

# Narrabri Gas Project Community Consultative Committee

## Meeting 38 – May 2019

### Action Item 38.1\_Response to Questions from PFTP directed to Santos – Water Portal

Questions to Santos to be presented at the May 2019 NGPCCC based on the Water portal site

The statements below are from the “statements” section within the Santos web site for the Narrabri Gas project dated August 19 2014 and December 10<sup>th</sup> 2015 and shows Santos’ intentions with regards to the Water Portal and Community Relations.

The questions that follow are all based upon this extracted statement and Santos commitment to an on time and up-to-date engagement with the community.

*“The local community can already access water quality and level data from Santos’ areas of operation in NSW by logging on to the Santos Water Portal (<http://http://www.santoswaterportal.com.au/>).*

*The Water Portal is a Santos-led initiative to help landholders and communities access the most up-to- date monitoring information, along with long-term trends of water quality and water levels in areas where we operate. The Water Portal is not a regulatory requirement, but the company is leading the way in the provision of this data to the general public.*

*“This forms an important part of our commitment to operating transparently with the landholders who host our activities and building confidence with the local community,” Mr Mitchley said.*

*“We strongly support any move that will help the community to gain a more thorough understanding of the water usage and impact of all industries across NSW.””*

And a further extracted Statement made on December 10<sup>th</sup> 2015 by Santos Senior Hydrogeologist, Mr Glen Toogood, again downloaded from the Santos website

*“Mr Toogood said ongoing monitoring is the tool by which Santos ensures that our activities do not impact water resources and the community, farmers and irrigators can be confident as a result.*

*“We test our ground water pressures every 30 minutes right across the monitoring network. We do this because we not only believe its good science, but it’s the right thing to do,” Mr Toogood said.”*

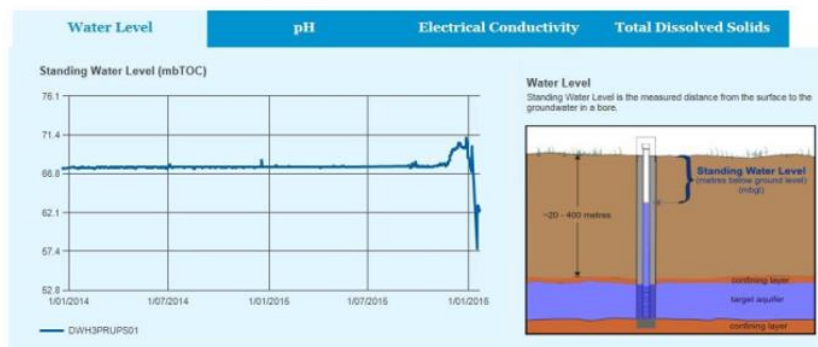
### Questions 1

Below are two images taken from the Santos Water Portal. Both are from the same site, Dewhurst 3, and are SAMBS on that site that are within 2 meters of each other, yet they show different SWL readings when it comes to dates around 1/01/2016.

#### Sample Location Reports

##### Location Report for:

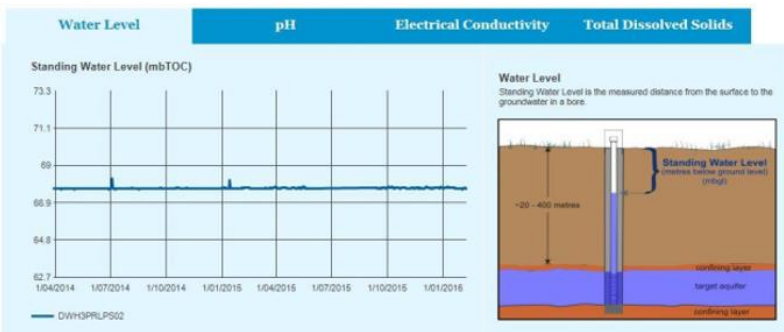
Santos Reference: DWH3PRUPS01  
Local Name: EPL Monitoring Point 14  
Sample Point Type: Groundwater Monitoring  
Monitoring Program: Groundwater Quality Monitoring



## Sample Location Reports

### Location Report for:

Santos Reference: DWH3PRLPS02  
 Local Name: EPL Monitoring Point 15  
 Sample Point Type: Groundwater Monitoring  
 Monitoring Program: Groundwater Quality Monitoring



### Questions on the SAMB Monitoring site DWH3

1.- Looking at the two images of DWH3 SAMB nest.

Question 1.- Please explain why the SWLs are different in the two images from the same SAMB site show different results?

2.- Please note in the DWH3PRUPS01 image that the SWL decreases to around 57.4 meters and then is graphed showing a fall back in a very short time to around 63 meters then decreasing to 62.1 meters.

Question 2. - Can Santos offer an explanation as to why this occurred and did Santos report the sudden dramatic changes of SWL over a very short period of time to the Regulating Authority, and what was the outcome? (copy of communications including any recommendations is requested and would be appreciated by the local and wider community to "build and ensure confidence" as per the intent of the extracted statement made by Mr P Mitchley).

3.- Follows on from 1 and 2.

Question 3a.- If the statement by Mr G Toogood is correct and the groundwater pressure (which gives SWL movement) is monitored every 30 minutes then, why is it that Santos did not notice the trend in SWL at its Dewhurst Monitoring sites for a number of months, and if the trend was noticed and Santos thought it was normal then why did Santos not make a statement to that effect at the time of the event?

Question 3b.- Has the monitoring equipment had a failure or been recalibrated and Santos not informed the Community as per the intention contained in the statement extract by Mr P Mitchley?

Question 3c. – Why are the graphs on the Santos Water Portal site not showing results after early 2016?

### RESPONSE:

There is a slight difference in readings from these two bores as they monitor the Pilliga Sandstone formation at different depths. DWH3PRLPS02 monitors the Lower Pilliga Sandstone and DWH3PRUPS02 monitors the Upper Pilliga Sandstone. These results do not appear unusual in the context of regional groundwater pressures which may vary by many tens of metres.

Santos undertakes regular maintenance and calibration of its onsite equipment and implements an assurance program to maintain the quality of its monitoring data. As part of the assurance process, the reading around January 2016 from this bore was identified as an anomalous result due to planned maintenance of monitoring equipment. Subsequent monitoring at this bore and analysis of water level trends confirms there has been no material change in water level over time at this location.

The Santos Water Portal was updated in November 2019. Comments and suggestions from Narrabri Gas Project CCC representatives, including those documented below, were considered during that update and changes implemented to improve the portal interface for users.

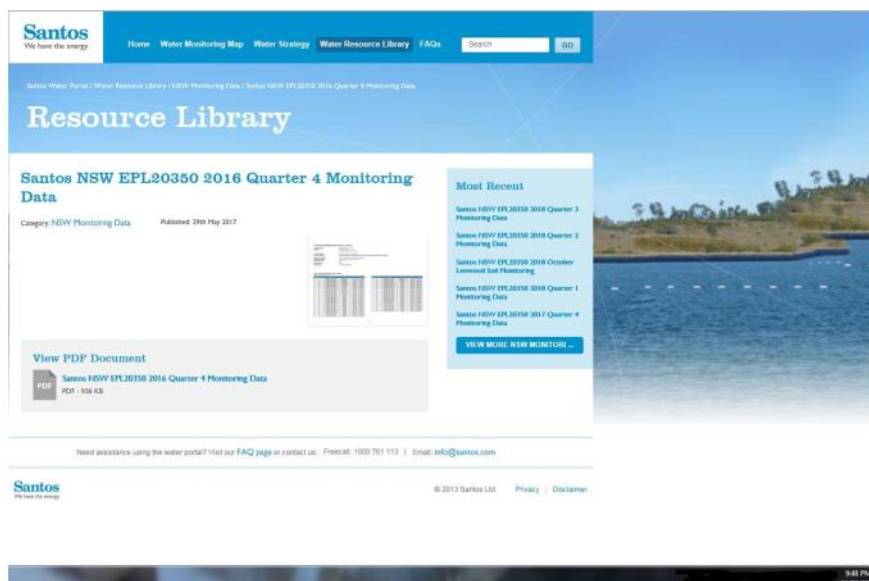
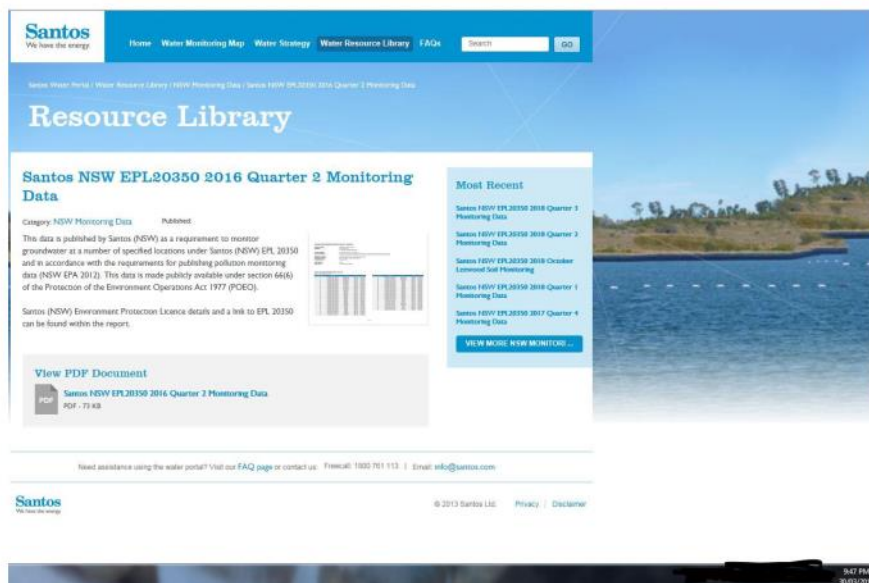
## Questions 2

### Questions on contents of the Water Resource Library

Below are two example images again taken from the Santos Water Portal Water Resources Library.

The statement regarding the requirement to publish the data according to the POEO Act 1977 and the EPL20350 licence can be found on all the Water Monitoring Reports up until and including quarter 2 of 2016 (first image), but is missing on all the Water Monitoring and Soil reports downloaded from the Water Resources Library after that date up to and including q3 of 2019.

Question 1.- Why is the statement not included on the latter water and soil monitoring reports?



## RESPONSE:

Santos publishes data in the Water Resources Library in compliance with regulatory requirements.



The Santos Water Portal was updated in November 2019. Comments and suggestions from Narrabri Gas Project CCC representatives, including those documented below, were considered during that update and changes implemented to improve the portal interface for users.

### Questions 3

The following is a page from a 2014 Santos multi page Brochure called "Narrabri Gas Project".

It explains water and emissions monitoring as well as the purpose and available access to the Santos Water Portal with regard *"Information on all water quality and water bore level test results from our NSW operations"*.

People for the Plains realise that the graph format and the Water Portal are a non-compulsory regulatory requirement, as per Mr P Mitchley's comment, however there are some questions below that need to be answered seeing Santos has, over the years, made a big thing of the Santos Water Portal and the purpose of that portal with regard to communication with the community re what effect Santos' activity is having, or not having, with regard to the local surface and groundwater within and adjacent to the NGP area.

## Checks and balances

Santos will deliver energy from the Narrabri Gas Project safely, sustainably and with minimal impact on the environment, industry and the local communities.

### Monitoring

We have developed a groundwater monitoring program covering not only the area where planned activities will take place, but also the broader region. The program is designed to improve the understanding of the natural variability in water levels, flows and chemistry across the region and includes the establishment of baseline conditions for streams, creeks, rivers and groundwater systems across the region.

As part of this program, we have conducted a regional survey of both government and landholder bores. We are also installing a network of deep and shallow aquifer monitoring bores. These bores will enhance the coverage of monitoring locations across the region and provide far more detailed monitoring of groundwater movement than has been achieved to date.

The data from our bores will be made available through an online water portal system, which is already established for our Queensland operations. This will enable the community to view our monitoring activities and access information about the groundwater systems.

### Understanding emissions

Often the presence of naturally occurring methane, for example in shallow farm bores, is the first indicator that substantial natural gas reserves may exist in an area.

To better understand the naturally occurring methane levels, Santos has commenced comprehensive air studies across the Narrabri Gas Project area and the region, collecting background or baseline data on the levels of methane in the atmosphere prior to development.

Collection of this data will continue during the development and operation of the Project, providing a baseline which will allow us to ensure our work is not adding additional levels of methane to the existing naturally occurring concentrations in the environment today.

The Commonwealth Government has also commissioned the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to conduct a study of emissions from coal seam gas wells. This study will confirm or update, if necessary, the methods used to calculate the greenhouse emissions for the industry.

We support relevant, robust research that can be used to provide more accurate information about emissions from coal seam gas production. To that end, we are providing practical and objective assistance to the CSIRO study.

Our infrastructure in NSW will be constructed, operated and monitored in accordance with best practice standards. This will ensure emissions are minimised as the Project is developed.

### The Santos Water Portal

In October 2011, Santos was the first coal seam gas company to launch an online portal to make publicly available all water quality and bore level testing results from our CSG operations in Queensland's Surat and Bowen Basins.

Information on all water quality and water bore level test results from our NSW operations will be available to the public from late 2013 at [www.santoswaterportal.com.au](http://www.santoswaterportal.com.au)

### Questions

1. As the graphs on the Santos Water Portal site are years behind with regard to SWL, EC, pH and the tabular information is not easy to find due to the heading used to describe it: Does Santos and the relevant NSW Government Departments feel that the state of the Portal fits into Santos' and the NSW regulatory requirements with regard to providing current information to the community that is transparent and open that enables the community to fully understand what effect the CSG industry (NGP) could have on the area?

As can clearly be seen under the heading of Monitoring Santos has carried out water testing on 'landholder' bore, as well as others, in order to establish a "baseline".

2a . How many times have samples have been taken for testing from landholder bores in order to establish this baseline?

2b. Where can the results of these samplings from landholder bores be found on the Santos Water Portal site as indicated in the provided page?

2c. How many samplings of Landholder bores does Santos feel are required in order to establish a proper baseline condition? (A presentation organized by the Narrabri Chamber of Commerce was told that a minimum of 5 over a period of up to a year were required for this purpose).

2d. Did Santos at any time during the sampling period of 2012 to 2013, do tests for bacteria, such as Sulphate Reducing Bacteria, E.coli and Heterotrophic Plate Counts on the samples taken from the Landholders bores and were analysed as stated in the included extracted page?

2di. If Bacteria counts were done, then where can these results be found on Santos' Water Portal or elsewhere on Santos' website?

2dii. If these results are not on Santos' site, then where can these Landholders bore results for Bacteria be found by the local and outside community?

2diii. If test for bacteria were not done then what is the reason for this discussion? And will Santos now commence doing Bacteria testing for the bacteria mentioned above plus any bacteria that might attack the Gas infrastructure? (This question has in part been made in response to a recently released newspaper and company released article where a Schlumberger subsidiary Saltel carried out repairs to two Queensland gas wells. Article and associated questions are provided separately).

#### **RESPONSE:**

Watering monitoring results are available in individual quarterly reports on the Santos Water Portal (<http://waterportal.santos.com/water-resource-library.aspx>). Santos also provides charts for each sampling location to enable make it easier to interpret the long-term trend in groundwater levels.

Groundwater monitoring is ongoing at a number of dedicated monitoring sites which is reported on the Santos Water Portal. The data points described as "Santos Baseline Monitoring – Groundwater Monitoring" represent bores which have been surveyed at some point in time, and are not long-term monitoring locations.

The Santos Water Portal was updated in November 2019. Comments and suggestions from Narrabri Gas Project CCC representatives, including those documented below, were considered during that update and changes implemented to improve the portal interface for users.

Questions relating to sulphate reducing bacteria have been comprehensively addressed by Santos in response to earlier questions from CCC members. The responses provided by Santos are available at:

- For questions asked at meetings between August 2012 and October 2014: <https://narrabrigasproject.com.au/documents-from-previous-narrabri-ccc/>
- For questions asked at meetings from December 2014 onwards:
- <https://narrabrigasproject.com.au/community/consultative-committee/>

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