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Dear Stephen

Narrabri Gas Project – Environmental Impact Statement Review

Thank you for your correspondence of 20 February 2017 inviting the Division of Resources & Geoscience (the Division) to comment on the Environmental Impact Statement (EIS) for the Narrabri Gas Project (the Project) submitted by Santos NSW (Eastern) Pty Ltd (Santos) on behalf of its joint venture partners.

The Division has reviewed the EIS and has assessed the project with regards to project to economic benefits, resource recovery and utilisation (**Addendum A & B**). A memo on the project status as a strategic energy project is also provided (**Addendum C**).

Under the *Petroleum (Onshore) Act 1991* Santos is required to hold appropriate petroleum production leases from the Division in order to conduct petroleum extraction.

The Project area incorporates Petroleum Assessment Lease 2 (Act 1991) (PAL 2) and Petroleum Production Lease 3 (Act 1991) (PPL 3) held by the proponent. Four separate petroleum production lease applications have been lodged by the proponent. Petroleum Production Lease Applications 13, 14, 15 and 16 (Act 1991) (PPLA 13, 14, 15 and 16) lodged by Santos on 1 May 2014, which will allow petroleum extraction if granted, are pending subject to the Project gaining development consent. Petroleum production leases can only be granted over an area of 4 blocks or less and cannot be granted for any activities not specified in the development consent.

Petroleum Exploration Licence 238 (Act 1991) (PEL 238) will continue to be held around titles associated with the Project.

In order to comply with the *Native Title Act 1993* (Cth) and the *Native Title (New South Wales) Act 1993* (NSW) a production lease must not be granted unless native title has been extinguished over the entire area of the application, or the right to negotiate process has been completed. The proponent has commenced the right to negotiate process with relevant registered native title holders or claimants.

The Division also notes that the Biodiversity Offset Strategy (BOS) has not yet been developed, that “*offset sites in the region will be investigated post submission of the Environmental Impact Statement*”. Should offsets be proposed, there is some potential that any biodiversity offset area proposed by Santos will impact on other resource types. The study area, and the region surrounding, contain extractive resources as well as coal and coal seam gas. The Division recommends it is consulted as part of the BOS process, in order to assist in identification of areas not likely to impact on other resource area.

In satisfying the NSW Government’s Gas Plan (November 2014), the Division seeks that the project demonstrate sustainable rehabilitation outcomes to deliver world’s best practice standards and regulation for the Coal Seam Gas Industry, while contributing to the safe and sustainable development of gas supply for the state.

In meeting this objective, the Division recommends the following additional information is provided:

Well Decommissioning/Suspension Protocols

The EIS is not clear on the protocols for when petroleum wells (and associated infrastructure) are to be decommissioned (or abandoned) other than acknowledging it will occur when wells are “no longer economically producing gas”.

Clarification on the criteria to be used by the proponent when identifying wells ready for decommissioning may assist with rehabilitation planning.

Final Land Use

It is noted that the EIS has provided the preliminary objective of returning the land to its original vegetation community or former agricultural activity. Clarification of the protocol to map pre-disturbance vegetation communities (or capability class target for agricultural land) and how this information will be recorded and reported in order to determine final landuse (rehabilitation completion criteria) for each site is required.

Top Soil Management

Clarification on topsoil storage protocols for the extended period between partial rehabilitation and final rehabilitation of well sites and other infrastructure sites is

required. In particular, the methodology of recording topsoil placement location to ensure is retained for final rehabilitation.

Conceptual Final Landform Plan

Conceptual final landuse plans are required for the Leewood and Bibblewindi infrastructure areas to clarify the final landform for the produced water storage ponds located at these sites and if any infrastructure is to be retained.

Removal of Infrastructure

The EIS notes that all gas and water gathering lines will be left insitu following decommissioning. Clarification is required for circumstances where landowner requires these gathering lines to be removed.

Should you have any further questions in relation to this matter, please contact Dr Chris Yeats, Executive Director Geological Survey of NSW, Division of Resources & Geoscience, at the Department on 02 4931 6404.

Yours sincerely

K Hargreaves
24.5.17

Kylie Hargreaves

Deputy Secretary Resources & Geoscience

Encl.

Addendum A - Resource Assessment - Narrabri Gas Project

Addendum B - Resource Assessment Appendix A - Narrabri Gas Project

Addendum C - Strategic Energy Project - Narrabri Gas Project

Unit Strategic Resource Assessment & Advice - GSNSW
Subject Narrabri Gas Project: Resource Assessment

Introduction

This resource assessment conducted by the Division of Resources and Geoscience (DRG) is designed to review the resource/reserve estimates stated in a proponent's Environmental Impact Statement and whether the project will deliver significant social and economic benefits to NSW from the efficient development of the resource and that resource recovery is optimised and waste minimised. It is also to ensure an appropriate return to the State from developing the resource.

The objects of the Petroleum (Onshore) Act 1991 are to encourage and facilitate the discovery and efficient development of petroleum resources in NSW. Of particular relevance to this resource assessment is:

Part 1 - Section 2A Objects:

- (a) to recognise and foster the significant social and economic benefits to New South Wales that result from the efficient development of petroleum resources, and
- (d) to ensure an appropriate return to the State.

The relevant section of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 is Part 3, Clause 15: Resource Recovery requires that resource recovery is efficient, optimised and minimises waste.

Background

The Narrabri Gas Project (NGP or the Project) is located in the Gunnedah Basin of NSW about 20 km south-west of the town of Narrabri. The Project is owned and will be operated by Santos NSW (Eastern) Pty Limited (the Proponent). The Proponent is a wholly owned subsidiary of Santos Limited. Santos Limited is an Australian petroleum company established in 1954, which has been supplying natural gas to NSW since 1976. Santos Limited and its subsidiary companies have been involved in developing natural gas from coal seams in Queensland for 20 years and commenced exploring for natural gas from coal seams in the north-west of NSW in 2008.

In November 2011, Santos Limited acquired Eastern Star Gas and its subsidiary Eastern Star Gas Eastern Pty Ltd (ESG) who was the operator of PEL 238, PAL 2 and PPL 3. The Proponent then became the operator of the ESG tenements.

The Proponent has submitted an Environmental Impact Statement (EIS) to the Department of Planning & Environment which went on public display on 21 February 2017.

Economic Benefits of the Project

The Project will contribute a significant increase in economic activity to the region, as expected of a new (greenfield) coal seam gas project of this magnitude. Many locally established businesses will receive flow through benefits from the Project, such as increased demand for both products and services. Project approval is likely to encourage new industry related businesses to commence, further contributing to the State's priorities of job creation, particularly in rural and regional areas.

From the Proponent's EIS on the Project, DRG also notes the following economic benefits have been calculated independently on behalf of the Proponent:

- real economic output of \$11 billion (\$4.5 billion NPV) in the Narrabri LGA
- real economic output \$572 million (\$348 million NPV) in the wider region
- real economic output of \$384 million (\$295 million NPV) in NSW
- real income of \$526 million (\$250 million NPV) in the Narrabri LGA
- real income of \$690 million (\$396 million NPV) in the wider region
- real income of \$4.8 billion (\$2.1 billion NPV) in NSW
- establishment of a Gas Community Benefit Fund which would receive an estimated \$120 million over the life of the Project
- average direct and indirect employment over the life of the Project of 127 full time equivalent jobs in the Narrabri LGA
- average direct and indirect employment over the life of the Project of 161 full time equivalent jobs in the wider region
- average direct and indirect employment over the life of the Project of 224 full time equivalent jobs in NSW

Over the identified life of the Project, average direct and indirect employment would be 512 full time equivalent employees. Capital investment during the construction phase of the Project would be of the order of \$3.6 billion in nominal terms. Ongoing operating costs over the life of the Project would be around \$5.5 billion in nominal terms.

Over the life of the Project the value of gas production is estimated to be worth around \$13.6 billion in current dollars.

DRG has estimated the net present value of this revenue stream at approximately \$6.3 billion.

Royalty Generated from the Project

The Project is a proposed coal seam gas operation and as such a royalty rate of 10% is applicable to the well head value. Well head value is the saleable value of gas produced minus any allowable deductions. Allowable deductions are related to four broad categories; conversion of the well head gas to a marketable product, delivery of gas to market, depreciation of the assets of the refining process, and administration costs.

A royalty rebate would apply to any Gas Community Benefit Fund established by the Proponent. This could reduce royalties paid directly to the State by up to 10% a year in full production. However for every \$1 of royalty rebate paid in to the CBF, the proponent must have contributed \$2 indicating a significant contribution to community projects in the area.

One of the most important assumptions in the calculation of future royalty for the Project is the estimate of a future gas price over the life of a project. The Proponent has assumed a gas price of \$8.70/gigajoule (GJ). DRG is of the opinion that this price lies within the range of expected future gas prices in the east coast gas market over the more than 20 years of the Project life. Given that current prices being asked for domestic gas in NSW and the east coast gas market for new contracts are well above this price, the \$8.70/GJ price may be conservative.

Another important aspect of future royalty calculation for the Project is estimation of future annual production. The Proponent has estimated that if the Project is approved, over 1500 petajoules (PJ) of gas would be able to be economically extracted from the Project area from 2019 to 2041. The maximum rate of extraction would be up to 200TJ/day of gas. DRG has concluded that both the total amount of gas to be produced from the Project and maximum rate per annum is achievable given current information of the area.

Using the above parameters DRG has calculated that in a typical full production year, excluding an CBF royalties rebate, the State will receive around \$32 million per annum in royalty, and the net present value of this royalty stream over the life of the Project would be \$313 million using a 7% real discount rate.

Relevance of the strategic energy project for east coast gas supply

In the EIS for the Project, Santos has stated that gas produced from the Project would be made available to the NSW market. The Project has indicated the potential to supply up to 200TJ of natural gas per day. This increased volume would provide NSW with a secure, long-term domestic supply of this resource as both a critical energy source and industrial input, reducing the State's reliance on contracts with interstate suppliers, now at 95% of gas consumed. The reliance of NSW on its gas requirements from interstate has potential security of supply risks for the State.

The Project has been viewed in a strategic context (Addendum C). According to many informed sources there is an identified shortage of gas in eastern Australia which is starving some users of supply and leading to significant increases in prices for short, medium and long term contracts. NSW is particularly vulnerable due to only 5% of its gas being produced within the State as mentioned previously. In NSW around 500 heavy industrial users currently consume 75% of NSW gas with possibly 300,000 jobs relying on a secure gas supply. It is possible that some heavy industrial users may vacate NSW due to both security of supply and pricing issues.

Of the 95% gas imported by NSW, the largest gas supplier has been Victoria which has traditionally supplied around 55% mainly from the Gippsland Basin – with lesser quantities from the Bass and Otway Basins. South Australia has supplied around 40% from the Cooper Basin.

In its latest Gas Statement of Opportunities (GSOO, March 2017) the Australian Energy Market Operator (AEMO), highlights that gas for LNG exports is projected to continue dominating gas demand and supply in eastern and south-eastern Australia to 2036. Due to the interconnected gas pipeline network in the east coast gas market it is now possible for

any gas produced in this market to be exported as LNG via the three major Gladstone facilities (Queensland Curtis LNG, Asia Pacific LNG and Gladstone LNG).

According to AEMO GSOO, it is likely that 2017 will see some levelling off of Gladstone LNG exports at close to their maximum capacities expected to be reached in the early 2020's. As a result of the increasing demand for LNG exports out of Gladstone the majority of gas previously contracted from the Cooper Basin has now been contracted to meet export requirements.

Of particular relevance to the Project, AEMO states "Development of the proposed Narrabri Gas Project could provide extra supply into the domestic market. Assuming first production in 2020, AEMO's modelling shows that the Project has the potential to remove all domestic gas shortfalls from 2020 to 2024." The Project is not a complete solution to meeting the long term east coast gas supply requirements but is a credible solution at least in the medium term, as longer term solutions are realised.

Forming long term solutions necessitates an understanding of the time required to continue exploration, undertake appraisal, develop a project application and gain the required approvals to commence production and then build the required pipeline and processing infrastructure. A review of the work programs, for the remaining petroleum titles in NSW indicate that it would be highly unlikely that gas could be delivered into the East Coast Gas Market prior to 2026-2028. Furthermore it is anticipated that for any new petroleum titles granted under the Strategic Release Framework for Coal and Petroleum Exploration it would also be at least 8-10 years, subject to a significant discovery, to deliver gas into the market.

Concluding on the need for the Project, the east coast gas market has short, medium and long term supply issues, DRG views the Project as contributing to a solution to the forecast domestic gas supply shortfall particularly in the medium term.

Resource Assessment

Size of the Gas Resource

DRG is satisfied that the NGP contains a gas resource of approximately 1797 Petajoules (PJ) classified as a 2C (contingent) resource. The 2C gas resource estimation was generated using a conservative approach based on appraisal (pilot) wells and exploration data. There is sufficient contained gas to provide approximately 40% of NSW gas needs for over 20 years.

The Proponent completed the resource estimation for the Project in accordance with the Guidelines for Application of the Petroleum Resources Management System (PRMS) 2007. The PRMS is an industry standard professional system for defining petroleum reserves and resources and is accepted by the Australian Stock Exchange.

The Proponent engaged a third party, Netherland, Sewell & Associates, INC (NSAI) to audit the gas resource estimation of Santos. NSAI are a US based petroleum consulting company with expertise in coal seam gas resource and reserve estimation. The audit was completed in February 2016, using a different resource estimation methodology, and it verified the gas resource estimation by Santos.

Resource Recovery

Key Geological Aspects of the Resource

The majority of the gas resource in the NGP is within the coal seams from the Maules Creek Formation. There are four seams containing gas however the Bohena Seam is the major gas reservoir.

The formation of a coal seam gas reservoir, that is commercially viable to extract gas from, depends on the presence of several key geological factors. The key factors are the net coal thickness, coal rank, gas content, gas saturation and the coal seam permeability.

Geologists from DRG reviewed the main geological data for the NGP. This review included reports submitted to government under reporting requirements for petroleum titles. DRG also included an on-site meeting to review additional geological data and the interpretation of those data. DRG is satisfied that the NGP resource has a reservoir system that meets or exceeds all the requirements with respect to the geological factors, for a successful project, as the factors compare favourably when compared to those at producing coal seam gas projects.

Production Technique

The permeability and the nature of the natural structural geological features within the coal seam are of prime importance as to whether or not commercial gas flows can be achieved. Gas is released from coal seams by extracting water thereby depressurising them to allow gas to flow and the permeability must be high enough for this to occur.

The natural structural features that define the permeability of the target coal formations of the NGP area unusual in comparison to similar CSG operations within Australia. They are unusual due to the fact that they exhibit a dominant master cleat system which has a strong preferred unilateral orientation, characterized by long continuous vertical fractures every 0.5

– 1.0m apart, typically in a NE-SW direction. Further information on this cleat system is in Appendix A.

This master cleat system is the reason commercial gas flow rates can be attained from coal seams at depths of 800m to 1000m without fracking. At this depth, in coal seams with the more typical face and butt cleat structure, the permeability is generally low and difficult to produce commercial flow rates without fracking.

In the early stages of the appraisal of the Narrabri gas field, Eastern Star Gas fraced a series of vertical wells with very limited success in 1999. Subsequently between 2000 and 2006 horizontal wells were drilled and some were fraced. It was discovered with further appraisal work that the most effective and efficient way to produce commercial flow rates was to drill horizontal wells and not frac them.

The key to producing good gas flow rates was to drill horizontal wells perpendicular to the master cleat set. The master cleat set created a naturally occurring directional permeability that is fully utilised, by what at the time was a paradigm shift in extracting coal seam gas at Narrabri. The data on current appraisal wells indicate very good gas flow rates, after sufficient water has been extracted to allow the gas to flow.

DRG is satisfied that the proposed method of drilling horizontal wells is the most efficient way to produce gas from the NGP at significant commercial quantities. This method was developed over a decade of testing different methodologies and best utilises the naturally occurring directional permeability in the main target coal seams.

Unit Strategic Resource Assessment & Advice - GSNSW

Subject Narrabri Gas Project: Resource Assessment - Appendix A

The main target coal seams in the NGP have an unusual master cleat system that creates a naturally occurring directional permeability that can be successfully used to realise commercially viable production of coal seam gas (Figure 1). The key to successful gas extraction is to drill horizontal production wells perpendicular to master cleat orientation.

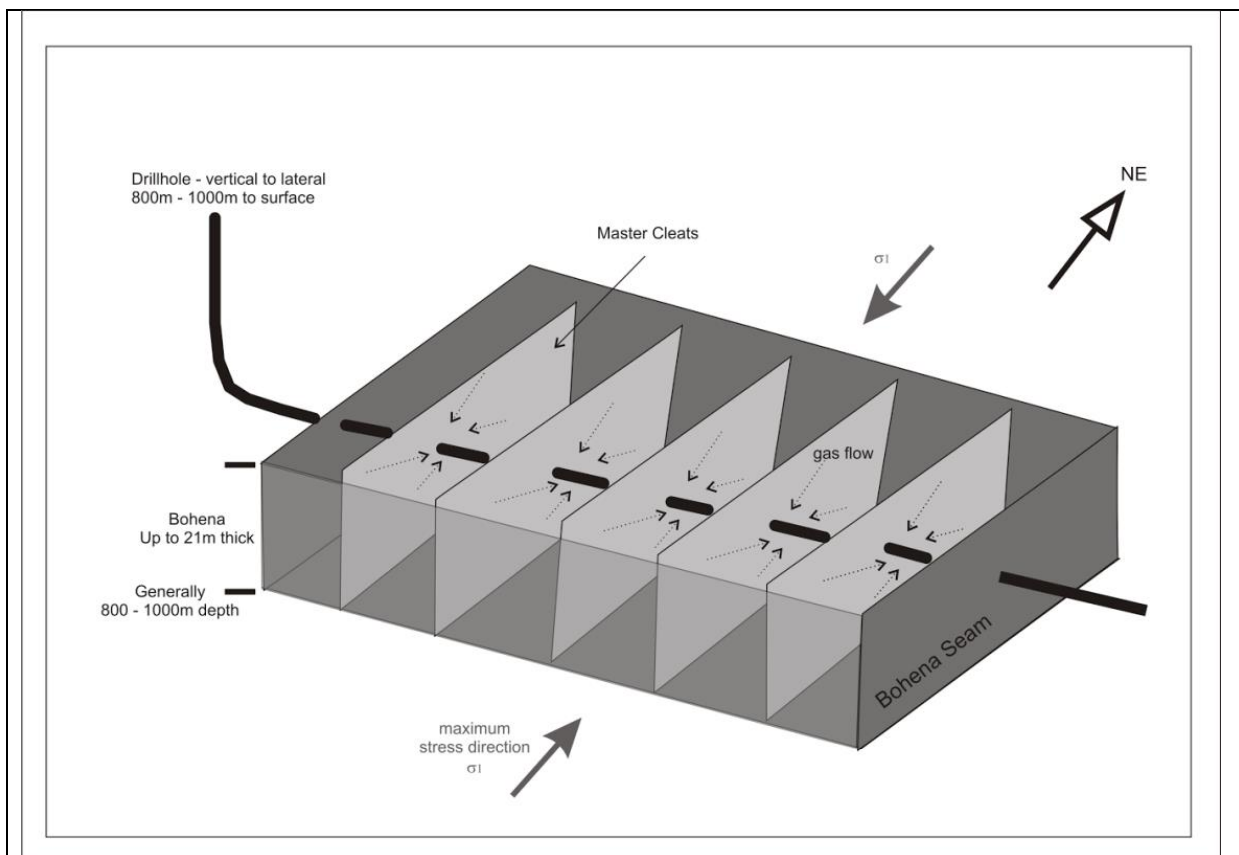


Figure 1. A schematic diagram showing the master cleat system in the Bohena Seam, the main target coal seam of the NGP and the direction at which the horizontal wells are drilled. The maximum stress orientation is also in a NE-SW direction.

The master cleat system in effect acts as gas gathering structures whereby they provide a pathway, with a very large area, for gas to flow from the coal into the horizontal well and then to the surface. The main orientation of this cleat system, over a large part of the NGP, is also sub-parallel with the maximum stress direction. This has the effect of producing a dilating effect on the cleats thereby having a positive effect on the permeability of the cleats.

The master cleat system is imaged in horizontal wells using a Formation Microimager (FMI) tool (Figure 2). The cleats are typically 0.5m to 1m apart, long and relatively continuous vertical fractures. The measured permeability of the reservoir in a vertical well was approximately 10md or less, which is considered relatively low. However, in a lateral well that intersects the master cleat system, the permeability is measured at up to 300md which is considered very good. These permeability data illustrate the presence of the directional or anisotropic permeability related to the master cleats.

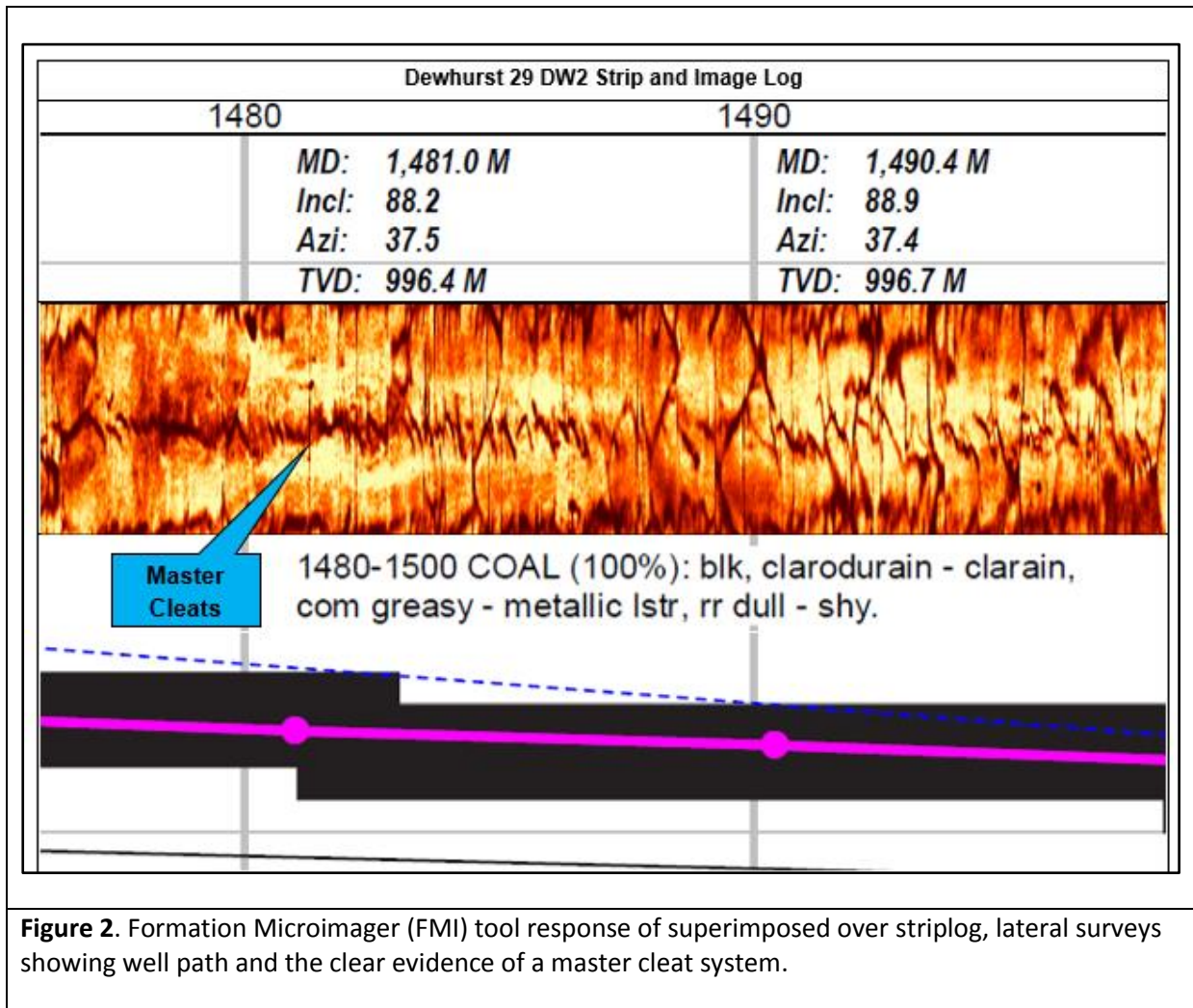


Figure 2. Formation Microimager (FMI) tool response of superimposed over striplog, lateral surveys showing well path and the clear evidence of a master cleat system.

Well type and history

Table 1 contains a summary of wells drilled within the NGP area as reported to DRG. The data in table 1 show that early in the project, vertical wells were fraced to enhance gas flows, however the results were generally poor.

The introduction of horizontal drilling in 2009 proved very successful in generating commercial gas flow rates and subsequently no further fracing was trialled.

Vertical Wells Drilled	Horizontal Wells Drilled	Wells Fraced	Year	Activity
11			1998	 First CSG well drilled by Eastern Star Gas
2		6	1999	
1			2000	
			2001	
			2002	
			2003	
4	1	4	2004	
			2005	
9		9	2006	
7			2007	
5			2008	
22	60		2009	
6	10		2010	
3			2011	
			2012	
3			2013	
14	2		2014	
			2015	
			2016	
			2017	
87	73			Narrabri Gas Project DA and EA Submitted
160				

Table 1. A summary of the history of drilling within the NGP area, showing a number of wells, well type and completion method.

MINUTE



Royalties and Advisory Services Unit
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Subject Santos Narrabri Gas Project: Strategic Energy Project

Summary

Santos NSW (Eastern) Pty Ltd (Santos) has sought approval to develop the Narrabri Gas Project (the Project) within the Pilliga region of NSW. The Project involves the development of a commercial coal seam gas field and processing facility to supply up to around 70 petajoules (PJ) of natural gas into the market each year.

The Australian energy industry currently faces a number of uncertainties including aging production assets and structural changes. These issues are interrelated, and their importance is recognised by the current government priorities and industry operators' desire to provide security of supply, reliability and consumer affordability to the market. Resolution of these issues will require an industry-wide, consolidated approach geared toward providing security and reliability.

Should the Project receive approval for development as sought, the resultant increase in NSW domestic gas supply would significantly contribute to the NSW Government's (the Government) priorities of energy security reliability and affordability, placing continued downward pressure on household energy prices in the medium term and insulating domestic users from price shocks as a result of undersupply, whilst the transition to sustainable renewable energy sources continues over the longer term.

Background

The Commonwealth Government (the Commonwealth) has identified that the national gas market requires greater domestic supply¹ from existing east coast producers, and has recently sought commitments that production would be made available for the domestic market and flagged the potential for further intervention in the form of export controls. The Australian gas market is complex and dynamic. Combined with a lack of transparency on commercial arrangements between producers and wholesale customers, this creates difficulty in providing comprehensive analysis.

The gas market in Australia must be viewed in parallel with the national electricity market, as there is a strong inter-relationship between gas supply as feedstock for industry and electricity generation.

The Australia Energy Market Operator (AEMO) has identified that gas shortfalls are the result of under supply² to the domestic market, as current production capacity is substantively matched to committed contract export sales. AEMO has predicted that without an increase in the supply of gas to the market, a number of adverse situations may arise, without timely intervention.

Firstly, declining production within established fields may result in a shortfall of supply to meet gas powered generation (GPG) in coming summers. While some jurisdictions have recently released new areas for gas exploration, the time required to discover, develop and

¹ Budget 2017-18

² Gas Statement of Opportunities

deliver commercial product to market, means that any potential projects within these areas are not able to contribute to the alleviation of immediate supply shortfalls.

Secondly, should under supply situations present, the national market may respond in such by encouraging electricity generation from less efficient sources to meet demand. These more expensive generation forms will place upward pressure on price, as the increased generation and transmission costs are incurred as a result. Further, any potential shift in the short term may significantly impact reliability depending on generation capacity at the time the shift occurs.

Finally, the continued upward trend in combined energy prices is expected to place pressure on the financial viability of commercial and industrial companies. As the major (combined) user of gas within the market, behind GPG, it is feasible to expect that the effects of changes to reliability and security will be experienced most within this sector. Whilst growth in electricity demand is forecast to remain flat³ due to the transition of the economic base to less energy intensive sectors and improved energy efficiency and technology uptake, any shift will require effective management.

Timely increases in gas supply to the market are essential to insulate customers from market shocks and effectively manage the impacts to consumers during these transition periods. The Project potentially represents new supply to market, providing an opportunity for uncommitted resources to be directed appropriately in order to address these potential issues.

National market

Australia remains a net energy exporter⁴ at a rate of around 2:1 to domestic consumption, with domestic consumption comprising oil (38 per cent), coal (32 per cent) natural gas (24 per cent) and renewables (six per cent.)

The Chief Economist has identified⁵ that following two consecutive years of decline in total energy consumption, in 2014-15 energy use rose by one per cent. This overall rise was distributed across the energy mix, with rises in coal (three per cent), renewables (two per cent) and gas (one per cent) which is predominantly attributed to an increase in electricity generation from increased demand in the market⁶.

Almost half of Australian natural gas production occurs within the eastern market and coal seam gas (CSG) accounts for 18 per cent of national production. In 2014-15, gas production rose by five per cent, due to increased CSG production from QLD as major projects reached full capacity. Over the same period gas consumption rose one per cent which has been attributed to the increased reliance on GPG within QLD.

Despite this increased demand from QLD, electricity generation from gas fell by four per cent nationally in 2015 as closures reduced generating capacity and increased prices drove down demand. GPG remains a significant contributor to electricity generation contributing 21 per cent of total capacity.

This reduction in GPG was offset by increased coal-fired generation from Victoria, South Australia⁷ and Queensland.

The Commonwealth⁸ has proposed a cautious approach in forming predictions of what future energy challenges may arise, citing the importance of consultation and policy robustness to protect against uncertainties and adapt to changing conditions.

³ National Electricity Forecasting report

⁴ Resources and Energy quarterly statistics 2016

⁵ Australian Energy Update 2016

⁶ National Electricity Forecasting Report

⁷ Statistics prior to recent closure of Pt Augusta power station

⁸ National Energy Productivity Plan 2015-2030

The Project will contribute to flexibility within the market, not only by creating a wider base of gas supply for electricity generation, but as the transition toward efficient energy generation continues, the substitution potential, to easily divert supply away from GPG toward feedstock in response to changing demand without creating increased pricing pressure, presents as a sustainable option for the medium to long term.

NSW conditions

NSW is the largest regional energy user in Australia, representing over one quarter of total national consumption. Total energy consumption in NSW has continued to fall in recent years, continuing the trends from 2007-08, primarily driven by the reduction in the consumption of coal and decline in electricity generation. Over the same period, gas use has increased steadily, before declining in 2014-15, which may be indicative of price sensitivity, or a move toward efficiency improvement.

The Government has identified a number of current priorities⁹ within the sector of both energy production and electricity generation, stating a focus on reform of the current market to develop the industry within NSW to secure energy sources for citizens, whilst responsibly managing the transition to alternative energy sources and protecting residents who are vulnerable to energy price rises by continuing to place downward pressure on household prices contributing to the cost of living.

The Government has recognised the significant impact that energy affordability has on both industry and the public within NSW. As forecast gas prices¹⁰ are predicted to increase in the short-term, a safe and sustainable gas supply for NSW is essential to ensure long-term financial stability for the residents of the State.

As the only producing gas operation in the State, the Camden gas project, has been in production for over a decade, and currently supplies slightly less than five per cent of total NSW consumption. Consequently, NSW customers are heavily reliant on imports, incurring direct costs associated with transport and indirect cost as a result of reduced volume of supply within the national market. AGL, the operator of the Camden gas field, has recently announced that current production is in decline, and their intention to cease operation in 2023, which with no new production would make NSW entirely dependent on imported gas.

Increased domestic production is the most effective way to deliver the requirements of the Government, and as such, the Project represents the only current option to ensure reasonably priced, secure supply to NSW residents.

The NSW Gas Plan

The NSW Gas Plan provides a strategy for the regulation and security of NSW gas supplies. The Plan identifies five strategic priorities that aim to define the NSW approach to gas supply and regulation of the industry, of these, Priority five – ‘securing the State’s gas needs’ set out actions to be taken on behalf of industry and government to protect NSW supply.

The Plan recognises that domestic gas production is a crucial component of the strategy and details the development of gas reserves will benefit the NSW consumer.

The Government has identified the significance of the Project in delivering the commitments in the Gas Plan, assigning strategic project status¹¹, to ensure the efficient assessment and determination in obtaining the required approvals. Should the required approvals be forthcoming, in agreeing to be party to the MOU, Santos has committed to develop the Project, with the intent of connecting to the existing gas network to supply to NSW customers, ensuring an economic supply of gas is available and value is shared by the residents of NSW.

⁹ National Press Club Premier’s address

¹⁰ Gas Statement of Opportunities

¹¹ MoU Narrabri Gas Project

Gas Prices

As a net energy exporter competing in a global marketplace, Australian gas prices are moving toward international prices. International gas demand has grown, following the closure of nuclear facilities in Japan and demand from growing economies. This increased demand, and the market's tendency toward satisfying export requirements, has seen a tightening of the east coast gas market and placed upward pressure on domestic prices which may be further exacerbated by the decline in established reserves.

In the Australian market, where market responses decide the direction of supply and retail pricing, NSW customers can experience price shock, due to the position of the State as a net importer of gas. While there are a number of different levers available to deliver on the Government's commitments of energy affordability, including regulation, efficiency and productivity increases, and government contribution (rebate) mechanisms, increasing the supply within the domestic market is seen as the most effective mechanism to balance the desire for low prices and encourage the investment required to achieve the targets set for increased efficiency within the market and overall energy productivity. Increasing supply is a key step to allow the gas market to efficiently respond to the changing conditions within a dynamic environment.

Conclusion

The Project represents the most suitable NSW- based option, within the current market and related framework, to deliver on the Government's priorities for secure, reliable and affordable gas supply to the residents of NSW. The Project can be developed in a manner that provides certainty to wholesale industry users and retail market participants in the short-term by providing insulation from price shocks, and in the mid-to-long-term by establishing a sustainable domestic supply of gas in NSW.

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Date: [22-May-17](#)