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NARRABRI NSW 2390

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Executive Director
Resource Assessments and Business Systems Branch
Planning Services
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Sir/Madam

RE: Narrabri Gas Project - SSD 6456

I support the development of the Narrabri Gas Project.

I am employed by Santos in NSW with the majority of my work responsibilities relating to the development of the Narrabri Gas Project. I would like it noted however that I am making this submission in my private capacity as an individual that has a good knowledge of the gas industry and the Narrabri Gas Project; and who also lives locally in the Narrabri community. My comments, observations and opinions are solely my own and do not necessarily reflect the official policy or position of Santos.

I moved to Narrabri in 2013 from Queensland when I accepted a position as Team Leader Community and Land with Santos. In this role, I have spoken to hundreds of people from very different backgrounds in relation to the proposed Narrabri Gas Project, from those strongly in favour to those strongly opposed with most being in the middle of that range.

I am a member of the Narrabri Gas Project Community Consultative Committee, a committee that has a very good mix of community representatives. The Committee members (including those strongly supportive and those strongly opposed to the industry) confidently and robustly raise and discuss issues that are relevant to their organisations or group. The Committee is independently chaired by the NSW Land and Water Commissioner and there have been numerous presentations from various levels of Government, academic organisations and others to provide information on the technical, scientific and environmental aspects of developing natural gas resources in this area.

I originally came from western Queensland, where Santos (an acronym from the original company name South Australia Northern Territory Oil Search) is an old and respected name in an industry that has been going for years. The industry has been operating there successfully in co-existence with agriculture and without any significant environmental

impact, providing gas and petroleum products to the Australian and overseas market for many years. Santos is a valued employer and community contributor in those communities.

The majority of people working for Santos in Narrabri, both as employees and through contract work, are local people with their families living in this area for generations. I'm one of the few exceptions, as I've only been here for four years. My work colleagues' ties to the local community are strong and they would not continue to work for, or with, a company that was developing a project that would negatively affect their family and friends, or their community and lifestyle.

Many local people are aware of the opportunities that can come from a new industry in this area, with both the cotton and coal mining industries successfully being established and flourishing over the years in addition to traditional agriculture. Historically, both of these industries have had some negative impacts, but in the main their presence in this area is now well accepted and supported and both have created lasting benefits for the community.

There are many that are enthusiastic that the development of the natural gas resources in this area will bring benefits such as employment opportunities, investment into the local economy and industry diversification that buffers poor seasonal conditions and agricultural commodity prices. Santos' EIS provides extensive information on the benefits of the Narrabri Gas Project going forward.

There are also local people that have concerns, many of those concerns being based around potential impacts to groundwater in an area where irrigation is required for farming and reliable water supplies are essential for stock and domestic purposes. The EIS describes in detail aspects of the groundwater assessment, modelling of the impacts and the ongoing monitoring framework.

From a personal perspective, the fear locally that has been generated by well-orchestrated activist campaigns in relation to the potential impact from this Project to groundwater has been astonishing and easily accounts for over 90% of questions that I receive from people. The field of hydrogeology is complicated and most people don't have the time to study every claim and nuance relating to groundwater in detail.

Furthermore, many people don't know where to go to find accurate and impartial information from a source that they trust. I'm fortunate as I know where to access this information and have access to experts to assist with interpreting the information and being able to personally satisfy myself as to the scientific rigour of the various information sources.

The key points from my perspective that are fundamental to my belief that the Narrabri Gas Project will have negligible effect on groundwater are:

- Santos is required to apply for water licences and purchase water allocations in the same way as any other water user in NSW, the company gets no special treatment
- A gas well is just a very well-engineered water bore – instead of drilling to target water, Santos drills to find gas. There are thousands of water bores in the Narrabri Shire alone and very few of them are cased, maintained or monitored as well as the Santos gas wells are

- The *NSW Code of Practice for Coal Seam Gas – Well Integrity* applies stringent conditions to the drilling and casing of gas wells and there are multiple government departments that monitor and audit these activities
- Santos drills deeper than any of the water sources accessed by stock and domestic users in this area so they're not taking water that others are reliant on
- The only reason that the water from the coals seams cannot be used directly without treatment through a reverse osmosis plant is that the water is salty. It is being drawn from deep underground – generally from about 500 - 1100 metres deep, with the water being about a third as salty as sea water
- The water is just normal bore water, there are no added chemicals. It's frustrating to me that the term 'produced water' is used so extensively in the oil and gas industry, resulting in everyone outside of that industry thinking that the water contains added chemicals – it doesn't, it's just plain old bore water
- The Narrabri Gas Project will extract an average of around 1.5 gigalitres of water per year. To put that amount into context, that represents < 0.06% of the available water in and overlying the Gunnedah Basinⁱ. It is equivalent to what is required to water less than 200 hectares of cotton (that has an average irrigation requirement of 7.8 megalitres per hectare)ⁱⁱ.
- Santos does not frack, nor are they applying to frack, in the Narrabri Gas Project area. I personally am not concerned about the technology or practice of fracking as it is used extensively and safely in many other areas in Australia and internationally, but I can understand that the community has concerns about the practice

Apart from groundwater, other common concerns relate to potential social impacts such as changes to existing land use, lifestyle and potential industrialisation of the landscape. These are all valid concerns, but again the potential risks have been highly exaggerated by those opposed to the industry and many of the concerns relating to social impact have been based on the much larger scale of the industry development in Queensland.

The Narrabri Gas Project is a small project, with Santos being the single company operator with up to 850 wells being drilled over a period of 25 years. In comparison to Queensland, where there are multiple companies currently drilling around 700 wells per year (with a record high of 1634 wells being drilled in 2013-14)ⁱⁱⁱ. We need to put the size of the Narrabri project into context - in one year, the number of wells and associated infrastructure that was developed in Queensland was nearly twice what Santos will be developing in the Narrabri Gas Project over the entire 25 years of the project. The scale of the developments cannot be compared. The 'we'll all be ruined said Hanrahan' predictions of impending catastrophe from large scale industrialisation of the area are exaggerated out of all context to the reality of what the project proposes and what the known quantity of the gas resource is.

The majority of the development will be occurring in the Pilliga East State Forest, with wells only being drilled on private land in the project area with the voluntary consent of the landholder. People ask me how I know that this is true - why am I so confident that Santos will only drill wells where the landholder is happy for us them to be there? I'm certain about this because it relates to my day to day job. I know what the Santos policy is and I am confident that the company will not go back on their word in relation to this.

I believe landholders should be fairly compensated for their voluntary participation in the development of this project and be able to share in the benefits from developing the project. The Santos framework for land access compensation is clear, fair and publicly available on the Narrabri Gas Project website at <https://narrabrigasproject.com.au/community/landholders/>. The method of calculating compensation is uncomplicated and any landholder that knows the rateable land value of their land can make the calculation.

I have a good understanding of the perceived impacts and benefits that people foresee from the development of the Narrabri Gas Project. From my experience, most people are comfortable with the gas industry being developed if they can be assured that:

- it will be developed safely;
- that it will complement and not displace existing land uses that are held as core to the community;
- that there is adequate regulatory oversight by the appropriate level of government;
- that there is respect for the local community and the people that live here;
- that the benefits from the industry are extended to the broader community; and
- that the industry will not negatively affect the health or lifestyle of people living in the community.

There has been a well-orchestrated campaign from national environmental and anti-fossil fuel activists about the development of this industry in NSW. As many people have little personal experience of how a gas field is developed, what it looks like or how it operates, and haven't found a trusted source to reassure them, the misinformation has unfortunately created concern and unnecessary fear amongst many people about the industry.

People should be reassured that the NSW State Government has implemented a rigorous regulatory framework and a very strong compliance function for this industry that is mostly unprecedented for any other industry in NSW or for gas developments in other States.

My experience is that gas industry projects can be safely developed and I believe that the benefits for the Narrabri community will be significantly greater than the potential impacts. The benefits aren't just local, with the Narrabri Gas Project being important to help secure the gas requirements for manufacturing and domestic use elsewhere in the State.

I believe that the people working with Santos genuinely care about the community and the people that may be impacted by the project and will do all they personally can to minimise those impacts. The EIS document covers the environmental issues associated with this Project in detail. I am confident that these matters have been addressed as far as possible without the Project having actually commenced, and that the others will continue to be addressed as the Project develops. If I wasn't personally confident of this, I wouldn't be involved with this Project.

Yours sincerely



Annie Moody

ⁱ Liz Webb, NSW Land and Water Commission, December 2014. *Coal seam gas development and groundwater – Gunnedah Basin NSW*. Slide 17 in presentation to Narrabri Gas Project Community Consultative Committee. URL <https://narrabrigasproject.com.au/community/consultative-committee/2014-archive/>

ⁱⁱ Cotton Australia, 2016. *Water use efficiency in the cotton industry*. URL <http://cottonaustralia.com.au/cotton-library/fact-sheets/cotton-fact-file-water>

ⁱⁱⁱ Queensland Department of Natural Resources and Mines, January 2017. *Queensland's petroleum and coal seam gas 2015–16*, page 1. URL https://www.dnrm.qld.gov.au/_data/assets/pdf_file/0008/1237742/qld-petroleum-coal-seam-gas-2017.pdf