

KEY POINTS

1. Petroleum exploration in the Great Australian Bight (GAB) region has been undertaken without reported or identified environmental harm since the late 1960s.
2. The protection of the GAB and its adjacent coastal environment is a primary concern for the South Australian Government. Plans for, and operations of, oil and gas projects must ensure no unacceptable risks to the Great Australian Bight, or indeed any other part of South Australia's marine and coastal environments.
3. The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is Australia's national regulator for health and safety, well integrity and environmental management for offshore oil and gas operations in Commonwealth waters.
4. The South Australian Government does not have a formal jurisdictional role to regulate offshore petroleum activities in Commonwealth GAB waters. South Australia is nonetheless a key stakeholder in the engagement process undertaken by both holders of petroleum permits in Commonwealth waters and NOPSEMA.
5. The Department of Planning, Transport and Infrastructure (DPTI) within the South Australian Government is the control agency under the Emergency Management Arrangements, responsible for State offshore oil spill response and oil pollution emergency planning, should an oil spill occur in Commonwealth waters and cross into State waters. The South Australian Government has the processes, plans and agencies in place to effectively and efficiently combat such a situation should it occur.
6. Under the OPGGS Act and Environment Regulations, NOPSEMA will only accept an Environment Plan that contains appropriate environmental performance outcomes, environmental performance standards and measurement criteria to demonstrate that the environmental impacts and risks of the activity will be managed to ALARP and to acceptable levels.
7. The Environment Regulations require that consultation be undertaken to ensure persons who 'may' be affected are identified and are provided the opportunity to raise concern, and further allows the titleholder the opportunity to assess or address any stakeholder concerns regarding the activity.
8. In addition to the EP, titleholders are required to submit an Oil Pollution Emergency Plan (OPEP) for assessment, as part of the EP assessment process undertaken by NOPSEMA. The oil pollution emergency plan is intended to ensure that the titleholder has demonstrated that it can respond as quickly and effectively as possible in the event of an emergency that has resulted or may result in oil pollution, to avoid or minimise potential environmental damage.

FREQUENTLY ASKED QUESTIONS

1. Who regulates the offshore petroleum industry?

Petroleum operations which occur within 3 nautical miles offshore from the South Australian coast are classified as occurring within State waters, and are administered under State legislation either the *Petroleum (Submerged Lands) Act 1982* or the *Petroleum and Geothermal Energy Act 2000*.

Petroleum operations which occur more than 3 nautical miles offshore from the South Australian coast are classified as occurring within Commonwealth waters, and thereby administered under Commonwealth legislation under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGGS). This legislation is administered by three Australian Government entities, the National Petroleum Titles Administrator (NOPTA), National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), and the Department of Industry, Innovation and Science (DIIS), together with the State and Northern Territory Governments through the Joint Authorities.

The Joint Authority consists of the responsible Commonwealth Minister (the Minister for Resources, Energy and Northern Australia), and the relevant State Minister. For South Australia, this is the Minister for Mineral Resources and Energy.

The Commonwealth-South Australian Offshore Petroleum Joint Authority (the Joint Authority) is responsible for licensing in Commonwealth waters offshore of South Australia. The Joint Authority makes the major decisions under the OPGGGS Act regarding granting and cancelling petroleum titles, imposition of title conditions, and core decisions about resources management and resources security. Through these Joint Authority decisions the State Government maintains a key role in the offshore petroleum regulation.

At the permit grant stage, the responsible South Australian and Commonwealth Ministers have the power to impose permit conditions relating to the technical requirements for well design, environment, health and safety. In light of the sensitive environmental, agricultural, aquacultural, industrial and cultural elements of the Great Australian Bight (GAB), these powers were exercised for BP's Exploration Petroleum Permits (EPPs) 37, 38, 39, and 40 with special conditions being placed on the permits in 2011. The imposition of these conditions on the BP permits resulted from concerns which emerged as a result of the Macondo and Montara incidents and were developed to increase insurance that such incidents resulting from well control were prevented from occurring in the GAB.

Day-to-day administration of offshore petroleum and greenhouse gas titles in Commonwealth waters in Australia is managed by NOPTA.

The South Australian Government does not have a formal jurisdictional role to regulate offshore petroleum activities in Commonwealth GAB waters. South Australia is nonetheless

a key stakeholder in the engagement process undertaken by both holders of petroleum permits in Commonwealth waters and NOPSEMA.

2. Who approves drilling and other petroleum activities?

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is Australia's national regulator for health and safety, well integrity and environmental management for offshore oil and gas operations in Commonwealth waters.

NOPSEMA is the statutory authority responsible for the regulation of all offshore petroleum activity in Commonwealth waters under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGs) and *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Environment Regulations). This includes exploratory drilling in the Great Australian Bight (GAB).

The creation of NOPSEMA as an independent authority for assessment and approval of offshore petroleum activities resulted from a series of independent reviews, consultation processes and Government and Ministerial approvals.

NOPSEMA was established on 1st January 2012, arising from recommendations from the Final Government Response to the Report of the Montara Commission of Inquiry (2011) and the Productivity Commission's Report - Review of Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector (2009). The responsibility to investigate and report on offshore environmental management practices and subsequently make recommendations had previously rested with the State and Territory Designated Authorities.

In 2009, the failure of well integrity barriers at the Montara H1 well in the Timor Sea resulted in an uncontrolled discharge of oil and gas into the marine environment lasting 74 days. In 2010, the Commission of Inquiry into the 2009 Montara oil spill incident strongly recommended that a single, independent regulatory body be responsible for safety, well integrity, and environmental management.

NOPSEMA was therefore established to supersede the National Offshore Petroleum Safety Authority (NOPSA) and reflect the added responsibility of regulating offshore environmental management. In addition, appropriate changes to regulatory frameworks under the OPGGS Act and associated regulations relating to well completion and control were implemented.

The amalgamation of safety, well management regulation, integrity and environmental management responsibilities into a single regulator has standardised Australia's offshore petroleum regulation to ensure leading practice, and thereby reduced the regulatory burden on industry, without reducing the robust effectiveness of the regulations and regulators. Furthermore, a key to effective regulation is having appropriately qualified and experienced regulators who can competently and independently oversee industry activities, taking national and international lessons learnt into account, to provide community confidence and assurance in the industry's performance. NOPSEMA is fully capable of efficient and effective regulation of offshore petroleum projects with its extensive technical expertise in offshore geophysical and geological surveys, drilling and production operations, from both engineering and environmental perspectives.

As evidence of the Commonwealth Environment Minister's confidence in the efficacy and robustness of NOPSEMA's approvals process and regulatory capabilities, in February 2014

the Minister for the Environment endorsed NOPSEMA's environmental authorisation process (the program) under Part 10, section 146 - the strategic assessment provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). In accordance with the endorsed program, separate referral, assessment and approval of petroleum activities in Commonwealth waters under the EPBC Act is no longer necessary. Impacts on matters protected under Part 3 of the EPBC Act will be assessed by NOPSEMA under their approvals process. This process represents leading practice for goal-seeking (objective-based) efficiency and effectiveness for regulating offshore upstream petroleum operations.

During an assessment, NOPSEMA has regard to:

- the compliance record of the titleholder, where it relates to matters considered in the environment plan;
- relevant information, including correspondence from external stakeholders;
- the Department of the Environment policies, guidelines, plans of management and any other material relating to matters protected under Part 3 of the EPBC Act relevant to the activity; and
- reputable, publicly available scientific and other literature relevant to the assessment.

NOPSEMA's assessment process is iterative and more than 90% of Environment Plan's (EP) have at least one interim decision (to seek further information) before a final decision to accept or refuse to accept the EP is made. Interim decisions can include a request for further written information or provision of an opportunity to modify and resubmit the EP.

NOPSEMA represents a 'one-stop-shop' for Commonwealth offshore petroleum activities which enables the delivery of faster approvals processes and removes unnecessary regulatory process duplication, whilst still maintaining integrity, environment and safety standards through objective-based legislation. Objective-based legislation is based on the principle that legislation sets the broad safety and environment goals to be obtained but the onus is on the proponent to develop the most appropriate methods of achieving those goals.

3. What consultation is undertaken for exploration proposals?

The Offshore Petroleum and Greenhouse Gas Storage Environment Regulations 2009 (Environment Regulations) contain specific requirements regarding consultation that must be undertaken in the course of preparing an Environment Plan (EP) for any petroleum activity. In the course of preparing an EP, or a revision of an EP, the titleholder for an activity must consult with relevant persons including a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the EP, or any other person or organisation that the titleholder considers relevant.

The EP must demonstrate consultation processes are in place and the titleholder, having undertaken appropriate consultation in preparation of the EP, has adopted or proposes to adopt appropriate management measures resulting from the consultation (if any).

The intended purpose of consultation is to allow the titleholder to identify and understand the potential impacts that their activity may have on other users of the marine area and to subsequently adopt control measures that will reduce those impacts to As Low As Reasonably Practicable (ALARP) and to community expectations for net outcomes.

The titleholder must then demonstrate to National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) through the EP that consultation has been appropriate and that the objections and claims of relevant affected persons have been appropriately addressed.

The Environment Regulations also specify that a titleholder is required to provide sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person and a reasonable period for the consultation. This provides a mechanism to ensure that titleholders can better meet specific information needs of relevant stakeholders and more readily address any claims or objections raised.

'Relevant persons' may include Australian Government agencies, individuals, community groups, non-government (including conservation) organisations, fishing, tourism and other business operators, depending on the proposed activity and the environment that may be impacted by that activity.

The Environment Regulations require that consultation be undertaken to ensure persons who 'may' be affected are identified and are provided the opportunity to raise concerns, and further allows the titleholder the opportunity to assess or address any stakeholder concerns regarding the activity. This process maximizes engagement and transparency, and ensures that the rights of relevant stakeholders are upheld and appropriately addressed throughout the planning, approvals and execution stages of an activity.

NOPSEMA must be 'reasonably satisfied' that the EP demonstrates an adequate level of consultation undertaken. This determination is informed on the assessment of the EP as a whole, not purely based on the adequacy of consultation.

Under the Environment Regulations, NOPSEMA cannot accept an EP that does not demonstrate that requirements relating to consultation, including ongoing consultation arrangements, with all relevant persons have been met.

It is a requirement for offshore petroleum operators to consult with relevant stakeholders in the planning phase of proposed activities, report on outcomes of consultation and maintain appropriate ongoing communications during the course of activities.

The South Australian Government is a key stakeholder in the engagement process undertaken by both NOPSEMA and holders of petroleum permits in Commonwealth waters. The SA Government has been, and continues to be consulted on varying aspects of BP's exploration drilling Environment Plan, and accompanying Oil Pollution Emergency Plan (OPEP). Relevant State Government agencies have commented on the EP to ensure key issues and concerns have been raised and a response provided.

South Australia supports the collaboration of relevant South Australian State Government agencies and titleholders to enable the development of appropriate environment and response plans. The SA Government will continue to consult with titleholders in the Great Australian Bight, to ensure that key matters and concerns of the State are raised throughout the lifetime of the potential project.

4. Is the petroleum regulatory regime effective?

Modern leading practice regulation for offshore oil and gas traces back to Lord Cullen's review of the North Sea Piper Alpha blow-out in the North Sea in 1988. Prior to this, jurisdictions tended towards prescriptive regulation – prescribing how each activity was to be carried out. Lord Cullen's review identified that whilst the Piper Alpha met prescriptive requirements, the overall objective of achieving safe operations was not achieved with subsequent extensive loss of life, assets, resources and environmental damage.

The USA has historically tended towards prescriptive regulation – and this has been driven in part by the litigious nature of the USA. Prescriptive standards for operations allow companies to commit to their insurers / regulators that prescribed technologies/methods are used. A foible is that companies can claim all regulatory requirements were met irrespective of mishaps, and regulators/regulations share the blame for mishaps.

Since 1988, there has been a global shift in regulation of the petroleum industry towards objective regulation – defining the outcomes needed to be achieved rather than how to achieve them. The latest USA amendments to regulations more closely match objective regulations already operating in Australia (including South Australia).

Where regulations are goal-seeking/objective-based (e.g. prevent a blow-out) – there is less scope to avoid liability for mishaps that cause significant harm. Such objective regulations drive operators to implement the best available technologies to avoid mishaps. Implementing change then becomes the norm - driven by lessons learnt from slips/trips/falls to more serious incidents. The issue of affordability is complex. We could prevent all vehicular related injury/death with a ban on the use of vehicles. That is not an affordable (to the community) policy. Rather - licensing requirements, speed limits, better braking, road maintenance, safety belts, air bags, etc. combine to reduced risks to as low as reasonably practical while meeting community expectations for net outcomes.

Uncontrolled flow incidents (blow-outs) of note (e.g. Macondo in the USA and Montara offshore the Northern Territory, Australia) have also been audited by independent experts and undergone numerous reviews. For Macondo – see this 2011 summary: www.jsq.utexas.edu/news/files/mcandrews_spe_143718-pp.pdf. Lessons from these incidents have also shaped international petroleum regulatory legislation and implementation. Specific recommendations from the Montara incident have been implemented, for example, resulting in the creation of the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

Where reducing potential risks to ALARP still results in an unacceptable outcome – regardless of affordability - goal seeking limitations become prescriptive e.g. bans or strict limits on certain practices. A common global approach to meet community expectations is to preclude petroleum operations in national parks rather than consider on a case-by-case basis. Consideration of the prospects for mineral/energy resources in areas proposed for restricted access have been able to influence park boundaries to preserve multiple-use access in several locations, leading to the most optimum utilization of the area for net community benefit.

The South Australian Government's view is that NOPSEMA has the necessary capabilities to be the nation's trusted regulator and approval authority for upstream petroleum operations in Commonwealth waters. The South Australian Government also believes that re-introducing overlapping powers over activity approvals for upstream petroleum activities in

Commonwealth waters would be a retrograde step for the efficiency of objective-based legislation in Australia, as it would inevitably add unnecessary duplicative steps within the approvals process.

5. Why does the Australian Government release offshore areas for exploration?

Currently Australia is a net oil importer with a trend of domestic oil production steadily declining whilst consumption has been increasing. This deficit is expected to increase in the next decade, in line with a reduction in domestic oil production.

The discovery of new petroleum reserves has the potential to reduce Australian energy import dependence and increase supply certainty. If new oil fields are discovered, Australia's declining oil production could be arrested in part and the country's balance of trade improved.

Offshore areas in Commonwealth waters are released annually for competitive work program bidding or cash-bidding by the Australian Government. This reflects the Government's recognition of the need for ongoing offshore petroleum exploration to meet demand and balance trade. It also reflects the need to have a mix of energy supply sources supplying energy to the Australian community, including oil, gas, coal, and renewables.

The Offshore Petroleum Exploration Acreage Release is a key part of the Australian Government's strategy to increase and promote petroleum exploration and development in Commonwealth waters.

6. How does the Government determine which areas are released for exploration?

Prior to the acreage release being announced by the Commonwealth Minister for Resources, Energy and Northern Australia, the Department of Industry, Innovation and Science (DIIS) and Geoscience Australia undertake a 10-12 month process in order to select the areas. Three key components of this are:

- the nomination of an area by industry, states/Northern Territory or Geoscience Australia;
- consideration of nominated areas; and
- the consultation process - which considers a range of factors, including: prospectivity; existence of title; proximity to sensitive marine zones.

In recognition of the multi-use nature of the marine environment, once the areas have been short-listed, targeted consultation is undertaken with Commonwealth, State and Northern Territory agencies responsible for managing the marine environment and representative industry groups whose members have access rights, such as fishing licences. DIIS consults with officers in the Commonwealth Department of the Environment, who provide comprehensive comments on the environmental considerations of each release area including whether the area(s) overlaps a Commonwealth Marine Reserve. In addition, DIIS consults with Parks Australia. Acreage will not be released in 'no access' Marine Parks where petroleum exploration is not permitted.

The targeted consultation assesses factors such as maritime boundaries, environmental and fisheries impacts, defence and communications requirements, maritime safety and native title interests. The information is then collated and published as part of the final acreage release package. The outcomes of the targeted consultation may also lead to the inclusion of specific conditions if a title is awarded in that area and/or the reshaping or removal of an area to

balance competing interests. It is at this stage that the consideration of the appropriateness of petroleum exploration and development in an area should be discussed.

Once the area(s) are released for bidding and tenements granted, there is in effect a contractual arrangement that the successful bidder has with the Australian Government to undertake the accepted exploration activities, conditional on respective approvals being granted. Any subsequent approval of activities should then be focused on the manner of undertaking these activities not on whether they should be undertaken or not.

At the conclusion of the targeted consultation, the proposed areas are made available for the following year's acreage public release. This has traditionally been done through the 'Australian Petroleum News' e-newsletter. In response to increased community interest in the acreage release process, the proposed areas for acreage release are made publicly available on DIIS's consultation hub. This provides the Australian community an opportunity to provide comment on the proposed areas.

Once the areas are finalised, the Commonwealth Minister announces the acreage release to the public and the global petroleum sector. Further information on the acreage release process is available at www.petroleum-acreage.gov.au

7. How are bids for petroleum exploration blocks considered?

Bids for exploration permits are assessed against the publicly available *Offshore Petroleum Exploration Bid Assessment Guidelines* (refer: www.petroleum-acreage.gov.au).

The Joint Authority must be satisfied that the applicant has developed an exploration strategy and work program that will significantly advance the assessment and understanding of the petroleum potential of the permit area.

The work program must, at a minimum, include new exploration work and be coherent, credible and able to be pursued on a 'dry hole basis' (as defined in Frequently Asked Question #8)

The strategy must be underpinned by a sound technical assessment of the permit area, along with evidence of the technical and financial competence of the applicant to facilitate the proposed work program.

Consideration is also given to any past performance issues, either within Australian or internationally, that may adversely impact on the ability of the applicant to undertake the proposed work program.

Bids are assessed against the publicly established criteria, in consultation with the South Australian Government. Bids are considered to be satisfactory if all criteria are met.

8. What does 'pursued on a dry hole basis' mean?

A work program that is able to be 'pursued on a dry hole basis' is one that the Joint Authority is confident that the explorer will be able to facilitate in the event that the explorer drills one or more exploration wells without finding new petroleum resources, and the work program excludes contingent efforts such as extended flow tests .

Failure to encounter hydrocarbons in a well often results in the prospectivity of a permit being downgraded. This may impact on the explorers' decisions in relation to future elements of a work program.

The Joint Authority needs to be confident that the work program proposed for the remaining years of the permit term can be pursued despite the fact that early drilling results may be discouraging.

Consideration of a work program takes into account the practicality and both the technical and financial adequacy of the bid party.

9. What previous petroleum exploration has occurred in the Great Australian Bight

Petroleum exploration in the Great Australian Bight (GAB) region has been undertaken without reported or identified environmental harm since the late 1960s. A range of major oil and gas companies have investigated the petroleum prospectivity of the GAB since the late 1960s, including Woodside, Shell, BP and BHP Petroleum.

The first seismic survey in offshore South Australia was undertaken by Shell in 1966. Prior to 2011, 126 seismic surveys have been conducted safely in offshore South Australian waters, with 92,297 km of two-dimensional (2D) and 1,700 square kilometres (km²) of three dimensional (3D) seismic data collected. Each of these seismic surveys were undertaken without environmental incident, including any negative impacts to marine species.

To date a total of 24 wells have been drilled in offshore South Australian waters. Twelve exploration wells have been drilled without incident in the GAB between 1972 and 2003. A total of 6 wells have been drilled in the Duntroon Sub-basin of the Bight Basin, 3 in the Ceduna Sub-basin.. The last well drilled was Woodside's Gnarlyknots 1A in 2003, which was safely drilled to a total depth of 4,736m. This well indicated that petroleum targets are expected to be in water depths of 1200 to 2200 metres.

Since 2011, four seismic surveys have been undertaken in the GAB in current Exploration Petroleum Permits (EPPs) without environmental incident or identified harm. The first in May 2012 by BP was Australia's largest proprietary offshore 3D seismic survey, with an acquisition of 12,418 km² of 3D seismic data. The second and third undertaken by TGS on behalf of Chevron in 2014-2015 resulted in the collection of 8,917 km² and 13,137 km² of seismic data. The fourth was completed by PGS on April 2015 with 8,867 km² of seismic data collected, again without environmental incident.

The proposed exploration activities by BP and others are the same type of activities which have previously occurred within the South Australian portion of the GAB. One substantial difference between the proposed activities and previous activities is the improved safety processes, environmental management and technology which form part of current proposals.

10. Why release acreage in the Great Australian Bight?

The Great Australian Bight (GAB) represents one of the world's last under-explored Cretaceous basins, where the geology and exploration targets are similar to those in established oil and gas provinces elsewhere in the world, including the North West Shelf in Western Australia. Strong evidence points to an active petroleum system including natural oil and gas seeps, natural strandings of asphaltite along the State's Southern Ocean facing coastline, and organic-rich source rocks recovered from the ocean floor by researchers. The potential for large-scale petroleum accumulations in the GAB has attracted major oil and gas companies including BP, Statoil, Chevron, Murphy, and Santos and a modest-in-size company, Bight Petroleum.

A 2014 review of the petroleum prospectivity of Australia's offshore frontier basins (those areas where oil and gas resources have not yet been found) determined that the Ceduna Sub-basin of the Bight Basin was the most prospective for oil and gas out of the 35 areas studied.

The majority of the area covered by current permits in the Bight Basin has been released for exploration and been held under exploration permit before. It is not uncommon to re-assess the petroleum potential of areas as scientific knowledge grows and exploration technology and extraction techniques evolve, which is why these areas are again being released for exploration.

The surrender of an exploration title is a commercial matter for the companies involved, however, it is generally based on a decision that further exploration of an area cannot be justified at a given time due to financial, technical or other factors (such as a company's global exploration strategy).

More information on the geology of the region can be found at <http://www.ga.gov.au/scientific-topics/energy/province-sedimentary-basin-geology/petroleum/offshore-southern-australia/bight>

In addition, detailed geological reports on the Bight and Duntroon basins and exploration history can be accessed at:

http://petroleum.statedevelopment.sa.gov.au/prospectivity/bight_basin
http://petroleum.statedevelopment.sa.gov.au/prospectivity/duntroon_basin

11. Where is the Great Australian Bight exploration acreage?

The Bight Basin is a vast Jurassic-Cretaceous basin extending from Cape Leeuwin off Western Australia to south of Kangaroo Island, off South Australia. The most prospective part of this region is the central Ceduna Sub-Basin, which is more than 300 km west of Kangaroo Island and 200 – 400 southwest of Ceduna.

Four permits, Exploration Petroleum Permits (EPPs) 37 – 40, were granted to **BP Exploration (Alpha) Limited** in the central Bight Basin on 14 January 2011 resulting from the 2009 Offshore Petroleum Exploration Acreage Release.

- These BP operated permits are located in the Ceduna Sub-basin, Bight Basin, which is located approximately 180km offshore in the central Great Australian Bight off southern Australia.

- The area is approximately 415 to 655 km west of Port Lincoln, and 250 to 530 km southwest of Ceduna.
- In total, the permits cover 24,570 km², in water depths ranging from 140m at the inner margin of the permits to 4600m at the southern-most point.
- In 2013, Norway's part-government owned and largest upstream petroleum company, Statoil, agreed to acquire a 30% equity share in EPPs 37, 38, 39 and 40 – with BP remaining as the operator.
 - Permit EPP 37 comprises 86 full graticular blocks¹ and covers a total area of approximately 6125 km². It lies in water depths ranging from approximately 140 m to 1550 m.
 - Permit EPP 38 comprises 85 full graticular blocks and covers a total area of approximately 6000 km². It lies in water depths ranging from approximately 1500 m to 4500 m.
 - Permit EPP 39 comprises 90 full graticular blocks and covers a total area of approximately 6335 km². It lies in water depths ranging from approximately 1200 m to 4600 m.
 - Permit EPP 40 comprises 87 full graticular blocks and covers a total area of approximately 6110 km². It lies in water depths ranging from approximately 1300 m to 4500 m.

Two permits, EPP 41 and 42, were granted to **Bight Petroleum Pty Ltd** west of Kangaroo Island in June/July 2011 resulting from the 2010 Offshore Petroleum Exploration Acreage Release.

- These permits are located in the Duntroon and Ceduna Sub-basins of the Bight Basin, and are located approximately 50km offshore in the eastern Great Australian Bight off southern Australia.
- The area is approximately 70 to 160 km south of Port Lincoln, and 150 to 180 km west of Kingscote.
- In total, these two permits cover 8, 514 km², in water depths ranging from 60m at the inner margin of the permits to 2000m at the southern-most point. Specifically:
 - EPP41 comprises 56 full graticular blocks and covers a total area of approximately 3915 km².
 - EPP42 comprises 66 full graticular blocks and covers a total area of approximately 4599 km².

One permit (EPP43) was granted to **Murphy Australia Oil Pty Ltd/ Santos Offshore Pty Ltd** adjacent to BP's permits in October 2013 resulting from the 2012 Offshore Petroleum Exploration Acreage Release.

- This permit is located in the Ceduna Sub-basin of the Bight Basin, and is located approximately 180km offshore in the central Great Australian Bight.
- The area is approximately 300 to 500 km southwest of Ceduna. EPP 43 comprises 233 full graticular blocks and covers a total area of approximately 16621 km².

Two permits (EPPs 44 and 45) were granted to **Chevron Australia New Ventures Pty Ltd** adjacent to BP's permits in October 2013 resulting from the 2012 Offshore Petroleum Exploration Acreage Release.

¹ A graticular block is a five minute by five minute area that generally covers 70km² (the exact size of a block depends on position on the globe).

- These permits are located in the Ceduna Sub-basin of the Bight Basin, and are located approximately 200km offshore in the eastern Great Australian Bight. The area is approximately 220 to 420 km south of Ceduna.
- EPP 44 comprises 264 full graticular blocks and covers a total area of approximately 18752 km².
- EPP 45 comprises 202 full graticular blocks and covers a total area of approximately 14154 km².

Another area, located between Chevron's EPP45 and Bight Petroleum's EPP 41, was released for competitive bidding in May 2015. Bids for this area closed on 21 April 2016. This 17,770 km² area effectively covers the remaining part of the prospective Bight Basin off South Australia.

The location of the permits in the Great Australian Bight and can be found at:

[Petroleum | Licensing & Land Access](#)

<https://sarigbasis.pir.sa.gov.au/WebtopEw/ws/plans/sarig1/image/DDD/204224-004>

Collectively, these companies have guaranteed to spend approximately \$1.2 billion over the period 2011/12-2016/17 in EPPs 37 to 45. This will result in the drilling of 9 wells and 38,785 square kilometres (km²) of three dimensional (3D) seismic with an additional approximately \$1.1 billion non-guaranteed funding over the ensuing 3 year period to drill another 13 wells and 9269 km² of 3D seismic.

12. What exploration activities are proposed to be undertaken?

The exploration work programs proposed by **BP** include 3D seismic surveying of an area covering 11,400km² within the first two operational years, along with the drilling of four exploration wells in the third operational year.

- The seismic surveying occurred in the summer of 2011-12 and it anticipated that drilling will take place in late 2016 to 2017.
- This represents the most comprehensive geological analysis of the area ever undertaken.
- The BP seismic program took 6 months to complete and the seismic survey ship covered about 67km² a day.

BP is well advanced in its planning for its drilling program, which includes substantial stakeholder consultation in addition to technical, logistical and environmental planning. Geotechnical investigations of the seabed and shallow sediments were completed in the first half of 2013 to assist with well planning and design.

BP announced it had contracted Diamond Offshore for the drilling of at least 4 wells, beginning in late 2016. BP commissioned the build of a new, ultra-deepwater harsh environment semisubmersible rig, the Ocean GreatWhite, in South Korea for Diamond Offshore who will undertake the drilling. The rig is a dynamically positioned semi-submersible mobile offshore drilling unit. It has capability to drill through harsh weather and in the required water depths present in the Great Australian Bight (GAB). BP and subcontractors are having a significant input into the design of the rig in light of conditions in the GAB and lessons from world-wide

experience. The Ocean GreatWhite is currently undergoing sea trials prior to travelling to its permit in the GAB.

Bight Petroleum have proposed 3D seismic surveying of an area covering 768 km² and 235 km of 2D seismic within the first operational year, along with the drilling of one exploration well in the third operational year. The seismic surveying was proposed to occur in the summer of 2011-12 and drilling to take place in subsequent years. However, this program has been delayed through community concerns and environmental approvals.

In October 2012 Bight Petroleum referred their proposed activity for Commonwealth assessment under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). However, this process was not completed and Bight Petroleum opted in 2014 to follow the new “streamlined” regulatory process in which EPBC Act requirements for most offshore petroleum activities operate under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* processes administered by NOPSEMA after February 2014. On 6 June 2014, NOPSEMA accepted Bight Petroleum’s EP for their planned Lightning 3D marine seismic survey following an extended period of assessment and approval. The concerns raised by third parties were considered during the assessment process in accordance with the consultation requirements of the Environment Regulations. This authorisation now provides Bight Petroleum the approval necessary to undertake the survey.

A seismic program was undertaken in EPPs 44 and 45 for **Chevron** covering 8500 km² between January and June 2014. This is similar in nature to the BP program. A subsequent survey was completed between December 2014 and May 2015 which expanded on the first survey area, covering 13,137 km². Chevron has a drilling commitment of four wells in permit year 3, nominally in 2018-19, and has begun consultation for this proposed work.

A seismic program was undertaken in EPP 43 for **Santos/Murphy** covering 8867 km² between November 2014 and April 2015. There are no guaranteed drilling commitments for this Permit in the first three years.

Adjacent to EPP 43, off Western Australia, Permit WA517-P was awarded to a joint venture between **Santos Offshore Pty Ltd** and **JX Nippon Oil and Gas Exploration (Australia) Pty Ltd** in August 2015. This includes a guaranteed work program of reprocessing and studies totalling \$3.1 million.

13. Does the Government recognise the values of the marine and coastal environment?

The Great Australian Bight (GAB) surrounding coastal waters represent a unique marine environment that supports a variety of iconic marine species including many that maintain important commercial South Australian fisheries.

The protection of the GAB and its adjacent coastal environment is a primary concern for the South Australian Government. The SA Government also supports the environmentally sustainable development of an offshore oil and gas industry in the Great Australian Bight on the basis that projects are required to be well operated and effectively regulated. Plans for, and operations of, oil and gas projects must ensure no unacceptable risks to the Great Australian Bight, or indeed any other part of South Australia’s marine and coastal environments.

14. Why has the Government granted exploration rights within the Great Australian Bight Marine Park?

Three of the permits granted to BP in 2011 are intersected by the Benthic Protection Zone within the Great Australian Bight Marine Park. This area is recognised as having high conservation values. Subsequently, Exploration Permit for Petroleum (EPP) 43 was granted over part of this Benthic Protection Zone to Santos Murphy in 2013. In 2013, the Commonwealth Marine Reserve system in the Great Australian Bight was expanded. This then partially intersected another four EPPs.

Commonwealth marine reserves (CMRs) are areas within the Commonwealth Marine Area that are proclaimed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for the purpose of protecting and maintaining biological diversity and which contribute to a national representative system of marine protected areas.

The decision of whether or not petroleum exploration activities can occur within a Commonwealth marine reserve is made at the time of proclamation of the marine reserves. The Great Australian Bight Marine Park was originally proclaimed on 17 April 1998. On 17 November 2012 extensions to the Park were proclaimed along with other new Reserves in the South West marine area of Australia. In December 2013, the Governor-General reproclaimed the Commonwealth marine reserves in the South-West.

In the case of the EPPs in the Great Australian Bight, where they intersect, the reserve proclamation allows for petroleum activities in parts of the reserves.

Petroleum exploration activities undertaken in this area are subject to an even higher level of environmental scrutiny and require assessment for matters of national Environment Significance under the EPBC Act.

During the preparation of an Environment Plan (EP), titleholders must demonstrate that impacts and risks on the Commonwealth Marine Area more broadly and relevant CMRs in particular from both planned petroleum activities and emergency response activities will be reduced to As Low As Reasonably Practicable (ALARP) and will not result in unacceptable impacts to the marine environment and specifically the CMRs.

Titleholders must continue to demonstrate throughout an activity that impacts and risks to CMRs have been reduced to ALARP and are consistent with relevant CMR management plans and any associated requirements.

Further detailed information in this regard can be found at:

<http://www.nopsema.gov.au/assets/Guidance-notes/A433426.pdf>

Petroleum industry activities occur successfully in a range of environmentally sensitive areas in Australia and globally. In particular, oil has been produced from a Class A Conservation Reserve on Barrow Island for many decades without compromising environmental values.

15. What potential impacts are there from seismic surveying?

Seismic signals used during surveying have the potential to impact on the hearing of whales and other cetaceans if they are in close proximity to the signal sources (i.e some 100's of metres). This does not occur with the current management procedures in place. Extensive 3D seismic surveys have been undertaken in the Great Australian Bight over the last 3 years with no negative impacts recorded while strict protocols were in place to manage interactions with marine mammals.

With respect to the Southern Right Whale aggregation and calving area at the Head of the Bight, and the Blue Whale feeding area to the East, acoustic modelling has been undertaken by the Curtin University Centre for Marine Science and Technology. This concluded that at both locations sound levels will have decayed to within the range of ambient conditions, so any impact on whale species should be avoided. Acoustic data loggers have been deployed on the seabed to verify this. In addition, seismic surveying takes place during summer/autumn, outside the Southern Right Whale calving aggregation period in winter.

With respect to migratory cetaceans which may be present in the survey, the standard management procedures as set out under the EPBC Act Policy *Statement 2.1 - Interaction between offshore seismic exploration and whales* (September 2008) are followed. In addition to this, there are Marine Mammal Observers on board during the survey to observe for southern right whales migrating to and from their winter aggregation area at the Head of the Bight as well as other whale species.

Companies work closely with the fishing industry to communicate plans and to manage interactions with them. These interactions are expected to be limited because petroleum operations are further offshore than is typically trawled.

The tuna industry has raised concerns about potential remote acoustic effects on tuna catches and also on a stock survey conducted from January to March. The Australian Southern Bluefin Tuna Association has acknowledged that industries need “to compromise and work together to minimise the risks and get a balanced outcome”.

In the Benthic Protection Zone (BPZ) of the Great Australian Bight Marine Park, no significant impact on the benthic community is anticipated by the acoustic waves through 1,000m+ of water.

16. When will drilling occur?

Drilling of exploration wells is scheduled to occur in the third to sixth operational years of the permits. It is anticipated that this will take place in late 2016 to 2017 at the earliest for BP. Prior to regulated activities being undertaken a titleholder must submit and have an Environment Plan, among other regulatory documents, accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

In October 2015, BP submitted its Environmental Plan (EP) to NOPSEMA for assessment. NOPSEMA determined in November 2015 that BP’s EP for undertaking exploration drilling in the Great Australian Bight (GAB) did not yet meet the criteria for acceptance under the *Offshore Petroleum and Greenhouse Gas Storage Environment Regulations 2009* (Environment Regulations), and has provided BP with an opportunity to modify and resubmit the EP. This does not mean the BP EP had been rejected. Instead NOPSEMA is required by law to provide BP with a reasonable opportunity to modify the EP. It is usual for NOPSEMA to provide initial feedback that titleholders need to address before resubmitting. BP has since revised its EP and resubmitted it to NOPSEMA for further assessment.

Chevron also have a four well drilling program as a commitment under its permits. Planning is underway for stakeholder consultation which forms an important part of the environmental approval process. Chevron’s well drilling commitment is due in 2017-18. In August 2015,

Chevron was granted a suspension of work program commitments and extension of permit term in light of delays in processing data and identifying drilling targets.

The duration of a permit year may be suspended and/or extended at the discretion of the Offshore Petroleum Joint Authority; this would generally occur if there were *force majeure* circumstances such as unavoidable delays in mobilising a rig to the area, unforeseen weather patterns or a need to alter schedules due to marine animal migration.

17. How will the Government ensure drilling is safe?

The offshore petroleum regulatory regime places the onus on the proponent to demonstrate to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) that the risks and objectives are satisfactorily being reduced to As Low As Reasonably Practicable (ALARP) and to acceptable levels.

This includes a demonstration to regulators that all exploration for, and extraction of, petroleum resources are undertaken in a safe and environmentally responsible manner.

Prior to commencing any regulated activity, titleholders must submit an Environment Plan (EP) to NOPSEMA for assessment. While the South Australian Government does not have formal authority over or input to the consideration of the EP by NOPSEMA, due to the requirement for consultation under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS) and *Offshore Petroleum and Greenhouse Gas Storage Environment Regulations 2009* (Environment Regulations), the South Australian Government has been and will be consulted in detail during the development of all EPs.

Once submitted, NOPSEMA assesses the information contained in the EP against the Environment Regulations.

To accept an EP, NOPSEMA must be reasonably satisfied that the EP meets the criteria for acceptance under section 10A of the Environment Regulations, including those Matters of National Environmental Significance under Part 3 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC), and must consider the relevant values and sensitivities of matters protected as well as all other values and sensitivities that exist in the environment.

Under the OPGGS Act and Environment Regulations, NOPSEMA will only accept an EP that contains appropriate environmental performance outcomes, environmental performance standards and measurement criteria to demonstrate that the environmental impacts and risks of the activity will be managed to ALARP and to acceptable levels. For EPs, the matters protected must be considered as part of the relevant sensitivities of the environment and an evaluation of impacts and risks of the proposal on those sensitivities must be included.

In addition to the EP, titleholders are required to submit an Oil Pollution Emergency Plan (OPEP) for assessment, as part of the EP assessment process undertaken by NOPSEMA. The Environment Plan must have an implementation strategy that must include an oil pollution emergency plan.

The intent of the Environment Regulations is to ensure that oil pollution risks associated with the activity have been detailed and evaluated, enabling appropriate control measures to be put in place to meet set standards of performance. The titleholder must demonstrate all

measures reasonably practicable are being done to prepare for and minimise the likelihood of their specific oil pollution risks.

An oil pollution emergency plan is required to include the following information:

- The control measures (e.g. systems, equipment, people or procedures) necessary for timely response to an emergency that results or may result in oil pollution;
- The arrangements and capability that will be in place, for the duration of the activity, to ensure timely implementation of the control measures, including arrangements for ongoing maintenance of response capability;
- The arrangements and capability that will be in place for monitoring the effectiveness of the control measures if they are required to be deployed, and ensuring that the control measures are performing to the required standard; and
- The arrangements and capability in place for monitoring oil pollution to inform response activities.

The oil pollution emergency plan is intended to ensure that the titleholder has demonstrated that it can respond as quickly and effectively as possible in the event of an emergency that has resulted or may result in oil pollution, to avoid or minimise potential environmental damage.

In assessing an oil pollution emergency plan as part of an Environment Plan, NOPSEMA will consider the adequacy of the arrangements proposed in deciding whether to accept or refuse to accept the overall Environment Plan.

Although the oil pollution emergency plan is assessed by NOPSEMA as part of the Environment Plan assessment process prior to the commencement of an activity, it is intended to be a 'living' document. As further information or improved technology becomes available, the plan should be updated to ensure the continued adequacy and appropriateness of control measures for timely and effective response to an emergency which results or may result in oil pollution.

In addition to the EP and OPEP, any exploration proposal requires the development of a Well Operations Management Plan (WOMP) and rig Safety Case to be approved by NOPSEMA prior to activity commencement.

Operators must hold appropriate levels of insurance prior to the commencement of operations, in case any incident occurs that requires remediation.

NOPSEMA may also place additional conditions on specific operations approvals (such as drilling) if it is appropriate to do so to protect the environment.

The South Australian Government is confident that through this process any potential risks to such an important marine environment will be managed to an acceptable level. The Government is also confident the OPGGS Act process, administered by NOPSEMA, provides strict regulatory oversight and scrutiny to ensure no unacceptable risks to the marine environment.

18. What provisions are in place for maritime environmental emergencies?

The National Plan for Environmental Emergencies (National Plan) establishes a cooperative framework for the management of maritime environmental emergencies. The scope of the National Plan encompasses the prevention, preparedness, response and recovery of maritime emergencies, and explicitly addresses the risk from oil and chemical pollution from both shipping and offshore petroleum activities.

The National Plan is consistent with a number of international conventions, including notably the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC) which underpins the domestic legislation, placing preparedness and response obligations on various industry sectors and government agencies.

The National Plan provides a single integrated response arrangement for all potential and actual oil pollution incidents in Australian waters and fosters a cooperative approach to ensure all incidents are managed in the interests of the Australian community.

Australia has established a comprehensive regulatory regime for the offshore petroleum industry for environmental management and oil spill response which has been fully integrated through the cooperative arrangements of the National Plan.

The National Plan arrangements are underpinned by contingency planning at National, State and Territory, regional, local and activity specific levels. Participants in the National Plan have responsibilities for ensuring that contingency plans are in place consistent with the relevant administrative or legislative requirements for each jurisdiction.

The Australian Maritime Safety Authority (AMSA) manages the National Plan on behalf of the Australian Government, working with State/Northern Territory governments, emergency services and private industry to maximise Australia's marine pollution response capability.

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) contributed extensively to the latest revision of the National Plan in 2014 and maintains membership in relevant governance committees. NOPSEMA also participates in National Plan exercises and shares technical expertise through the National Response Team and Environment, Science and Technical network.

The petroleum industry contributes to the National Plan via the Australian Maritime Oil spill Plan (AMOSPlan). The Australian Marine Oil Spill Centre (AMOSC) holds stockpiles of equipment at various locations, with its largest stockpile at Geelong, Victoria. Smaller equipment holdings are held by a number of companies and these are generally available to other AMOSC members through the mutual aid arrangements of the AMOSPlan.

AMOSC also contributes to the National Plan through joint funding to maintain capability and preparedness and provide training services.

NOPSEMA has legislated responsibilities for oversight of oil spill response arrangements for petroleum activities in Commonwealth waters, consistent with its responsibilities under the National Plan.

19. How is an oil spill responded to in Commonwealth Waters?

The focus of drilling is to maintain the integrity of the well and avoid oil spills or blow-outs. The focus of well integrity is on designing the well to avoid the escape of hydrocarbons from the well. Any escape of hydrocarbons indicates that the first lines of defence have failed and that containment and mitigation measures are consequently needed.

In the unlikely event of an emergency, the Oil Pollution Emergency Plan (OPEP) must demonstrate how a titleholder can respond quickly and effectively to avoid or minimise potential environmental damage from oil pollution. This includes actions to eliminate or control the escape, clean up the escaped petroleum, remediate any resulting damage to the environment, and carry out environmental monitoring of the impact of the escape on the environment.

In the event of an offshore petroleum environmental incident, the titleholder has responsibility under the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGGS) for emergency response. Titleholders are required to report any incident to The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) within two hours of the first occurrence, or first detection of the occurrence, of the incident. Titleholders also operate as the Control Agency in responding to a spill, as per their oil pollution emergency plan.

Under the OPGGS Act a petroleum titleholder must do the following:

- Take all reasonably practicable steps to eliminate or control the escape of petroleum, as soon as possible after becoming aware of it;
- Clean up the escaped petroleum and remediate any resulting damage to the environment; and
- Carry out environmental monitoring of the impact of the escape on the environment.

The Australian Maritime Safety Authority (AMSA) may, upon request, support an offshore petroleum titleholder in responding to an incident. AMSA has a number of memoranda of understanding (MOUs) with offshore petroleum operators in relation to oil spill preparedness and response.

Titleholders may also establish arrangements in their oil pollution emergency plan to use equipment and expertise from industry-funded cooperatives such as the Australian Marine Oil Spill Centre (AMOSOC) or Oil Spill Response Limited (OSRL).

NOPSEMA conducts inspections to monitor compliance with the law including ongoing implementation and compliance with accepted risk management plans. Where an inspection finds non-compliance with legislative requirements including the accepted EP, NOPSEMA will take necessary enforcement action.

Where NOPSEMA determines a breach of the legislation has occurred, the authority may take enforcement action to rectify the breach, prevent a recurrence and act as a deterrent to future non-compliance. Enforcement action can include issuing improvement and prohibition notices, giving directions, requesting a revision or withdrawing acceptance of an EP and/or prosecution.

20. What is the role of the Australian Government in responding to an oil spill in Commonwealth Waters?

The Australian Government does not have a direct response role in responding to an oil spill.

The Australian Government Crisis Management Framework (AGCMF) outlines that leadership of the Australian Government's response to a crisis will, in the first instance, be the responsibility of the relevant portfolio minister. In the event of a significant petroleum incident in Commonwealth waters, the Minister for Resources, Energy and Northern Australia is the lead Commonwealth Minister.

In response to the Report of the Montara Commission of Inquiry, the Australian Government agreed that in responding to future petroleum incidents, a central incident coordination committee be convened and chaired by the Department of Industry, Innovation and Science. The Committee is the Offshore Petroleum Incident Coordination Committee (OPICC).

The OPICC's Framework outlines the governance arrangements for the OPICC, including its purpose, membership and key protocols for member agencies. The OPICC's purpose is to effectively coordinate Australian Government efforts and resources, and communicate to the public and affected stakeholders all matters relevant to a significant offshore petroleum incident in Commonwealth waters. The OPICC's roles and responsibilities are:

- Providing leadership and strategic coordination in response to an incident;
- Developing and communicating a common operating picture on behalf of the Australian Government;
- Reporting to relevant Ministers and governments on the conduct and associated risks of emergency and response operations;
- Developing and implementing a whole-of-government approach to media management in response to the incident;
- Developing and implementing a whole-of-government approach to community engagement in response to the incident; and
- Providing support to the Control Agency as required.

The Framework recognises and is intended to interface with other emergency incident response/coordination frameworks including: titleholders' oil pollution emergency plans; the National Plan for Maritime Environmental Emergencies; the Australian Government Crisis Management Framework and other whole of Australian Government Crisis Management Plans, and State or Northern Territory marine pollution contingency plans as appropriate.

The OPICC is not a mechanism to:

- Deploy Commonwealth resources for the operational response. As noted above, deploying resources is, in the first instance, the offshore petroleum titleholder's responsibility and shall be coordinated in accordance with their oil pollution emergency plan and other regulatory instruments.
- Incident control or implementing operational response arrangements. This is the responsibility of the Control Agency.
- Assume regulatory responsibilities, which remain at all times with the relevant regulatory agencies.

The decision to activate the OPICC will be determined by the scale and nature of the incident and may be taken by the responsible officers within the Department of Industry, Innovation and Science in consultation with other agencies and regulators.

The OPICC is convened and chaired by a Deputy Secretary of the Department of Industry, Innovation and Science (or his/her delegate) and includes senior representatives from key agencies, other relevant government agencies at Commonwealth and State/Territory level and industry representatives where appropriate. The exact OPICC composition will be determined by the Chair depending on the nature of the incident.

21. What is South Australia's role in offshore regulation and responding to oil spills in State Waters?

In addition to the South Australian Government's role as part of the Joint Authority, the South Australian Government regulates multiple industries which facilitate Commonwealth offshore exploration including, but not limited to, onshore petroleum operations, port related activities, marine parks and wildlife, storage of and transport of chemicals and wastes, and oil pollution emergency planning and response.

Further to this, the Department of Planning, Transport and Infrastructure (DPTI) within the South Australian Government is the control agency under the Emergency Management Arrangements, responsible for State offshore oil spill response and oil pollution emergency planning, should an oil spill occur in Commonwealth waters and cross into State waters. Should a response be required, DPTI is joined in its response efforts by other relevant South Australian Government agencies supported by Commonwealth agencies (Australian Maritime Safety Authority (AMSA) and others) and the titleholder and industry resources (Australian Marine Oil Spill Centre (AMOSC) and others).

This is outlined in the South Australian Marine Spill Contingency Action Plan (SAMSCAP) which is utilised for ship wreckages, maritime and other spills, as well as oil and gas activities. The SAMSCAP sets out the state arrangements for preparing for, responding to and recovering potential spills of oil or noxious and hazardous substances into coastal waters (within 3 nautical miles of coastlines) and onto beaches and foreshores, and is reviewed by the South Australian Government every 12 months.

DPTI is also working with The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), AMSA, AMOSC and title holders to ensure that there is clarity around who is empowered to undertake specific response activities, e.g. the establishment of exclusion zones, advising air and marine craft of issues, and determining who will undertake specific response tasks. DPTI has made it clear to title holders that once a spill enters South Australian waters, any response activities that are undertaken can only proceed with DPTI approval.

The South Australian Government has a Marine Spill Committee, involved in both the planning and response activities to potential marine oil spills in state waters that meets at least twice a year which has representation from agencies and industry members that can assist with a response if necessary. Relevant South Australian Government members include Environment Protection Authority, Department of Environment, Water and Natural Resources, South Australian Police, State Emergency Service, Country Fire Service, Metropolitan Fire Service, and Volunteer Marine Rescue to ensure expert advice can be

obtain. Industry members include Santos, Flinders Ports and BP with other industry members invited as needed. AMSA is also invited to ensure that National issues are considered.

The South Australian Government has a lead role, through DPTI, in determining whether an Oil Pollution Emergency Plan (OPEP) is satisfactory, insofar as it relates to spill response within South Australian waters. An oil spill has the potential to have serious negative consequences for South Australia's coastal and marine environment. The South Australian Government has the processes, plans and agencies in place to effectively and efficiently combat such a situation should it occur. The South Australian Government intends to continue engaging with all potential titleholders in the Great Australian Bight (GAB) to ensure that oil pollution response plans comply with the requirements outlined in both the National Plan for Maritime Environmental Emergencies and the SAMSCAP.

The Western Australian Government is very experienced in offshore exploration as a result of a large-scale offshore petroleum industry, and provides advice, reviews plans and participates in all mock oil spill response exercises to ensure that all stakeholders are clear on their respective response responsibilities. The South Australian Government through DPTI has been working closely with the Western Australian Government to benefit from their experience in engaging with offshore titleholders, but also to address and develop any inter-jurisdictional cross-over which may arise in a response to an oil spill which enters both State jurisdictions.

Should exploration or production commence, other South Australian agencies will have a role in the regulation of onshore facilities, shipping, and transport of waste and supplies to and from the drilling rig. While the South Australian Government does not regulate offshore oil and gas activities in the GAB, it does play an important role onshore and in coastal waters with regards to regulation and facilitation.

22. What financial assurance does a Title Holder have to provide?

The *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act) also requires a petroleum titleholder, at all times while the petroleum title is in force, to maintain financial assurance sufficient to give the titleholder the capacity to meet costs, expenses and liabilities arising in connection with the carrying out of a petroleum activity in the title area. This requirement is intended to ensure that the titleholder will have the capacity to meet extraordinary costs, expenses and liabilities that go beyond the normal operational and commercial costs of engaging in the offshore petroleum sector. This includes costs, expenses and liabilities arising in connection with complying with the titleholder's legislative obligations under the OPGGS Act, including its duty in relation to controlling, cleaning up and monitoring the effects of any escape of petroleum, or reimbursing The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), or the responsible Commonwealth Minister, if the titleholder has failed to comply with its duty.

The amount of financial assurance titleholders require considers the most potentially 'costly' unplanned incident or event that could occur in connection with the activity, and the worst realistically predictable consequences of that incident or event, having regard to the relevant circumstances in which the activity is to be carried out.

The Offshore Petroleum and Greenhouse Gas Storage Environment Regulations 2009 (Environment Regulations) also provide a mechanism for NOPSEMA to assess compliance with the requirement to maintain financial assurance, as a condition precedent to the

acceptance of an Environment Plan (EP). The titleholder is therefore required to demonstrate that it has complied with the financial assurance obligations along with the submission of the EP for the relevant petroleum activity. NOPSEMA must not accept the EP unless it is reasonably satisfied that financial assurance in relation to the activity (or activities) is sufficient, and in an acceptable form.

The Environment Regulations also provide that a failure by a titleholder to continue to maintain sufficient financial assurance is a ground for NOPSEMA to withdraw its acceptance of an EP.

23. How can the values of Marine Parks be protect from potential impacts?

South Australia's State marine parks are well away from the exploration petroleum permits in Commonwealth waters and as such direct impacts are expected to be minimal. Potential for extensive oil spills being the risk of most importance to coastal marine parks.

Close attention will be paid to any drilling proposals to ensure that oils spills such as Montara and Macondo are not repeated. Focus of management will be on measures to ensure that spills do not occur in the first instance. Enhanced contingency measures to contain any spills, should they occur, will be in place to confine them and their potential impacts.

The Commonwealth South-west Marine Bioregional Management Plan came into effect in July 2014. Under the plan, these reserves over these permits will have the status of Multiple Use Zone, allowing petroleum exploration and production as happens currently for the pre-existing Great Australian Bight Marine Park.

Specific management requirements for Commonwealth Marine Reserves (CMRs) are detailed in management plans made under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These plans give effect to the broad reserve management principles and define what activities are allowed to occur without the need for authorisation from the Director of National Parks (DNP), allowed to occur following authorisation by the DNP, or not allowed, within the CMR. Each CMR must have a management plan in operation as soon as practicable after the reserve is declared.

The content of the management plan is prescribed in the EPBC Act. Among other things, the Act requires that management plans detail how each zone of the reserve is to be managed and include specifications for any 'mining operations' that may be carried out in the reserve, as well as the conditions under which these operations may be carried out. A management plan comes into effect after it has been approved by the Minister and registered on the Federal Register of Legislative Instruments (or on a later date specified in the plan approved by the Minister).

The DNP and other Commonwealth agencies must act consistently with the in-force management plan.

The EPBC Act defines 'mining operations.' This terminology is used in CMR management plans and approvals issued by the DNP. The definition of mining operations under the Act includes all petroleum activities, including associated emergency response activities.

Titleholders must demonstrate in their Environment Plan (EP), that impacts and risks on the Commonwealth Marine Area (CMA) more broadly and relevant CMRs from both planned petroleum activities and emergency response activities will be reduced to As Low As Reasonably Practicable (ALARP) and will not result in unacceptable impacts to the environment of the CMA, including CMRs.

Titleholders must continue to demonstrate throughout an activity that impacts and risks to CMRs are not unacceptable, reduced to ALARP and consistent with relevant CMR management plans and any associated requirements.

Activities would only be approved in these circumstances where there was no significant risk to the values of the park.

24. Does offshore petroleum exploration benefit scientific research on the environment?

In any environmental system, particularly marine areas, there is always an incomplete knowledge about its specific ecosystem and how it supports such diverse marine life. A unique \$20 million dollar Science Research Program, the Great Australian Bight Research Program, is currently being undertaken to improve understanding of the environmental, economic and social value of the Great Australian Bight (GAB). This Research Program will be one of only a few whole-of ecosystem studies undertaken in Australia. This multidisciplinary study will build on selective studies undertaken to date to improve the understanding of how the GAB ecosystem functions. This Research Program is the collaboration between BP, CSIRO, Marine Innovation Southern Australia, The South Australian Research and Development Institute, the University of Adelaide and Flinders University.

The Great Australian Bight Research Program aims to obtain information about the unique marine environment and potential marine resources within the GAB, and will provide information to stakeholders, including government regulators, scientists, and environmental groups among others, to support sustainable development in the region and monitor possible future impacts.

The GAB research program addresses seven closely linked research themes:

1. Oceanography
2. Pelagic ecosystems and environmental drivers
3. Benthic biodiversity
4. Ecology of iconic species and apex predators
5. Petroleum geology and geochemistry
6. Socio-economic analysis
7. Integration and modelling.

It is being advised by an Independent Science Panel comprising internationally recognised experts in key discipline areas.

In parallel, another research program funded by Chevron in the GAB, is currently being undertaken. This program includes oceanographic, ecosystem and geological research and will involve CSIRO, University of Adelaide, Geoscience Australia and others. This second research program will complement the aims of the Great Australian Bight Research Program.

Due to project completion timeframes, much of the research conducted through the GAB Research Program will not be available to further inform National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) of the description of the environment in and surrounding the permit areas within the Environment Plan (EP) assessment process. However under the Offshore Petroleum and Greenhouse Gas Storage Environment Regulations 2009 (Environment Regulations) operators must revise and resubmit an EP if new information reveals a new or increased risk to the environment.

Over the past 15-20 years, there have been a wide range of studies around the world undertaken or supported by exploration companies to address these gaps in knowledge. Local examples are the collection of marine acoustic data in the Otway and Bight Basins prior to, and during, seismic surveys and the aerial observation of whales with approaching seismic vessels. The marine acoustic data loggers providing valuable information of other marine fauna, such as fish choruses, shrimp clicks and whale calls.

The aerial observation of the Duntroon Sub-Basin prior to a seismic survey in 2004 discovered the aggregation of pygmy blue whales west of Kangaroo Island and new feeding grounds. The aerial surveillance of the behaviour of whales in the vicinity of the working seismic vessel provided some of the best evidence of whale – seismic interaction in the world. The overall outcome of this was that whale behaviour did not significantly change in the presence of the working seismic vessel.

During the course of seismic and drilling there are many opportunities for observing and recording the natural environment and faunal activities. An example of this is in 2001, Woodside undertook a 6 month long seismic survey in the Bight Basin with dedicated marine mammal observers aboard for the full period of the survey. Whilst the number of observations of whales and other cetaceans was quite small, the observers did also make opportunistic observations of the migratory seabirds for this period. This extensive observation study provides an exceptionally valuable record of the seabirds in a very remote part of the world which would not be possible otherwise

25. What are the potential impacts on the economy and other users of Great Australian Bight?

While all human activity has potential risks, the challenge in accepting an activity is to ascertain whether the risks can be managed to as low as reasonably practicable and to acceptable levels, rather than benefits outweighing the potential risks or imposts.

The Great Australian Bight (GAB) and surrounding coastal waters represent a unique marine environment that supports a variety of iconic marine species including many that maintain important commercial South Australian fisheries. By way of example, this area is home to Australia's most profitable commercial aquaculture industry, the Southern Bluefin Tuna industry which contributes \$136 M annually to State Gross Product (SGP). In addition, this area supports a large range of commercial fishing, aquaculture and tourism industries that contribute a further \$108M to SGP.

The potential for large petroleum accumulations has attracted major oil and gas companies to take up nine exploration permits in the Great Australian Bight Basin, including BP/Statoil, Murphy/Santos and Chevron. Collectively, petroleum permit holders in the Great Australian Bight have guaranteed to spend approximately \$1.2 billion over the period of 2011-2018 in their respective Exploration Petroleum Permits (EPPs 37 to 45). This relates to the drilling of

9 wells and acquisition of 40,622 km² of 3D seismic data. An additional \$1.1 billion in non-guaranteed exploration within these permits is also possible in the following 3-year period to drill another 10 wells and acquire 8,969 km² of 3D seismic data. Over the same period of time (2011-2018), the southern Bluefin Tuna industry, west coast commercial fisheries, aquaculture, and tourism will contribute approximately \$1.7b to South Australia's SGP (EconSearch 2015).

As a comparison, over the last 46 years, Bass Strait oil and gas operations have provided energy to homes, businesses and industry in Victoria and the east coast of Australia, sustained tens of thousands of jobs and generated billions of dollars in tax revenue.

Just as occurred in Victoria with the need to support operations in Bass Strait, it is anticipated that exploration will bring with it investment into, and expenditure in South Australia through industry contracts, construction and suppliers. While the greatest scope for local input lies in a potential future development and production phase, exploration creates opportunities in relation to supply vessels, aircraft and drilling rigs with a range of services, products and infrastructure, logistics and warehousing, machine shops, environmental, medical and catering services.

To date BP has initiated significant investments within South Australia to support its planned drilling operations including:

- The awarding of an \$A138 million rotary wing contract to the Bristow Group that will support BP's initial exploration drilling activities in the Great Australian Bight;
- The initiation of major upgrades to the Ceduna airport to accommodate BP's aerial transport needs, and a planned secondary helicopter facility upgrade to the current Coorabie facility;
- An alternate helicopter landing and refuelling capability to be set up on the Eyre Peninsula;
- The ASCO Group has won the contract to manage the supply base for BP, which will be managed in partnership with Flinders Logistics, a subsidiary of Flinders Port Holdings, at Port Adelaide; and
- The opening of a Port Adelaide Marine Supply Base which will service and provide supplies to the rig.

Should commercial quantities of petroleum be discovered and the production phase commence, royalties in their entirety are paid to the Commonwealth. The State Government does not receive any royalties on petroleum in Commonwealth licensed permits.

26. What opportunities are there for local businesses?

During exploration phases of the petroleum industry, there will be modest opportunities for local provision of supplies and services. Survey vessels and drill rigs will require fuel, catering supplies and transport services from local ports during each activity. Other services may also be needed from time to time. This provides for local businesses in South Australia opportunities for engagement and development. Opportunities for jobs at this stage would be limited as most survey and drilling crews would have very specialised skills in specific activities. There is a general requirement for Australian maritime crews to operate the vessels. This may provide some local employment.

The greatest opportunity for local businesses to be involved in petroleum offshore sector is once a discovery is made and field development advances for extraction of the oil and gas.

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This phase is a much longer lasting phase with semi-fixed facilities and much longer local contracts for fuel, catering, transport and employment. Supply chains from nearby onshore location in South Australia would have an advantage in this case, with the possibility of local onshore supply and support bases.

Exploration companies usually engage local consultants and personnel, particularly to liaise with local fishing communities and other stakeholders. BP has located personnel in South Australia for their exploration program.

Approximately 1000 companies across industry sectors have registered an interest in participating in BP's landmark project, which is generating much needed economic activity for the state. The level of interest on the Industry Capability Network (ICN) Gateway portal is one of the highest on record and further evidence of how local industry is throwing its support behind the project.

Discovery and subsequent development of extraction facilities would precipitate installation of infrastructure both offshore and onshore.

Offshore infrastructure would relate mainly to petroleum extraction and transport facilities such as production platforms, pipelines and loading facilities. Fixed production platforms, particularly in the more distant waters away from the coast, provide a focal point for marine safety by the way of helicopter landing in an area currently devoid of any such opportunities. This provides a component of maritime safety for any maritime user currently unavailable.

With longer term activities such as production, there would need to be enhancement of transport facilities onshore for fly in-fly out (FIFO) workers on offshore facilities. This would mean better flight services into the service centre (e.g. Ceduna, Pt Lincoln or elsewhere) as well as local helicopter facilities and airport/heliport upgrades. Long term contracts would also be needed for catering, fabrication, logistics and other services to the offshore facility and its workers.

27. Has the Government favoured development over the environment?

The Government must balance environmental, social and economic considerations when developing our natural resources.

The discovery of new petroleum reserves has the potential to reduce Australian energy import dependence and increase supply certainty. A moratorium on petroleum exploration and development activities has the potential to undermine Australia's energy security.

Australia has a strong offshore petroleum safety and environmental regulatory regime. This approach must continue to ensure oil and gas exploration and production in Australian waters is the best and safest in the world. This means having a world-class regulatory system, diligent and effective regulators and competent and professional operators.

Lessons from Montara and the Gulf of Mexico (Macondo) have been examined and integrated into existing systems.

Shutting down the industry and putting the nation's energy security, jobs and the economy at risk is not a balanced approach to achieve these goals.

28. Is Australia the first jurisdiction to grant titles to BP following the Macondo incident?

No. Since the 20 April 2010, incident BP has increased its international petroleum portfolio:

- In the North Sea off Norway, BP increased its equity in the Valhall and Hod fields, where it is the operator.
- In the Caspian Sea off Azerbaijan, BP increased its equity in the Azeri-Chirag-Gunashli (ACG) oilfield, which it operates.
- In the Mediterranean off Egypt, BP has become the operator of the offshore North Alexandria and West Mediterranean Deepwater concessions.
- In the South China Sea off China, BP has acquired a 40.82 percent stake in a block that will be operated by Chevron during the exploration phase.
- BP also concluded agreements with the Indonesia Government in relation to the West Sanga Sanga exploration area and a cross assignment of acreage interests with ExxonMobil in deepwater in the Canadian Beaufort Sea.

29. What track record does Bight Petroleum have in offshore exploration?

Bight Petroleum is a relatively newly formed company, registered as an Australian Proprietary Company with the Australian Securities and Investment Commission. Whilst Bight Petroleum has not explored in the offshore previously, key personnel have extensive experience in both onshore and offshore petroleum exploration projects in a number of counties including North Sea, Gulf of Mexico, East Coast of Canada, Timor Sea, Bonaparte Gulf and Otway Basin.

30. Who is Chevron Australian New Ventures Pty Ltd?

Chevron Australia New Ventures is registered as an Australian Proprietary Company with the Australian Securities and Investment Commission. It is a subsidiary of global energy giant Chevron.

Chevron Corporation has more than 100 years in the oil and gas business, starting out in the USA as Standard Oil. One of the world's six supermajor oil companies, its headquarters are in California and it runs businesses in 180 countries.

31. What is the Santos-Murphy Oil Joint Venture?

Murphy Australia Oil Pty Ltd and Santos Ltd have joined together to explore EPP43. Murphy will be the operator for the joint venture.

Murphy Australia Oil Pty Ltd is registered as an Australian Proprietary Company with the Australian Securities and Investment Commission. Murphy Australia Oil Pty Ltd is a subsidiary of Murphy Oil Corporation, which is a global oil company. Murphy Oil Corporation is an independent exploration and production company with a strong portfolio of global offshore and onshore assets delivering oil-weighted growth. Its global offshore operations are complemented by a predictable growing North America onshore business. Exploration activities are focused in four main regions: Deepwater Gulf of Mexico, the Atlantic Margin, Southeast Asia and Australia.

Santos Ltd. is a large Australian oil and gas exploration company. An Australian energy pioneer since 1954, Santos is one of the country's leading gas producers, supplying Australian and Asian customers. With its origins in the Cooper Basin, Santos is one of

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Australia's largest producers of gas to the domestic market and has the largest exploration and production acreage position in Australia of any company.

Santos has also developed major oil and liquids businesses in Australia and operates in all mainland Australian states and the Northern Territory.

Santos also has an exploration-led Asian portfolio, with a focus on three core countries: Indonesia, Vietnam and Papua New Guinea.

Any further queries?

Should you have any further questions or concerns please contact Mr David Cockshell, Director – Geophysical Operations, Energy Resources Division, Department of State Development (DSD-ERD) on phone 8463 3233; or by email david.cockshell@sa.gov.au.