

Groundwater Monitoring Update

Santos Narrabri

Tintsfeld Water Management Facility

EPL No. 20350

Who is the NSW EPA?

- The NSW Environment Protection Authority protects our environment and community.
- We do this by being a leader, partner and protector
- We act to protect our air, waterways, land and health of the community.
- We work with communities, government and business to reduce our impact on the environment.
- We hold people and organisations to account through licensing, monitoring, regulation and enforcement

Tintsville Ponds



Tintsfield Ponds

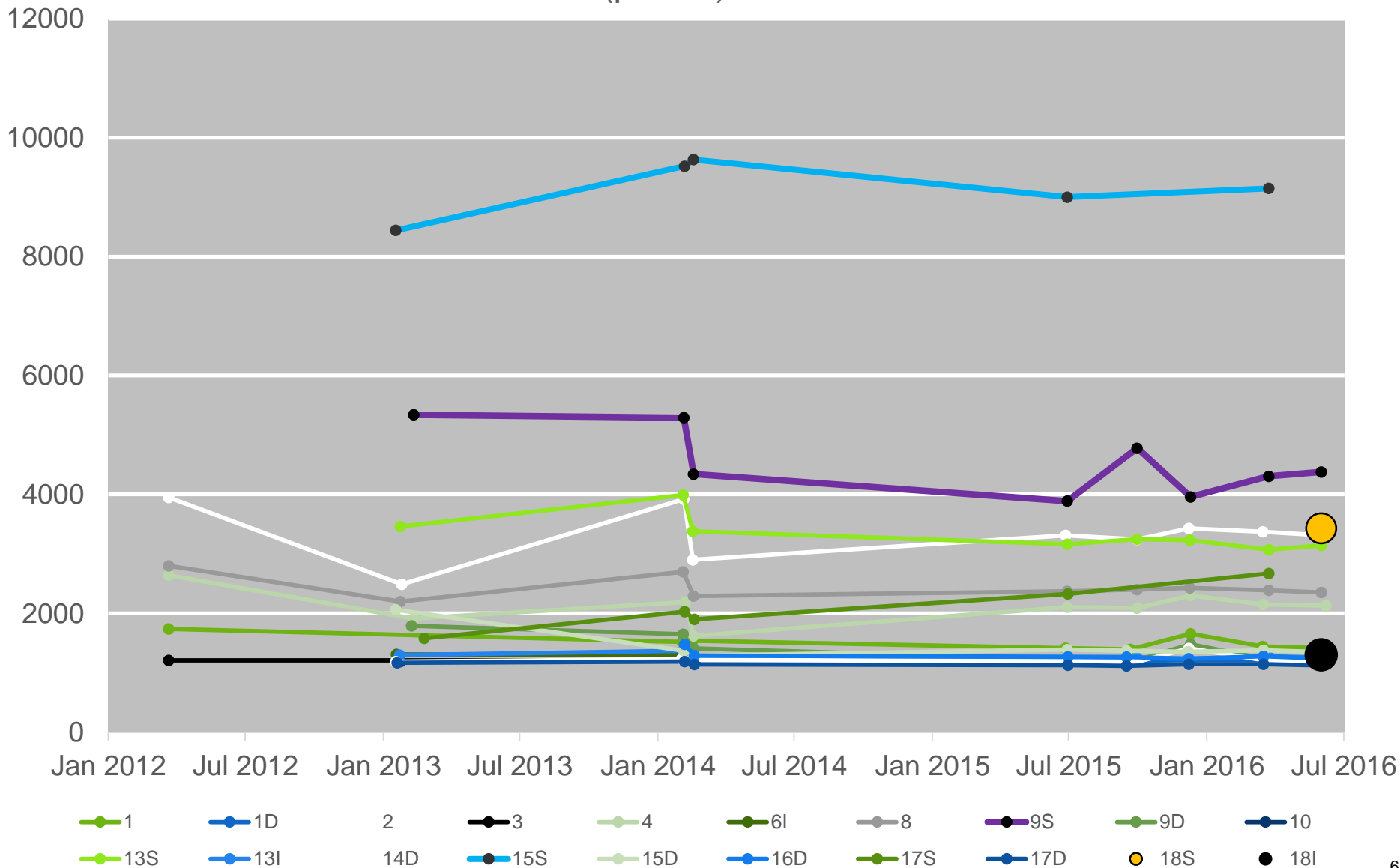
2 produced water & brine holding ponds

- Pond 1 (east) 23 ML
- Pond 2 (west) 92 ML

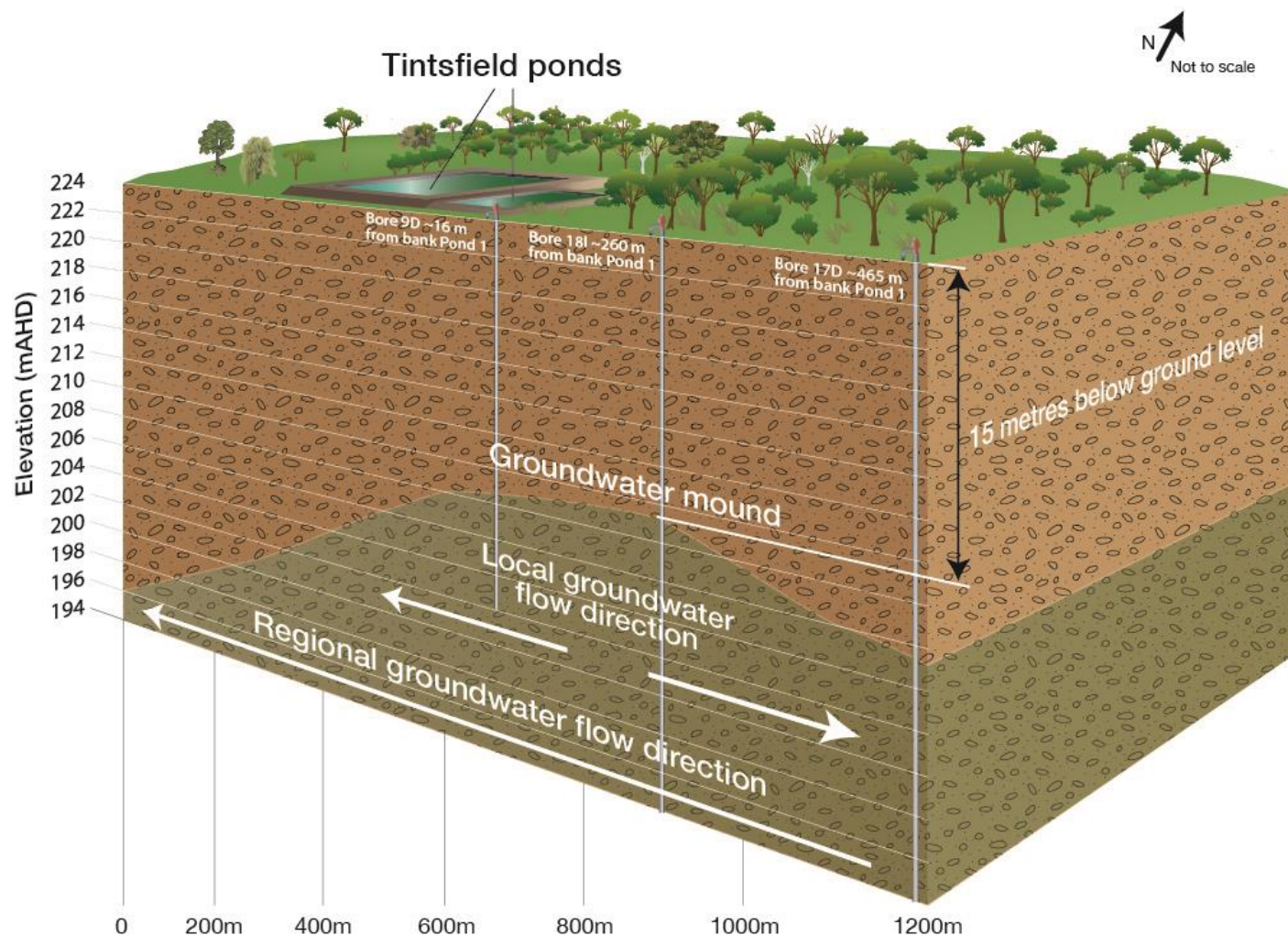
Tintsville Ponds Timeline

- 2010 - Ponds constructed by ESG
- 2011 - Santos acquires ESG
- 2012 - Santos commences investigations
- 2013 - NSW Government notified of potential leak
- 2014 - EPA becomes lead enviro regulator for all CSG
EPL issued for Santos Narrabri
EPA investigation commences
- 2015 - EPA becomes lead enviro regulator for all GAS
EPA investigation determines no environmental harm
but improvements needed
Pollution Study added to Narrabri EPL
- 2016 - EPA remove Tintsville PS from EPL
Santos monitoring ongoing

Groundwater EC ($\mu\text{S}/\text{cm}$) Tintsfield Ponds 2012 - 2016



Tinsfield Water Management Facility



Pollution Study Now Concluded

- Data from new bores refines understanding of groundwater flow, chemistry
- Groundwater chemistry stable over 4+ years
- Mounding up-gradient from ponds, due to enhanced recharge
- EPA satisfied slightly elevated concentrations and mounding are result of natural landscape processes
- EPA continually reviewing data to test our conclusions

Further Questions?

Gas Regulation Branch

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