Senate Economics Reference Committee
Inquiry into Australia's oil and gas reserves

28 February 2020 Public Hearing

Geoscience Australia's response to Questions-on-Notice

1. **Senator Rex Patrick asked: "Which jurisdictions, other than Norway, provide pre-competitive data." (Committee Hansard, p.10)**

Response:

As well as Norway, the following countries provide pre-competitive geophysical data:

- United Kingdom: https://www.ogauthority.co.uk/data-centre/
- Republic of Ireland: http://gis.dcenr.gov.ie/internetIPAS/servlet/internet/IPAS2IHome
- Canada: Nova Scotia: https://energy.novascotia.ca/oil-and-gas/onshore/petroleum-resources/geoscience-data-and-maps
- Canada: Alberta: https://www.alberta.ca/energy-industry-documents.aspx
- New Zealand: https://www.nzpam.govt.nz/our-industry/nz-petroleum/

2. **Senator Rex Patrick asked: "… is it [ACIL Allen report] publically available?" (Committee Hansard, p.11)**

Response:

ACIL Allen was engaged by Geoscience Australia to independently quantify the potential return on investment to the Australian Government from the $100.5m, four-year Exploring for the Future (EFTF) program. The ACIL Allen report titled: *Exploring for the Future (EFTF) Program Return on Investment*, is available on Geoscience Australia's website at (https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/132897)

3. **Senator Rex Patrick asked "Would you be able to provide the committee – perhaps select an area –with an idea of what the data looks like…?" (Committee Hansard, p. 14)**

Response:

Offshore Perth Basin Study

The presentation, **Attachment A**, on the study of the offshore Perth Basin provides a summary of the type of pre-competitive work Geoscience Australia undertakes and makes publically available. A typical pre-competitive basin-wide study synthesises marine (bathymetry, seabed video and samples) data, seismic data, potential field (gravity, magnetics) data, as well as structural geology, stratigraphy and organic geochemistry data into a coherent understanding of the geology and resource potential.

The offshore Perth Basin Study was released in support of the Australian Government's 2011 Offshore Petroleum Acreage Release program.

Release area W11-18 (Perth Basin), located in Commonwealth waters offshore Western Australia, received multiple competitive work program bids and was ultimately awarded to a consortium of companies (Murphy Oil, Kufpec and Samsung - the latter being a newcomer to offshore exploration in Australia). The initial work program commitment for the primary 3-year term of the permit was $70 million and included drilling of three exploration wells, all of which were deemed technical successes.

The consortium relinquished their interest after the primary term and new operators Key Petroleum, Pilot Energy and incoming Red Emperor (all small sized companies) took over operation of the permit.

On 22 February 2020 the operators of the permit announced a "high-grading of the prospectivity", meaning they consider an increased chance for exploration success and indicated their intention to renew the permit for further assessment work.

Onshore – Cooper Basin (Queensland and South Australia)

The presentation at **Attachment B**, which was given at the 2015 Australian Petroleum Production and Exploration Association (APPEA) conference, provides an overview of a cross-jurisdictional study that was undertaken by Geoscience Australia in collaboration with the Department of State Development, South Australia, and the Geological Survey of Queensland.

The study produced the most detailed 3D basin and petroleum system models for the Cooper Basin (which remains to this day). The results were recently used to produce petroleum prospectivity maps and assess groundwater resources for the Cooper Basin as part of the *Geological and Bioregional Assessment (GBA) Program*, which is being led by the Department of Agriculture, Water and the Environment, and includes Geoscience Australia and CSIRO. The GBA Program will improve our understanding of shale and tight gas developments for three onshore basins that have the potential to supply the East Coast gas market within 5-10 years. Further detail and information regarding the GBA Program and Basin assessments is at: https://www.bioregionalassessments.gov.au/geological-and-bioregional-assessment-program)

4. Senator Rex Patrick asked in relation to Professor Fernandes's submission for Geoscience Australia to respond… (Committee Hansard, p.15)

Response:

Professor Fernandes proposes in his submission to the Inquiry that the Australian public "bears the costs and risks of investment in Australia's oil and gas reserves, whilst the benefits accrue disproportionately to small groups in control of vast concentrations of wealth and influence". Professor Fernandes also states that Geoscience Australia and its predecessors were involved in geological data acquisition programs that ultimately benefited only those "privileged" groups.

Geoscience Australia's pre-competitive work program is undertaken to encourage exploration by reducing technical risk for the offshore petroleum industry. This, by its very nature, is non-rivalrous in that it aims to alleviate an element of investment risk, due to the high degree of uncertainty around the resource potential, particularly associated with greenfield (underexplored) regions.

The provision of high-quality, accessible and freely available pre-competitive geoscientific data is an important component in the suite of commercial deliberations a resources company considers for investment in Australia. Geoscience Australia s pre-competitive activities and products provide Australia with a strong competitive advantage, supporting the significant investment (over A$350 billion) that has been made in Australia's petroleum sector during the past decade.

As stated in the Department of Industry, Science Energy and Resources submission to the Inquiry (Submission 37) benefits to the Australian community from petroleum development include highly skilled jobs, business opportunities and infrastructure. This is particularly true for regional Australia. These projects also generate significant tax and royalty revenue streams including the petroleum resource rent tax, petroleum royalties and production excise and company income tax. Key statistics identified in its submission include 26,100[1] people employed in the oil and gas industry and over AU$1 billion[2] paid in the Petroleum Resources Rent Tax in 2017-18, while for this same period (2017-18) the industry recorded net operating losses of $7.6 billion[3].

The Australian Government's 2019 National Resources Statement, highlights the success of the development of the Ichthys field in offshore north-west Western Australia as stemming from the $3 million pre-competitive data acquisition work undertaken by Geoscience Australia over the Browse Basin in 1996. The Ichthys field is the largest liquefied petroleum discovery since the Bass Strait discoveries of the 1960's. Development is being led by Inpex Corporation who have committed US$34 billion – the single largest investment made by a Japanese company in Australia, and the largest overseas investment made by a Japanese company. It has been publically noted that the Ichthys development will generate over its 40 year life: $73 billion of tax revenue and $195 billion in exports. It will provide 40 years of employment opportunities, with 1800 fulltime positions on average[4]. Also, as noted in the National Resource Statement the project has paid more than $13 billion to Australian businesses during construction with over $150 million worth of work being awarded to indigenous companies.

In response to Professor Fernandes' assertions in his submission, Geoscience Australia notes the following additional wider benefits of its offshore pre-competitive program:

- *Resource management* – providing a national understanding of our energy resources that enables government to make evidence-based decisions on the sustainable management of oil and gas resources.
- *Environmental and marine management* – identifying suitable protected areas (offshore and onshore), including those containing exclusion zones for future resource exploration (e.g., *South-west Corner Marine Park, which extends over the prospective Mentelle Basin and Naturaliste Plateau, offshore Western Australia*).
- *Confirmation of Australia's sovereign rights* – providing data-sets and geological studies used as evidence for Australia's extended continental shelf Law of the Sea submission to the United Nations. This resulted in the extension of Australia's marine

[1] Submission 37 – Australia's oil and gas reserves
[2] ibid
[3] APPEA - Key Statistics 2019
[4] 2019 National Resources Statement

jurisdiction by more than 2.5 million square km[5] benefitting all Australians in terms of national security and access to resources.

- *Supporting a low-carbon footprint* – identifying potential areas suitable for CO_2 geological storage in sedimentary basins, including the offshore Browse, Bonaparte, Gippsland basins, and the onshore Perth and Darling basins.

5. Senator Rex Patrick asked Geoscience Australia to consider the terms of reference for the Inquiry and sought the Agency's perspective regarding whether there are arrangements, used elsewhere that could be considered by Australia to "maximise benefits to the public of Australia's national oil and gas resources congnisant of things like sovereign risk, property rights …"(Hansard p.15-16)

Response:

There have been several reviews, internationally and domestically, that consider the operational arrangements of mineral, oil and gas resources and the benefits that arise from the resources sector.

The United Kingdom (UK) Government, in accepting all the recommendations in the review of their domestic oil and gas sector by Sir Ian Wood in 2014 (*UK Continental Shelf: Maximising Recovery Review*), established the UK Oil and Gas Authority (OGA), a government company with the UK Secretary of State for Business, Energy and Industrial Strategy as the sole shareholder. The OGA's role is to regulate, influence and promote the industry in order to maximise the economic recovery of the UK's oil and gas resources. Geoscience Australia notes that the UK offshore petroleum regime reflects that of Australia's, particularly through the work of the National Offshore Petroleum Titles Administrator, which was established in 2012.

Access to timely geological data and analysis was also viewed by Sir Ian Wood as a "prerequisite for a competitive market and this is even more important in an industry which relies on good data to create value and support its safe operation." The UK OGA identified this as an incentive for exploration in its Exploration Strategy, as an important medium term action to support a revitalisation of exploration activity, for not only new fields by also the ongoing viability of existing development infrastructure.

In Australia, a key finding of the 2014 Productivity Commission Inquiry into *Mineral and Energy Resources Exploration* was that Australia's geological survey organisations and databases are highly regarded by industry. The quality of, and accessibility to, pre-competitive data is seen as a source of attractiveness for investment by domestic and foreign investors. While the draft finding (4.1) of the March 2020 Productivity Commissions Draft Report on its study into Resources Sector Regulation states that: "There is no case for a major reform of the Australian pre-competitive geoscience arrangements given the quality of the information is generally highly regarded."

[5] https://www.ga.gov.au/ausgeonews/ausgeonews200903/limits.jsp

ATTACHMENT A

- GA Pre-comp Study – Offshore Perth Basin

ATTACHMENT B

- Presentation made at APPEA Conference on the Cooper Basin