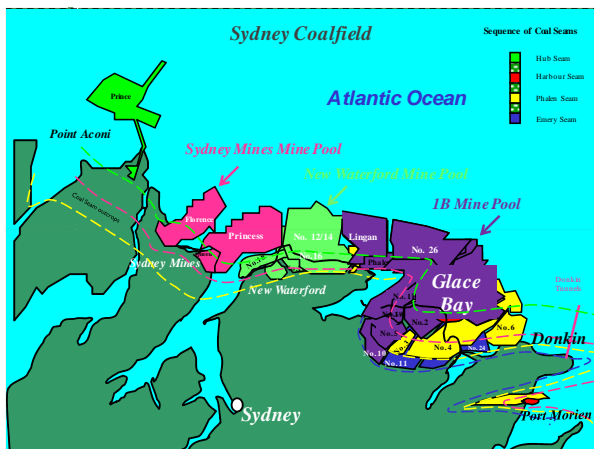
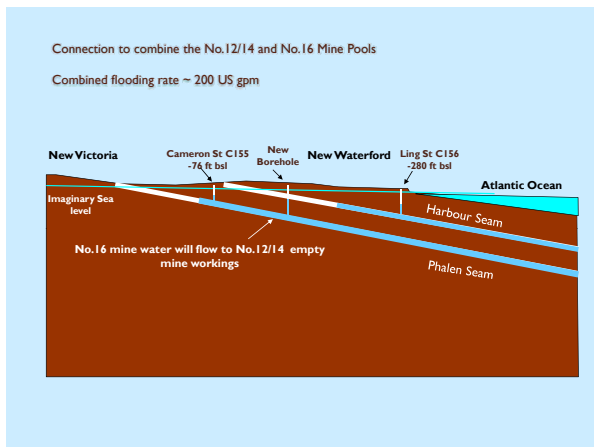


The New Waterford Mine Pool

- Three interconnected mines (1910–1972)
- More than 10 billion gallons of mine water
- Flooding began in 1962
- Monitoring boreholes installed in 2008
- 200 US gpm, Acidity 5000mg/L, Fe 3500mg/L
- Mine pool predicted to outfall by August 2009**

ENTERPRISE
CAPE BRETON
CORPORATION

SOCIÉTÉ
D'EXPANSION DU
CAP-BRETON



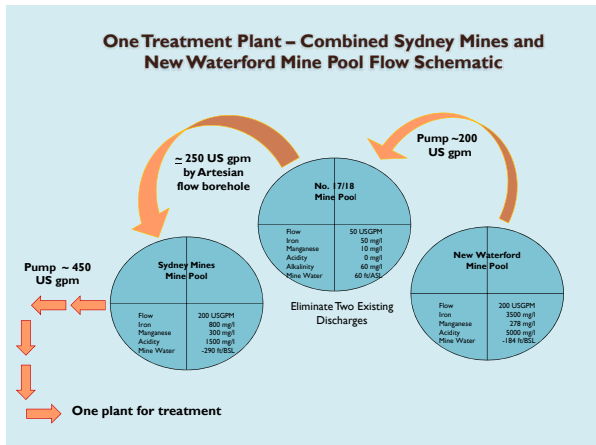
The Sydney Mines Mine Pool

- Three interconnected mines (1854–1976)
- More than 12 billion gallons of mine water
- Flooding began in 1976
- Monitoring boreholes installed in 2008 **
- 200 US gpm, Acidity 1500mg/L, Fe 800mg/L
- Mine pool predicted to outfall by December 2013

ENTERPRISE
CAPE BRETON
CORPORATION

SOCIÉTÉ
D'EXPANSION DU
CAP-BRETON





Conclusions

- Mine water issues are never simple – innovative solutions are always required. Save your mine plans.
- The 1B mine pool is being controlled by a PTS at the NSW - good mine water research will be required to get to an untreated discharge.
- The combined SM and NW mine pools will be controlled by an active treatment plant – good mine water research will be required to get to an untreated discharge.
- Common theme – good mine water research !!

ENTERPRISE CAPE BRETON CORPORATION SOCIÉTÉ D'EXPANSION DU CAP-BRETON Canada

Thank You

ENTERPRISE CAPE BRETON CORPORATION SOCIÉTÉ D'EXPANSION DU CAP-BRETON Canada