

MINUTES:	SANTOS COMMUNITY COMMITTEE – UPPER HUNTER Tuesday, July 24, 2012 Barry Rose Room, Upper Hunter Shire Council office.
Attendance:	Graham Brown, Sean Constable, Don Eather, Steve Guihot, Cr Michael Johnsen, Cate McMahon, Peter Miller, David Ross (Chair) and Wayne Bedggood.
Apology:	Sam Crafter, Peter Bishop and Paula Stevenson.

Discussion		Action/By Whom
1. Welcome	<p>The Chair opened the meeting at 6:23 pm.</p> <ul style="list-style-type: none"> • Discussion of unproductive behaviours at last meeting. • Chair approached several water specialists to present including AGL, Office of Water, University of NSW, University of Technology Sydney, Sydney University but no one available. Prof Garry Willgoose and Phillip Pell agreed to be there, but Pell then cancelled. • Don: Why didn't you go to the University of Canberra? Chair: Happy to look at approaching Canberra University if you have a name there. GB: Can you give me a list of the people you approached, so we can put forward a name? 	<p>Chair: To approach Canberra Uni for a water specialist.</p> <p>GB: To put forward other names for a water specialist.</p>
2. Confirmation of previous minutes	<ul style="list-style-type: none"> • Committee accepted the minutes. 	

3. General business

Cate: Discussed the new compensation agreement. (Slides presented, see Appendix 1).

(Cate tabled the 'Working together in partnership' brochure (Appendix 2), Update on operations in the Pilliga (Appendix 3), Print out of a webpage "Eastern Star Gas fined for pollution in the Pilliga" (Appendix 4)).

Mark Rodgers, land manager, joined the meeting via phone.

Michael: The **\$30,000 per year** is that per well or per hectare? Mark: It is per disturbance, so yes that figures out to be per well.

Don: What are you doing about **devaluation**? The government in QLD has said activities have lowered **land values** by 12%. A local real estate agent has said the Bunnan land has gone down and one farm was unable to be sold. Mark: The argument is it can actually increase the value of the land, because of a new income for the land and there have been places brought on the fact that it has increased. Chair: Is this is an issue that has been considered by Santos? Mark: We have two landholders that I know of that have purchased land on the strength of the activity and I haven't seen any devaluation of property with the activity in the area.

Steve: Human nature being the way it is, if I had a wind turbine and I'm generating an income, the impact of it will be felt on neighbours. To pay a landholder value is good, but what about adjoining landholders? This is an industrial development and other people who are impacted should also be compensated. Santos should also be liable for a similar **compensation package for neighbours**. It really needs to be treated as an industrial development in a rural setting. Mark: If we have to address that we certainly will. We don't want to see anyone adversely affected. We consider impact all the time when considering the placement of infrastructure. Chair: Is this something you can take back to Santos. Mark: It is a fair question and we'd be silly not to look at the adverse impact on other landholders if that is there.

Mark to discuss with Santos compensation for neighbours under the new compensation package.

Graham: I'd like it noted that there is heaps of evidence of **devaluation**. I want to know if the area of the wells is going to be the 80 x 100 standard, how wide are the roads going to be? Mark: Any footprint is measured at a hectare rate, for a road disturbance is also calculated. Graham: The landowner will want to know what the conversion rates are for roads and lease areas, so what are they? Mark: I don't

know off hand, but I can certainly get it to you. Graham: What rate have you been using to date? Mark: We haven't used this package anywhere yet. Previously we have calculated the area used and compensated based on that. Peter Miller: So it is basically square meters? Mark: Yes. Wayne: What do you mean by conversion rate? Graeme: Some roads are larger than others. Wayne: But each project would be fairly different and the calculation per metre is still the same. Graeme: There have been two applications that have been thrown out of court because there was not enough detail, that is why the size of the roads are important. Peter Miller: It is still calculated on per square meter basis. Mark: our standard roads are five metres, but we can bring that back where needed.

Mark to get the conversion rates of roads to drill pad areas.

Steve: I have a friend from St George and he is concerned about **water and salt**. Is there a possibility that contaminated water or salt can occur after usage in this Bunnan area. Cate: It depends where you are, it varies from area to area. In Sydney not much water, in Queensland much more. In Kahlua there was 60% less than in Queensland. In terms of the salinity of the water, in QLD I saw some that were less than the Roma water. Steve: Will compensation be available if something happens? Mark: If there was any detrimental impacts, Santos would make good. There is no expectation of something negative, but in any context if anything detrimental occurs we are obliged to make good. Steve: Can that be publicly stated in your compensation materials? Mark: I am sure it would be and could be.

Mark to ensure obligations to make good are included in compensation promotional materials.

Chair: With the farm management plans would that detail this? Mark: The farm management plan is more about the day to day running of the farm. More about us not affecting the day to day running of the property.

Graham: Is there going to be a **dispute / resolution** process? Mark: Yes there will be. We would hope that would not occur, but we would entertain that for sure. Graham: Will there be compensation for people who can't get **insurance** for their property? Mark: I can't see they wouldn't get insurance. Cate: What companies are looking at it? Graham: There are two, but I don't know their names. Wayne: What aren't they insuring? Graham: They don't want to insure land with exploration holes? Michael: But they don't insure land? Graham: They are increasingly reluctant to insure the properties. Wayne: I'm unsure of the undue risk that the companies would be looking at and it would be good to get more information on that. Graham: Impact on the health of the animals, the abortion rates are definitely higher and that is where the insurance of animals comes into it.

Graham: To provide names of insurance companies who do not insure properties with CSG activities.

Cate: Will investigate if Santos is aware of these companies.

Michael and Wayne will also call their insurance companies.

(Mark Rodgers departed meeting).

Pilliga Update

Steve: Let's just say you didn't own Eastern Star Gas and the EPA handed out a \$3000 fine, in your opinion is that an **adequate fine**? Cate: Well first I'd look into what occurred to assess if the fine was appropriate. (refers to power point presentation). The cyanide was of drinking water standards and the ammonia, which we reported to the EPA, the ammonia they could not find in the plant what the source was, so we shut the plant down. EPA's view was no harm was caused. Knowing those facts, I'd say the money was in proportion. Wayne: Was this self-regulated? Cate: Yes, we put our hand up to the EPA. Kathy: So you're **self-regulating**, so where are the policing bodies, how many accidents do we need to have before we get a body that is coming in over the top. We are sitting here aiming it all at Santos and they are giving the right answers, but how do we get the government to police this better? Wayne: In the budgets cuts there were actually more compliance officers being put on, which is a good sign. Steve: Perhaps they need to step up the unit of fines though.

Peter Miller: Slightly off topic. When **mines release polluted water** that builds up after rain and it can have millions of litres of water with pollutants released into the Hunter River. Cate: They did have a licence to release into the creek also. Peter: I'd like to put this into perspective, millions of litres compared to a very small amount from CSG. Cate: We can change it, we have stopped the plant and we will make sure it doesn't happen. Kathy: I agree Peter that the mines should not be releasing so much, but the mines have got away from us, but with CSG we have an opportunity to try and control it. Don: I don't approve of the way they do it, but they are only allowed to let it in when it is in high flow and only certain amounts.

Graham: The reason this came out was because the **Alliance reported it to the EPA**, who didn't want to do anything about it. They tested it themselves and then the EPA tested it. Perhaps Santos or EPA would contribute the \$6000 for the cost of the alliance doing the tests? Cate: I'm not sure that was the case. Santos brought it to light with the EPA.

Peter: The \$30,000 **compensation agreement** that is being put up, is that a Santos initiative? Cate: Yes.

Graham: In regard to the **storage ponds**, up the north coast Metgasco were illegally dumping the water at the tip. They are having trouble working out what is an evaporation pond and what is a storage pond. I'd like details of how long it is a storage pond before it becomes an evaporation pond? It seems

like they are just changing the name of them. Cate: Happy to find out for you.

Graham: Where would a **pond be in Bunnan**? Cate: I will have to find out; I don't know the geology of Bunnan.

Graham: How much water will be produced? Cate: It varies from area to area. Don: There are coal seams in some parts of this Valley are 12 times more saline than the sea water. Cate: The seams targeted by coal mines are much shallower. Don: But you are targeting the same seams, just further up the valley where they are deeper? Cate: No, they are different seams. (Cate, did a drawing). Wayne: They are different seams. They can probably tell you what seams they are targeting exactly, to make that clear.

Steve: My only caution is not to drive a wedge between neighbours and land holders and it is important for Santos not to set people against one another. You might want to spend some time thinking about that. Cate: A good example in QLD where a neighbour did not have gas and wanted some benefits, so they were able to place some infrastructure on their land and compensate them. Steve: Fair enough.

Cate handed out copies of the latest newsletter (Appendix 5). Criticism about the name "Gunnedah Basin" was made by the Committee.

Peter: A lot of people see Gunnedah Basin and think, well that doesn't relate to us. Would Santos consider having an office here? Cate: Yes, we have just opened another office in Narrabri and we would be pleased to open other offices as things progress.

Graham: Will the pond be classed as utilised land? Cate: Yes Graham: And paid at the same rate? Cate: Yes. Graham: Where will the large storage ponds be in the gas field? Cate: It depends on how the field develops, which we don't know at this stage.

Cate - **Water testing** update: We have four people to date who want to participate in the water bore testing to gather baseline data. Don: About this water testing, it is five months ago that the maps are out of date, it is a joke why isn't it up to date? Cate: The only public data is the government data to go on, unless you update the government on, if your bores are no longer in action or recorded in the wrong location. Wayne: We have talked about this previously, about how the government data is very inaccurate. Steve: So how can it be updated? Perhaps a general mapping exercise with the people in Bunnan would be useful? Cate: We'd be pleased to do that. Cate: When Steve Tapsall goes out to site

Cate to find out when a storage pond becomes an evaporation pond.

Cate to find out where the storage pond will be located in Bunnan.

Cate to find out the names of the seams being targeted in the Bunnan area.

Cate to review newsletter mailing list and name of the newsletter

when they do water bore testing and they can take a GPS location of the bore. Michael: I'm sorry, but can you imagine if Santos went door knocking to ask to map their bores? Steve: Some people would find that useful. Michael: And some would not find it welcome. Steve: It could be a nice exercise for Santos and Don to go to Bunnan residents together to map them.

Chair: Tabled letter from Margaret from the **AGL community committee** wanting to undertake a **regional groundwater study** in the Hunter. Don: This is badly overdue and should have been done before any activities. Graham: Supports a regional approach with AGL and Santos. Steve: Is this similar to the Naomi Water Catchment Study? Michael: Yes, it is based on that kind of model. Peter Miller: So at what level will the study take place? At what depth? Michael: Provided maps (see Appendix 6,7,8). Wayne: The study would be focused on the aquifers used by the community, so within the first 150 m, because water below that tends not to be usable. It measures recharge and gives some good baseline data.

Chair: It has been a few months since I sought feedback on my performance as a Chair.

Peter: Wield a bigger stick. Some people get off track, me included and I think you need to stop it sooner.

Graham: You were going to front with Willgoose tonight knowing full well I did not like that. Chair: I had spent a lot of time finding other people. I had considered your thoughts and that is why I got Phillip Pell, who I knew you were comfortable with. When I learned Phillip could not make it, that is why I contacted you and we decided to postpone that presentation.

Wayne: Willgoose is internationally renowned, a peer review for AGL, but you've decided he is an advocate for AGL and I'm not sure why. So Pell has stood at rallies and actively opposed CSG, but you say he is independent. You are saying you want an advocate for your side and not from the other or anyone independent. From my point of view having both means there is an impartial person and a person from the other side and Santos would have no one signing their praises. You have biased it the other way. To then reprimand the Chair for looking to have him here. You have completely skewed it.

Graham: But what I was driving at was having him here tonight. Are we looking at consensus here?

Chair: I understand you may not have wanted him here, but there would have been someone you did.

We won't have complete agreement, but we need the majority to be comfortable with it. Graham: I had made it clear I did not want him to be here and would have liked to have been told about what you

Santos to go to government to ask for accurate mapping of the region to be undertaken by government.

Chair to write to AGL Community Committee Chair offering support on behalf of the Santos Committee

were trying to do and be told sooner. I was glad it was held over and that end result was pretty good. That it has been put off until we can sort something else out. Wayne: Is every time one or two people disagree are we going to avoid the issue and conflict? I'm sorry Mr Chair how are we going to decide to get someone that everyone agrees to? Sean: Why didn't you go to all members of the committee and go with the majority, why only one or two people? Chair: Some people have some strong views... Wayne: With due respect, we all have strong views and the majority needs to rule in a democracy, we can't just not do something because one or two are not happy with it. Michael: I want to hear from everyone, I have no problem to hearing a range of views. Graham: It is a difficult situation.

Don recommended Denny Noris (DPI) and Ben McDonald. Graeme will look for a water person.

If water specialists are unavailable for the next meeting, Frank Krsitic will be invited to speak about landholder rights under the legislation and will be available to speak with local solicitors prior to the meeting.

Steve: Has there been an update from the Bunnan meeting?

Chair: Graeme and Michael to give an overview of the Bunnan meeting.

Michael: It was a NSW Farmers meeting that had little to do with CSG. There was discussion, AGL was also there. Some people asked questions we've all heard before, but the vast majority of the meeting was other NSW Farmers business.

Graeme: It was about water, fracking and drilling. The real conversations seemed to take place after.

Don: We talked about the dog problem and we talked about things like that.

Steve: What is upcoming in PEL456? Cate: Nothing at this stage.

Chair closed meeting: 8:20 pm.

Next meeting: Tuesday, August 28.

Don and Graham to forward names to the Chair for independent water specialists within one week of July meeting.

Attachment 1. Issues prioritised by the Committee Members and progress made

Issue Prioritised		Progress Made
1.	Understanding the impacts of the coal seam gas industry drilling and fracture stimulation techniques on water	Well integrity presentation – Feb 2012
2.	Identifying the need for independent peer reviews of water monitoring	
3.	Better communication with the community	
4.	Providing timelines for proposed activities, including Santos activities, commercial in confidence matters and regulatory changes	
5.	Providing better education on the process and impacts of coal seam gas	
6.	An understanding of the cost of the industry to the community and how this may be recovered	Discussed at February meeting
7.	Establishing baseline data of local aquifers	
8.	The need for independent specialists such as hydrologists and geologists to provide information	
9.	Understanding how value can be added to the community through this process	

Attachment 2. Actions raised by Committee Members that are not complete

	Action Raised	Date Raised	Progress Made
1.	Committee to ensure that all communication is distributed through DR rather than through any other individual(s)	29 th November 2011	Ongoing
2.	Alternates to be briefed by their colleagues before attending any meetings, as required	29 th November 2011	Ongoing
3.	Santos to present on legislative approvals process at a future meeting	29 th November 2011	
4.	Santos to invite water specialist to present at next meeting	29 th November 2011	Ongoing
5.	SC to table an REF at a future meeting	29 th November 2011	
6.	SC to present at a later date on the Eastern Star Gas pipeline projects once the business plan has been completed	29 th November 2011	
7.	DR to provide Committee Members with copies of future media releases	29 th November 2011	Ongoing
8.	Santos to report back to the Committee on the findings of the investigation in to spill	24 th January 2012	Ongoing
9.	Santos to report back on whether a prosecution is to go ahead	24 th January 2012	Ongoing
10.	Minutes to be provided to members within one to two days and members then to have five days in which to provide comments back to the Chair	24 th January 2012	Ongoing
11.	Santos to present on well integrity at next meeting	24 th January 2012	Ongoing
12.	DR to ensure there is another presentation on the impacts of CSG on water management	28 th February 2012	Ongoing
13.	DR to ensure there is a presentation on fracture stimulation in future presentations	28 th February 2012	
14.	Pilliga issue to remain on the agenda for March meeting	28 th February 2012	Ongoing
15.	Santos to provide before and after photos of the Brawboy 2 site at the next meeting.	27 th March 2012	Ongoing
16.	Next water management presentation to respond to the issue of geological flaws and cracks	27 th March 2012	
17.	Santos to provide updates on progress of organising future joint forums	27 th March 2012	
18.	Produce written update on work schedule in PEL 456	27 th March 2012	

19.			
20.	PB and PS to discuss organising a cattle property tour with Santos	27 th March 2012	Ongoing
21.			
22.	Santos to consider appointing an independent consultant to assist landholders with what information is available to them during negotiation	24 th April 2012	
23.	Liz to also email Steve Guihot a copy of the Update	24 th April 2012	
24.	Santos to provide CCC with copy of its submission	24 th April 2012	
25.	Santos to talk to Frank Krstic and the EDO to identify what they could offer to the SCC or local solicitors	22 nd May 2012	
26.	SC to identify Santos sites in the audit	22 nd May 2012	
27.	Santos to contact the Knights and provide them with appropriate details (when there is a date for seismic)	22 nd May 2012	
28.	PS and SC to discuss obtaining water quality data from landowners	22 nd May 2012	
29.	SC to find out who approached Santos for rodeo sponsorship	22 nd May 2012	
30.	SC to identify the sponsorship contribution Santos has made locally	22 nd May 2012	
31.	Santos to consider how to communicate landholder negotiations to general public while maintaining the privacy of individuals	22 nd May 2012	
32.	Santos or DR to contact John Ross, Gavin Mud or Phillip Pells to present on local hydrogeology	22 nd May 2012	Ongoing
33.	Chair to approach Canberra Uni for a water specialist after input from GB	24 th July 2012	
34.	Mark to discuss with Santos compensation for neighbours under the new compensation package	24 th July 2012	
35.	Mark to get the conversion rates of roads to drill pad areas.	24 th July 2012	
36.	Mark to ensure obligations to make good are included in compensation promotional materials	24 th July 2012	
37.	GB to provide names of insurance companies who do not insure properties with CSG activities	24 th July 2012	

38.	CM to investigate if Santos is aware of these companies.	24 th July 2012
39.	MJ and WB to call their insurance companies re: action 39	24 th July 2012
40.	CM to find out when a storage pond becomes an evaporation pond.	24 th July 2012
41.	CM to find out where the storage pond will be located in Bunnan.	24 th July 2012
42.	CM to find out the names of the seams being targeted in the Bunnan area.	24 th July 2012
43.	CM to review newsletter mailing list and name of the newsletter	24 th July 2012
44.	Santos to go to government to ask for accurate mapping of the region to be undertaken by government.	24 th July 2012
45.	Chair to write to AGL Community Committee Chair offering support on behalf of the Santos Committee	24 th July 2012
46.	DE and GB to forward names to the Chair for independent water specialists within one week of July meeting.	24 th July 2012

Attachment 3. Actions raised by Committee Members that have been completed

	Action Raised	Date Raised	Progress Made
1.	SC to provide DR with copy of presentation to go out with minutes	29 th November 2011	Completed
2.	SC to provide information on crops grown (at site in presentation) and the details of the water content of the treated water	29 th November 2011	Completed
3.	DR to contact Committee members to determine the date for the next meeting.	29 th November 2011	Completed
4.	DR to forward Kathy a copy of the previous minutes	24 th January 2012	Completed
5.	CM to source information on costs of running a desalination plant	24 th January 2012	Completed
6.	CM to report back on Santos' policy on community investment	24 th January 2012	Completed
7.	CM to report back on progress on joint water forum	24 th January 2012	Completed
8.	DR to contact Committee members to determine the date for the next meeting	24 th January 2012	Completed
9.	SC to resolve Santos mail out database	28 th February 2012	Completed
10.	SC to provide DR with possible government contacts for presentation	28 th February 2012	Completed
11.	DR to discuss list of government contacts with PS	28 th February 2012	Completed
12.	DR to invite government regulator to present at next meeting	28 th February 2012	Completed
13.	SC to respond to Foreign Correspondent story at March meeting	28 th February 2012	Completed
14.	Electronic copy of Santos report on the Pilliga to be forwarded to the Committee	28 th February 2012	Completed
15.	Hard copy of Santos report on the Pilliga to be sent to Don Eather	28 th February 2012	Completed
16.	SC to identify the date for licence renewal	28 th February 2012	Completed
17.	Santos to present on well abandonment at March meeting	28 th February 2012	Completed
18.	DR to invite WB, MJ and PB to present their views on the land use forums at the next meeting	27 th March 2012	Completed
19.	DR to talk to Julie Moloney about landowner rights	27 th March 2012	Completed
20.	DR to talk to Julie Moloney about responding to road sales in April meeting	27 th March 2012	Completed
21.	DR to ensure that staging of works to be a set agenda item	27 th March 2012	Completed

22. MJ to provide DR with background information on enquiry for DR to forward to committee

24th April 2012

Completed

DRAFT

GUNNEDAH BASIN NEWSLETTER

SANTOS NEWS FOR THE PEOPLE OF GUNNEDAH BASIN

ISSUE 6 • JUNE 2012

NATURAL GAS – AN ESSENTIAL ENERGY SOURCE FOR NSW

Natural gas has the capacity to save farmers thousands of dollars on their operational costs each year.

One farmer in the Gunnedah area estimates he has made a 50% cost saving by powering his irrigation pumps primarily with gas rather than diesel over the last four years.

While the initial outlay to tap into the Central Ranges Pipeline and install an appropriate monitoring system was not insignificant this has already been recouped several times over .

The equipment is currently run on a ratio of 90% CNG (Compressed Natural Gas) to 10% diesoleum resulting in an extremely clean low carbon burn.

The role of gas in powering other farm machinery will also increase with companies like FIAT, working on designs for a gas powered tractor, which could then be adapted to suit other farm equipment.

While gas will play a pivotal role in the energy mix as Australia moves to a low carbon economy. A newly released independent report has found New South Wales could face major shortfalls in gas supply within five years, unless coal seam gas projects are developed.

The report by international research and consulting company Wood Mackenzie forecast the domestic market would be under-supplied from 2016, but the shortfall could be avoided if coal seam gas projects were developed without delay.

A separate report by energy consultancy ACIL Tasman, commissioned by Santos, had similar findings.

New South Wales currently imports around 95% of its gas from other states. The majority of these supply contracts will need to be renegotiated by 2017. By that time, unless it can develop a gas resource of its own, NSW will be competing against the high prices offered by the export LNG market and the general increase in domestic demand for gas from other states, following the introduction of carbon pricing and the subsequent switch from coal-fired power generation.

The Wood Mackenzie report found the greatest challenges in developing a NSW gas supply were not technical or commercial, but rather opposition at a local level and potentially arduous regulations. The State government's recent Draft Strategic Land Use Plans, contain additional processes for the review of applications for mining and coal seam gas production in areas designated as "strategic agricultural land", which may further lengthen the development time of Santos' project.

Santos Vice President Eastern Australia, James Baulderstone, said while he accepts the objectives of the new policy, the CSG industry is already one of the most regulated in Australia.

"We are very concerned about the potential impact of these policies on our continuing ability to deliver new sources of natural gas to New South Wales, as we have done safely and sustainably for nearly four decades. Natural gas must remain an important energy source for NSW residential and industrial customers."

Santos is currently finalising the first phase of its drilling program with plans for fifty exploratory wells in the northwest NSW, mainly in the Narrabri area, over the next three years.

GUNNEDAH SHIRE COUNCIL VISIT TO QUEENSLAND OPERATIONS

Continued on page 2



Gunnedah Shire Council representatives in Queensland.

Santos
We have the energy.

FAST FACT
The name Santos was originally an acronym for South Australia Northern Territory Oil Search.

YOUR QUESTIONS ANSWERED

with Carl Greenstreet



Carl is Santos' Manager Development and Operations for the Gunnedah and Narrabri Projects. He has over 27 years experience as a Petroleum Engineer working in Australia, New Zealand and the USA. If you would like to have your question answered by one of our technical team, please email to energy.nsw@santos.com.

What is dewatering and what do you do with the water extracted?

Dewatering is the process where water is pumped from the coal seam in order to reduce the pressure in the coal seam allowing the gas to flow and be extracted.

It is important to note that the water recovered from the deeper coal seams is not the same water that local communities extract from the near surface aquifers for agricultural and domestic purposes.

In the Gunnedah Basin, the coal seams targeted typically lie between 350 and 1200 metres below the ground, well below the depths reached by local bores.

The incidental water extracted from these coal seams is brackish which limits its capacity for use for other purposes unless treated by reverse

osmosis. This process produces high quality desalinated water that has multiple uses such as irrigation of forage crops and reinjection into shallow community aquifers that supply town water as is the case in Roma, Queensland.

Given the early stages of Santos' operations in the Gunnedah Basin, all beneficial reuse options for CSG water are being considered, with the company committed to treating 100 percent of its incidental water and ensuring that treated water is available to the community for reuse.

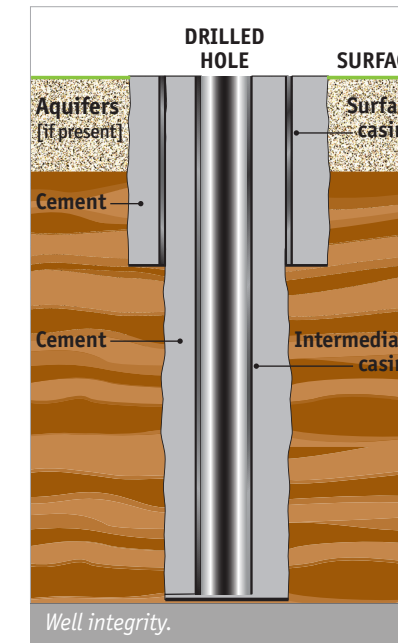
How does Santos ensure our groundwater is not affected when it drills through aquifers close to the surface?

Santos has stringent safety and environmental standards and practices in place at every level of its operations that meet, and in many cases exceed, regulatory requirements.

Santos uses surface casing to isolate any useable aquifers while drilling at greater depths, and generally uses multiple steel casing designs to ensure the aquifer remains protected throughout the life of the well and beyond.

All of Santos' wells have steel-casing that is cemented with high quality oil field grade cement, which is then pressure tested to ensure its long term integrity. All well designs are based on the Santos Drilling Operations Manual, which ensures compliance with well design standards and reflects many years of best practice drilling experience.

To produce CSG, we need to remove water from the coal to allow the gas to flow. If water was allowed to flow into the coal seam from aquifers above or below, production would be compromised and gas would not be extracted effectively or economically. To produce gas from the well for its full 20 to 40 year life, the gas must be contained and the well designs are driven by this requirement.



NEED MORE INFORMATION?

A series of factsheets relating to the Gunnedah project is available on our website at www.santos.com/nswcsg

If you are not an internet user, please ring 1800 071 278 and we will post printed copies to you. If you wish to unsubscribe from this newsletter, please ring 1800 071 278.

Information line:
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Website:
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Santos
We have the energy.

If you would like to find out more about our activities and organise a presentation or site visit for your local community group or organisation contact our Gunnedah office or email us at energy.nsw@santos.com.

Community Events

Following the acquisition of Narrabri-based Eastern Star Gas, Santos has taken on a number of sponsorships in Narrabri.

The inaugural Santos Narrabri Cup was run in March. Over 4000 spectators enjoyed the great weather and saw Armidale-trained Duplily lead from the start to win the race comfortably.

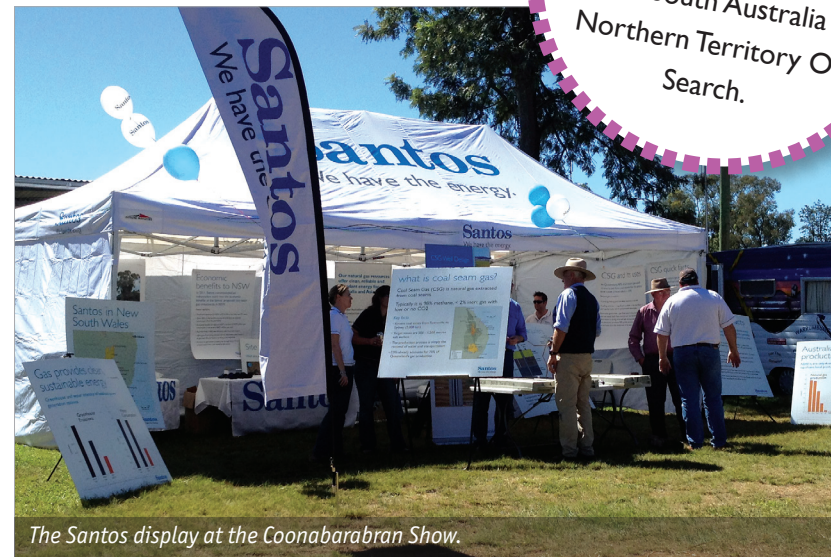
Santos was the principal sponsor of the town's 10th annual Nosh on the Namoi food and wine fair.

Held on the lawns of the Crossing Theatre on March 31, this year's



The Santos Blue Boars in action.

Photograph courtesy of www.namoiphoto.com



The Santos display at the Coonabarabran Show.

Nosh highlighted the diverse ethnic background of the local communities and was the perfect opportunity to savour local produce.

The newly named Santos Narrabri Blue Boars are also representing the town in the Central Northern Rugby Union Competition this season.

Following on from our involvement last year, Santos again sponsored a Poet tour of the north west as part of our support for the Dorothea Mackellar Poetry Awards. Sydney-based Mandy Tunica visited schools in Narrabri, Moree, Wee Waa, Pilliga, Coonamble and Baradine to get the children involved in poetry and promote the awards which are open to school children across Australia.

In Gunnedah, Santos supported the Jockey Club's Mother's Day Gold Cup Race Meeting for the first time this year. Santos was also a sponsor of the town's Cancer Council Relay for Life. We'd like to congratulate the more than 500 locals, including cancer survivors and their carers, who braved chilly conditions to raise money for this worthy cause.

As well as sponsoring events at many of the local agricultural shows, Santos staff manned information stalls at the shows so interested locals could stop by and have questions about coal seam gas and Santos' operations answered. The team attended shows in Coonabarabran, Tamworth, Narrabri and Gunnedah.

Narrabri shopfront

Santos will be opening a shopfront in Narrabri's Maitland Street to complement the company's existing Marquis Street office in Gunnedah.

With a refit underway, work should be complete by June. The office will be used for meetings with local community groups, to stage presentations and information sessions, and be a convenient central information point for locals interested in finding out more about Santos' operations.

To foster a better understanding of our projects, regular visits to the company's work sites will also be conducted to allow locals a first-hand look at field operations.



Santos' North Western Tour cycle race coming soon.

Santos is excited to be partnering with Cycling NSW to bring a major road cycling event to the north west region later this month.

The four day Santos North Western Tour will run from June 21-24, commencing with a time trial and criterium races around the Narrabri town centre. Riders will then move on to road race stages from Coonabarabran to the ANU Observatory at Siding Springs, then on to Gunnedah, before crossing the finishing line in Tamworth.

The tour will be the only multi stage cycling race in NSW to be part of the National Road series, ensuring the participation of the top national road cycling teams and guaranteeing national television coverage.

“This is a great result for the region,” said Sam Crafter, Santos’ Manager of Community and Government Relations. “Not only will there be an influx of visitors to view the race, but the added media coverage will expose a much wider audience to the spectacular scenery and attractions we have in the north west.”

The tour will be an annual event, moving to April from next year. For more information on the Tour and where to view the race visit www.nsw.cycling.org.au.



Continued from page 1

Five Gunnedah Shire Councillors and the Council’s Director of Planning visited Santos sites in Queensland earlier this year. The tour was part of a trip to learn more about the coal seam gas industry and to gauge the effects of the industry on communities.

The four day tour took the group to areas around Roma, Injune, Condamine, Miles and Dalby. Meetings were held with local councils and community representatives. In Roma and Fairview, near Injune, the group met with Santos staff who explained extensively about the company’s coal seam gas operations, which have been established in Queensland for more than 15 years.

Mayor Adam Marshall said the fact-finding trip was arranged after councillors expressed a desire to see first hand the impacts of coal seam gas operations and see and learn as much as they could from communities which have extensive experience with the industry.

The delegates report on the trip was tabled in Council and can be viewed on the Gunnedah Shire Council website.



SANTOS CSG INVESTMENT BENEFITS NSW

Santos’ plans to develop the coal seam gas reserves of north west New South Wales could deliver a \$15.2 billion boost to the state’s economy and see the creation of 2,900 ongoing full-time jobs. Over 40% of the benefits will accrue directly back to the regional economy including the communities of Boggabri, Coonabarabran, Gunnedah, Narrabri, Quirindi and Scone.

An independent report by the Allen Consulting Group, commissioned by Santos, shows that if the company’s proposed coal seam gas investments proceed as scheduled the economic benefits from a fully-developed CSG industry would include a \$470 million per year or \$8.5 billion to 2035 increase in the Gross Regional Product of north west NSW.

As well as the economic benefits, the operations could produce an extra 5GL per year of water from coal seams, which after treatment by Santos, could boost agricultural production in the region by an average of nearly 1% per annum.

A copy of the report by the Allen Consulting Group can be downloaded from www.santos.com/nswcsg or call 6741 5100 and a copy will be posted to you.

REVIEW OF EASTERN STAR GAS OPERATIONS

Santos now has the largest natural gas reserves in NSW with an exploration area of over 62,000 square kilometres following the acquisition of Eastern Star Gas Limited last year.

At the time of the acquisition, Santos announced the withdrawal of Eastern Star’s application for a pipeline route from Narrabri to Wellington; and a commitment to have Eastern Star’s existing Narrabri CSG project application reviewed under the more stringent Part 4 of the Environment Planning and Assessment Act.

While finalising a thorough review of all of Eastern Star’s facilities and practices in the months following its acquisition, Santos became aware of a spill in the Pilliga Forest that had occurred in June 2011, but had not been reported to the government regulator or disclosed to Santos.

Extensive soil tests undertaken near the site of last year’s spill showed that the levels of elements and compounds in soil near the site, with the exception of salt, did not represent health or ecological risks with levels well within the National Environmental Protection Measure guidelines for the most sensitive health-based land use soil criteria.



Santos Vice President Eastern Australia, James Baulderstone, said while the impact of the spill is limited and the site will be remediated, “Eastern Star’s practices were not up to the standards the community is entitled to expect and Santos is investing \$20 million to upgrade the sites, equipment and processes to ensure the operations in the Pilliga State Forest meet best practice standards.”

These measures include:

- ▶ A major clean up of all operational sites
- ▶ A complete design review of the Bibblewindi water treatment plant in the Pilliga
- ▶ The transfer of 60 megalitres of saline water from the Bibblewindi holding pond, via existing flowline, to ponds located Santos-owned site adjoining the Wilga Park Power Station
- ▶ A plug and abandon and rehabilitation program for a selection of Bohena wells
- ▶ Communications upgrade for the Narrabri Operations Centre
- ▶ Erection of fencing at all sites
- ▶ Stringent asset inspection program carried out by external consultants

Santos has scaled back operational activities in the Pilliga while it carries out these upgrade and remediation plans.

FARMERS’ FORUM AT KAHLUA

Due to limited ongoing activity at Kahlua near Gunnedah, Santos has added an education area with the construction of a replica of the company’s Pickanjinie multi-wellpad which is currently in operation near Roma, Queensland.

Santos hosted a Farmers’ Forum with members of the local community last month. They were briefed by Santos CEO David Knox, Vice President Eastern Australia James Baulderstone and Santos technical experts.

Landholders were shown how the environmental footprint of coal seam gas operations can be reduced by the construction of multi-well pads, in this case a four well pad.

In these types of wells, directional drilling is used to access a large area of the reservoir from a single surface location and equipment is centralised on one site to increase efficiency. This type of design is commonly used by Santos in other areas.

Santos is conducting monthly tours and information sessions at Kahlua. Interested members of the community can call 6741 5100 for a tour of the site.

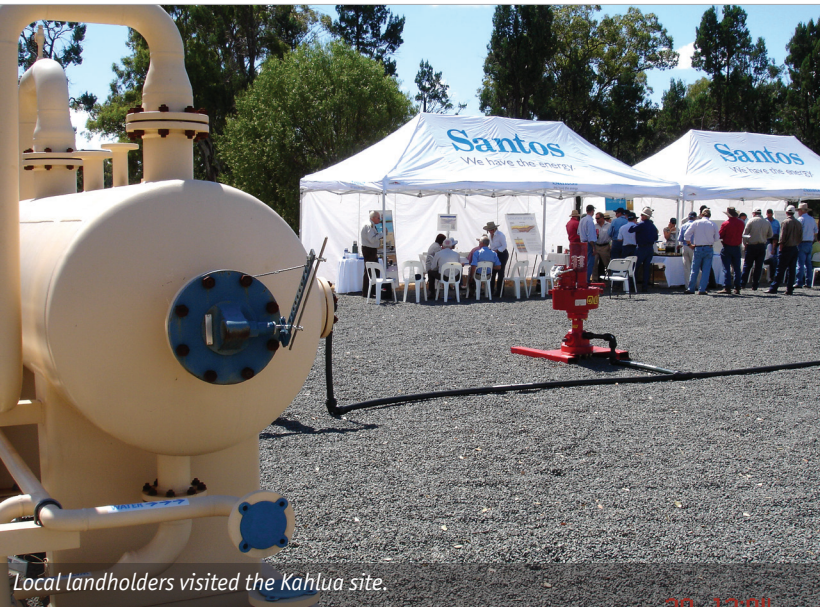
LANDHOLDER WATER BORE TESTS

In the last 12 months, over 300 bore visits have been made on private properties across Santos exploration areas.

Santos engages qualified independent water specialists to test local water bores with samples sent to accredited laboratories where they undergo over 130 separate analyses.

Water bore testing is offered to landholders who are within a reasonable distance of proposed CSG activities such as exploration drilling.

Although there is no regulatory requirement that Santos undertake this work, the company has been voluntarily conducting the Regional Bore Inventory sampling program for the past three years, to ensure local landholders can be confident Santos operations are having no impact on their groundwater.



SANTOS AND THE COMMUNITY

Community Meetings

As part of Santos’ commitment to open engagement with local communities, a series of community consultation committee meetings have been held in both Scone and Narrabri.

The Scone Community Consultation Committee is made up of community members, thoroughbred industry representatives, Santos representatives, Upper Hunter Shire councillors and council staff. Santos technical staff have recently presented to the group on Santos’ local water bore testing program and well integrity.

In Narrabri, Santos is expanding the Community Working Group originally set up by Eastern Star Gas, with more local community members becoming involved.

Formation of a similar group in Gunnedah is also planned for later this year. For more information contact our Gunnedah office on 6741 5100.

Santos’ community engagement team have also addressed the Gunnedah and Gunnedah West Rotary clubs, briefed the Australian Future Cotton Leaders in Narrabri and met with members of the thoroughbred industry around Scone to discuss how the industries might work together. A presentation was given to the Moree Chamber of Commerce, and AGL and Santos also conducted a forum on groundwater, for interested locals in the Scone area.



Regional Community Benefit Fund

At Santos, we understand that regional communities which host our operations also deserve to share in the benefits of our project, so we will establish the Regional Community Benefit Fund (RCBF).

Our contribution to the RCBF will be equivalent to 5% of the royalty payment made to the NSW Government within our production licence area. This amount will then be matched by the Government. Santos estimates local communities could benefit by more than \$300 million over the next two decades.

These funds will be used to support major initiatives and infrastructure projects which directly benefit all those in the NSW communities in which we operate. It will be administered by a body comprising local and state government and licence holder representatives.

We are investing in the future of our local communities to thank them for working with us every day.



Working Together

Santos is undertaking activities in NSW which involve exploration for, and in due course, production of natural gas from coal seams.

Unlike coal mining, the extraction of natural gas from coal seams generally does not require the freehold acquisition of land. Our operations have a small footprint that enables us to coexist with current and future land uses.

That means rather than buying private properties, we work with landholders to negotiate access to sections of their land.

We value and respect the landholders we work with and it is important our access arrangements with private landholders reflect this.

As such, we have developed a significant new landholder compensation plan that is set out in this brochure.

In addition, to ensure that the regional communities hosting us directly benefit from our activities, we will establish a Regional Community Benefit Fund.

Dependent on Santos' potential commercial production in northwest NSW, total payments to host landholders could be in excess of \$150 million over a 20 year period, while more than \$300 million could flow to local regional communities.

By working in partnership with private landholders and local communities, we want to ensure the northwest continues to prosper through further investment and job creation, without impact on the agricultural productivity of the region.



Contact Us

We understand you may have questions regarding this new compensation program and we are more than happy to answer them for you.

Our Land Access representatives are able to meet and discuss this compensation program with you further.

The Santos NSW CSG team

Santos Office
88 Marquis Street, Gunnedah, NSW 2380

Phone: 6741 5100

Online form: www.santos.com/contactnsw

Website: www.santos.com/nswcsg



Working Together in Partnership





Our Commitment to Landholders

Santos genuinely respects the landholders we work with. When we arrange to carry out activities on your land, you are inviting us into your home and we recognise this requires a great deal of trust.

We understand gas exploration and production activities can have an impact on your business and lifestyle. We are committed to ensuring you are comfortable our activities can work together with your business and farming practices.

We will work with you to develop a Farm Management Plan to ensure the profitability and sustainability of your business operation is not compromised.

When entering into a land access agreement with you, we will:

- Be honest, transparent and straightforward in our dealings with you;
- Pay for reasonable legal costs incurred by you in the agreement process and respect your right to confidentiality;
- Operate to the highest health and safety standard;
- Implement a plan to manage weeds, and minimise noise, dust and light from our operations;
- Implement a stringent regional groundwater monitoring program measuring water levels and quality;
- Rehabilitate your land progressively throughout our operations and at the completion of our activities.

Compensation for Exploration

Santos' development of natural gas resources has two distinct stages; exploration and production. We have developed a program, which compensates landholders at both stages.

The exploration stage involves the drilling of core holes to assess the geology and coals of a specific area. This is a short-term phase usually lasting 6-8 weeks, after which the site is completely rehabilitated.

The exploration stage may also include an appraisal program involving the construction of pilot wells to demonstrate gas and water flow rates. A pilot is usually in operation for between 3-18 months and may then be converted to a production well.

Compensation for these activities will be paid on the following basis:

First year:

Land Value x Area Utilised x 1.2

Land Value means the value of the property (per m²) as stated on the private landholder's Land Rates Notice.

Area Utilised means the number of square metres of a private landholder's property impacted by any installation of wells, dams, new access roads or other equipment that may be required.

Fee for Service \$30,000

When we undertake activities on private properties, we realise landholders prefer to keep our attendance to a minimum.

We will seek their help in simple monitoring and upkeep of our facilities and will pay this fee for their time.

Second year and onwards:

Land Value x Area Utilised x 0.6

Example: For a 1 hectare surface facility on land valued at \$6,000 per hectare (\$0.60/m²) for the next three years:

Year 1 = \$0.60 x 10,000m² x 1.2 = \$7,200
Year 2 = \$0.60 x 10,000m² x 0.6 = \$3,600
Year 3 = \$0.60 x 10,000m² x 0.6 = \$3,600

Fee for Service \$30,000 per annum

Compensation for Production

The production stage occurs once exploration and appraisal have been completed and the additional regulatory approvals have been sought by and granted to Santos. A production well has an average life of approximately 20-30 years.

Compensation during production will be paid on the following basis:

First year:

Land Value x Area Utilised x 1.2

(as with exploration)

Fee for Service \$30,000

Second year and onwards:

Landholder Incentive Fund x

Landholders Percentage of Total Private Surface Area

In recognition of the landholder's support in the activities leading up to and during production, Santos is setting up a new fund which enables the landholder to share in the long term benefits of the development.

The **Landholder Incentive Fund** will be an annual amount equal to 5% of Santos' royalty payments associated with private land within a production licence area. Based on our estimated production volumes this could exceed \$150 million over 20 years.

Landholders Percentage of Total Private Surface Area means the proportion of a private landholder's property utilised by Santos as compared to the total area used for our operations.

Fee for Service \$30,000 per annum will continue to be paid until activities on the landholder's property cease and the site is rehabilitated.



Compensation Estimates

Exploration compensation*:

Year 1	\$0.60 x 10,000m ² x 1.2 = \$7,200 Fee for Service = \$30,000
TOTAL	\$37,200
Year 2	\$0.60 x 10,000m ² x 0.6 = \$3,600 Fee for Service = \$30,000
TOTAL	\$33,600

Production compensation*:

Year 1	\$0.60 x 10,000m ² x 1.2 = \$7,200 Fee for Service = \$30,000
TOTAL	\$37,200
Year 2	Landholders Percentage of Total Private Surface Area x Landholder Incentive Fund Fee for Service = \$30,000
TOTAL	\$50,000 – \$70,000 estimated figures

* estimates based on a 1 hectare surface facility on land valued at \$6,000 per hectare (\$0.60/m²)