

# **What is Happening on Chevron's Gorgon Project?**

**A Preliminary Report to the International Transport Workers' Federation**

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### **Executive Summary**

One of the world's largest liquefied natural gas investments, Chevron's Gorgon project off the north-west coast of Australia, seems to be in trouble. Originally costed at USD37 billion, the budget is now running at USD54 billion. Originally scheduled to have 'first gas' in 2014, there are growing concerns about delay, with 2015 as the most optimistic start-up date. Shell, one of the project's joint venture partners, believes the date could be at least 2016.

The Gorgon project is very complex indeed. The construction site for the jetties and gas trains is on Barrow Island, 70 miles off the coast, hundreds of miles from the main population centre. Accommodation for the workforce as well as the infrastructure is new. The work is taking place in a nature reserve with strict quarantine processes for all materials brought onto the site; it is an extremely windy site and open to major sea swells. Parts and materials are shipped from the major port nearly 1000 miles to the south; huge pipe-laying vessels work offshore to connect the gas-fields to the Island. Dozens of contractors work with and for the joint-venture partners.

In the statements of local Chevron managers and business lobby groups and in most media accounts, there is a simple explanation of the project's problems. The causes lie mostly in low productivity, pro-union labour law and aggressive maritime unions representing over-paid workers. One way or another, labour – be it workers themselves or their unions – is to blame. Is this an adequate explanation? The short answer is: no. This kind of explanation lacks any credibility. Any serious attempt at explaining the problems serves to pose quite different questions – questions about how the project is managed and why Chevron and others so often portray the problems as they do. This report suggests these behaviours are more about blame-shifting than genuine analysis.

Even a quick reading of the agreements covering the workforce will raise questions about some commonly quoted wage numbers, not least the infamous cook making AUD350,000 (USD326,445). The argument about wages-driven cost blow-outs is misconceived for two reasons: first, many of the claims made about wage levels are greatly exaggerated; second, maritime wage costs make up only one per cent of the estimated project cost. This means that even if the most inflated claims about wage figures were correct, they still would not go close to explaining a cost blow-out of 46 per cent of the original estimate; they cannot account for anything like the USD17 billion increase.

What of delays? These, of course, might in part explain the cost increases. But how do we account for delays themselves? Assessing the argument about attributing delay to the workforce requires us to analyse the nature of the project and the performance of work itself. This report is the only public attempt at carrying out this important task. It draws on focus groups and interviews which revealed structural problems around the relationship between client and contractors, internal red-tape, safety flaws, delays and waste due to poor planning. On the other hand, high levels of commitment to the job and to its success were in evidence.

Much public comment from resource industry lobbyists and media commentators paints the workforce, particularly the maritime workers, as so industrially destructive that they are threatening not only the long term viability of the project but the sector itself. The focus groups provide us with a very different picture: the workers express high levels of commitment to the job and to the sector's long term success. The success of this and other LNG projects was critical to them. Many said that this was the best job they had ever had. They explicitly argued that it was important that they do a good job on Gorgon to enhance their own, and the sector's, future prospects.

The accounts from the workforce describe fundamental, inherent problems on the project and of scores incidents large and small which the workers say explain the problems with cost and time.

The 'big ticket' problems and continuing sources of concern have included:

- Combi-Dock III (a vessel which has roll-on-roll-off capacity and also serves as a dock) being impounded for two months by the Australian Government after coming adrift and hitting an Australian submarine, HMAS Sheean. The company and its insurer paid about \$10 million compensation.
- International vessels delayed at Barrow Island, unable to discharge cargo because of lack of space in the lay-down areas. As one worker reported: 'So for each day if you take into account what one vessel would cost in a day and sometimes it can be up to \$400,000 or \$500,000 a day'.
- Reports of major delays at sea, in some cases, a whole swing of 35 days. In the words of one seafarer: 'the vessel hasn't moved, the guys have literally sat on the back deck. They might be chipping and painting and there's only so much painting you can do on the vessel ...there is no productive work for them to do for ... that whole five weeks'.

Workers also report, sometimes through 'leading-hand logs', on more routine delays that have marred the project. Among many:

- Complexities imposed by the quarantine requirements for all material brought onto Barrow Island. Foreseeable or not, these environmental requirements at times mean that whole barge loads need to be re-treated.
- Dozens of stories of loads being re-lashed, often because of competing instructions from different contractors,
- A five-month period where skilled assembly workers had to fill in paperwork simply to get the right size of bolts.
- Compulsory wearing of US-mandated safety harnesses which are irrelevant because of higher standards on Australian scaffolding.
- In just one (randomly-selected) week, one leading-hand log included entries such as: not quarantine compliant; incorrect manning levels because wrong plan; Change in vessel allocation – no plan; cargo re-allocated: insufficient equipment – steps tagged out; wind delays as per manufacturer's specs: excessive barge movement could not install ramps; no truck movements – no traffic control.

The most commonly circulated media stories about the Gorgon project have not considered these and other workplace perspectives presented here. They have not considered the possibility that there may have been problems with the project's management from the beginning, as the companies set about their work in the Australian environment, on an isolated and complex construction site. They have not examined the experiences of the workforce, but, rather, seem to have assumed the workers and their unions are the problem.

If the standard explanations for the project's problems are flawed, then this raises significant questions about how the cost and time difficulties should be addressed. It follows logically from what is presented in this report that somehow 'fixing' labour relations will not solve the problems; neither will blaming the unions. The logic of this report also means that management needs to recast its thinking: if Gorgon's problems are simply and continually attributed to the workers, then there would appear to be little prospect of management practices and contracting arrangements being changed on this project or others. Meantime, neither Chevron nor the partners and contractors appear to see themselves as in any way accountable for the failings on their project. In short, both the evidence presented here and the pattern of blame-shifting raise questions about management practice and management accountability.

# What is Happening on Chevron's Gorgon Project?

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### 1. Introduction

Chevron's Gorgon liquefied natural gas (LNG) project is one of the world's largest resource projects, and the single most expensive ever undertaken in Australia. Pitched as central to a massive expansion of energy production for both Chevron and the Australian economy, Gorgon's national and corporate significance can indeed hardly be overstated. It has been estimated that in its first 30 years, Gorgon will add AUD65 billion (USD60 billion) to national GDP.<sup>1</sup>

More broadly, the project is part of a major shift in global energy production as the LNG industry meets an ever greater share of rising global energy demands. For the International Transport Workers' Federation (ITF) and any number of interested parties, the geography of this expansion is striking: the Asia-Pacific is the source of well over half the world's demand and, increasingly, of production. For investors, governments and unions, the increasing proportion of exploration and production in the Asia-Pacific region, as opposed to the more established sites in the Middle East, poses fundamental questions about the development of new projects on time and on budget.

In this context, the Gorgon project is highly problematical. This massive project has been attracting publicity in Australia for all the wrong reasons as its costs and timeframes have blown out. Originally costed at USD37 billion, when work began in 2009, the Gorgon budget is now running at USD54 billion; scheduled to have first gas in 2014, the timing is now in doubt. According to Chevron, it will be mid-2015; according to another partner, Shell, it will be at least 2016.<sup>2</sup>

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<sup>1</sup> Former Minister Martin Ferguson drawing on ACIL Tasman's data.

<http://www.forbes.com/2009/09/14/chevron-gorgon-investment-markets-commodities-natural-gas-australia.html>

<sup>2</sup> *Australian Financial Review*, 15 March, 2014: Shell casts doubt over Gorgon timing.

Cost blow-outs and time delays are more common than not on megaprojects. Nonetheless, each instance needs to be contextualised and explained. The dominant narrative about Gorgon has been largely framed by Chevron and much media coverage in terms of problems imposed by Australian labour relations and by one particular union, the Maritime Union of Australia (MUA). As recently as 6 April 2014, the Managing Director of Chevron Australia, Roy Krzywosinski, told an industry conference that wages for some classifications had doubled since 2008, reaching up to \$400,000: ‘This wage growth is what is currently crippling Australian industry and is simply not sustainable. Rising labour costs are hampering competitiveness, and combined with low productivity, will ultimately cost jobs’.<sup>3</sup>

The typical narrative focuses on union wage demands and poor productivity with government failings, in terms of labour legislation and cumbersome bureaucracy, also in the mix. Although various complex logistical aspects of the project are also alluded to at times, it is usually the workers who are at the centre of lobby group and media attention. Simply put, they are being blamed.

This focus on workers and unions is wholly inadequate and indeed quite misleading. This kind of analysis overstates the impact of wage costs and completely fails to explain project delays. This way of seeking to understand the Gorgon project makes no attempt to explore the nature of work itself. Furthermore, this logically means that neither Chevron nor the partners and contractors see themselves as in any way accountable for the failings on their project.

This report takes a different approach in coming to grips with the Gorgon debate. It examines the nature of work organisation on the project. It draws on publicly available data and original focus group and interview research. It draws on workers’ accounts from the project’s assembly sites, wharves and ships to assess the project’s problems. The findings here are preliminary pending further original qualitative research as well as still wider use of the extensive material collected thus far. Only a small amount of the available oral testimony is presented here. This material provides sufficient evidence to argue that investors, shareholders and others are not being provided with a full account of work on the project.

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<sup>3</sup> Quoted in Reuters: High-cost Australia May Miss \$180 bln LNG Expansion Wave  
<http://www.gulfoilandgas.com/webpro1/MAIN/Mainnews.asp?id=34770>

This report begins by presenting a brief context in which to situate the project. It argues that most of the public discussion misconceives the nature of the problems and that in fact more questions than answers arise from a close assessment of those arguments. The report provides extensive material from focus group and interviews in which the experience of the workforce is presented at some length. In turn, this material raises further questions for any investigation into the project's problems.

## 2. Alternative perspectives

Before presenting the original findings of this report, there are several ways in which the both the study and the Gorgon project itself should be framed. These contexts challenge the simple and often misleading way the issues are often presented. They should be taken into account when assessing the management of the Gorgon project. Three matters are especially important: the general context of megaprojects; other evidence in the debate in Australia; and what we know about the project's wages.

### (i) *Megaprojects*

Megaprojects run over time and over budget much more often than not:

- *The John Grill Centre in Australia* reports that 65 per cent of the world's major engineering projects fall down, be it in terms of schedule, cost or quality. (It is worth noting that the founder of the Centre, John Grill, was the founder and CEO of WorleyParsons, one of the country's largest engineering service companies and provided the single biggest donation to the University of Sydney to establish this centre for project management.)<sup>4</sup> The Centre's overview of project problems highlights: 'a failure to ask the right questions of strategic fit, risk and return' and 'deficiencies in leadership practices, collaborative engagement and strategic and design thinking'.<sup>5</sup>

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<sup>4</sup> Quoted in *Sydney Morning Herald*, 24 October 2012: Magnanimous magnate gives \$20 million to university

<sup>5</sup> See <http://sydney.edu.au/john-grill-centre/about/need.shtml>

- ***A Perth-based consultancy, RISC***, last year drew on data from Wood Mackenzie, a British firm specialising in energy, metals and mining research, to argue that the average cost over-run on major oil and gas projects was 98 per cent. In Australia, the average was (merely) 30 per cent. The consultancy also says that currency fluctuations can be problematical: their analysis puts the Gorgon cost increases in US dollars at nearly twice the level of Australian dollars.<sup>6</sup>
- ***Professor Bent Flyvbjerg*** of the Said Business School at Oxford University, one of the world's leading researchers and consultants in this field, shows that nine out of ten projects have cost overruns; across 70 years there have been *no* improvements in the accuracy of cost-estimates. In his book, *Megaprojects and Risk* (with Nils Bruzelius, and Werner Rothengatter) and elsewhere, Flyvbjerg argues that psychological explanations ('optimism bias') and political and economic ones ('strategic misrepresentation') are the key explanatory variables in cost over-runs. Costs are routinely underestimated; revenues are routinely overestimated.<sup>7</sup>
- ***The Business Council of Australia*** identifies three major drivers of project costs: problems with planning and procurement, partly because of optimistic scheduling; complex government regulatory processes; the workplace relations system.<sup>8</sup> One might contest these explanations but here the relevant point is simply that statements by Chevron and others focus on only one of these three – the labour relations issues – failing to examine the dynamics of the project itself.

In sum, these and other sources tell us that over-promising and under-delivering are structural features of, and endemic, to megaprojects. This leaves us with the problem of explaining the particular features of this general phenomenon: that is, the local contours of the Gorgon project.

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<sup>6</sup> Resource Investment Strategy Consultants quoted in *Australian Financial Review*, Human touch adds to costs, 27 May 2013, p. 8.

<sup>7</sup> Flyvbjerg, B, Bruzelius, N, Rothengatter W, *Megaprojects and Risk: An Anatomy of Ambition*. Cambridge: Cambridge University Press, 2003. A presentation summarising this work and similar studies can be found at: <https://www.youtube.com/watch?v=gEXWULGEvs8>

<sup>8</sup> Business Council of Australia, *Securing Investment in Australia's Future: Report of the Project Costs Task Force*, BCA, 2013: page 3.

**(ii) Reservations about Gorgon?**

Others involved with, or analysing, the Gorgon project recognise that the reality of the Gorgon project is more complex than blaming the workers or the national regulatory framework. For instance:

- Generally speaking, returns on oil and gas are somewhat problematic at present: existing oil and gas fields are running lower; exploration costs are rising partly because new sites are remote; profits are under pressure with relatively flat prices; oil prices have been roughly flat for about three years; expensive projects (such as Gorgon) are yet to deliver product.<sup>9</sup>
- We know from statements made in March 2014 that Shell has its own concerns about the delays. The *Australian Financial Review* reported that Royal Dutch Shell had ‘classified Gorgon in an investor presentation as a project starting up in “2016-2018”’.<sup>10</sup>
- There is anecdotal evidence that many of the contractors have concerns about the overall management project. Typically, commercial constraints limit their willingness to speak on record.

**(iii) Wage structures**

Wages are governed by ‘enterprise agreements’ between employers and employees to which unions may become a party. Agreements were typically made in 2009, locking in wage rates since then. Employers are concerned about a new round of agreements when these expire but here the relevant issue is the available evidence about what those wages are.

Much publicity centres on maritime cooks being paid AUD350,000 (USD326,445) yearly but the agreements show that the rate is typically AUD128,601 (USD119,446) paid to a chief

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<sup>9</sup> See <http://www.news.com.au/finance/business/chevron-profit-plunges-on-lower-production/story-e6frfkur-1226904043523>: Chevron profit plunges on lower production: 3 May 2014.

<sup>10</sup> *Australian Financial Review*, 15 March, 2014: Shell casts doubt over Gorgon timing.

cook. Over 40 pay-slips and tax returns provided to me failed to yield up the \$350,000 cook.<sup>11</sup>

There are different rates of pay on some specialist vessels but the point remains that in seeking to explain the cost blow-outs on this project, wages simply cannot be considered part of the problem. Others may wish to address questions of increases under new agreements, or of comparative worth in jobs, but for the purpose of examining the cost and time problems on Gorgon, maritime wages – or indeed wages overall – are simply not a major component. Even if the claimed wages figures were correct, they could not account for the \$17 billion blow-out. BIS-Shrapnel has shown that wages of maritime workers on the project account for less than one per cent of the total project cost.<sup>12</sup>

### **3. Re-assessing Chevron's Gorgon Project**

The starting point for looking carefully at the problems with Gorgon cannot logically lie with the wages. Not only are they too small a component of the cost but they cannot be characterised as an unexpected cost. Likewise, other explanatory factors, while important, do not of themselves explain delay, unless there were flaws in original planning. That may well be the case – and several interviewees suggested just that – but it is difficult to evaluate this claim without internal company data.

The Gorgon project is certainly marked by geographic, environmental and logistical complexities. The construction site on Barrow Island, 70 miles off the coast, lies hundreds of miles from main population centres with their labour supplies and industrial infrastructure. The main gas-fields are much further out to sea. Parts and materials are shipped from the major port nearly 1000 miles to the south; huge pipe-laying vessels work offshore to connect the gas-fields to the Island. Dozens of contractors work with and for the joint-venture partners. The island itself is a Class A (state protected) Nature Reserve with strict quarantine processes for all materials brought onto the site. The island is also an extremely windy site and open to major sea swells.

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<sup>11</sup>Agreements can readily be found on the Fair Work Commission's website.

<sup>12</sup> BIS Shrapnel, *Implications of Wage Costs on the Offshore Oil and Gas Marine Support Sector*, 2013.

To repeat, it is difficult to assess the extent to which, in this particular case, the sorts of issues identified by Flyvbjerg and his colleagues might explain the original costings and timelines. However, one would not need hindsight to be aware of the difficulties. Indeed, in October 2013 Roy Krzywosinski himself told a Western Australian parliamentary inquiry into Floating Liquefied Natural Gas Operations that the company had underestimated the project's difficulties. His statement is worth quoting at some length because it gives an insight into the project that is somewhat different from the more public and more common focus on labour:

there is no doubting the fact that being on not just a class A nature reserve but an island resulted in some challenges because you are limited in your supply chains and marine vessels and boats and things of that nature to deliver materials. We just did not see the productivity in getting our equipment and material up to the island. That was a real problem. We got the infrastructure in place, what we call a fly camp or a construction village, started mobilising people, anticipating that we were going to have the material to feed the workers so they can actually start completing their work scopes. What we found is that it was just much more difficult to get what we would call the tonnage and the volume of material up to the island to feed the workforce so that they could be productive. As a result we had some logistics issues impact the productivity in the whole project.<sup>13</sup>

Similarly, a few months later in December 2013, when announcing new problems, several likely causes were highlighted:

Chevron has cited the high Australian dollar, high wages, low productivity, weather delays and the logistical challenges of building a gas plant on Barrow Island, a Class A nature reserve as the major reasons for the delays and cost overruns.<sup>14</sup>

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<sup>13</sup> Economics and Industry, Standing Committee, Inquiry into The Economic Implications of Floating Liquefied Natural Gas Operations, Transcript Of Evidence Taken At Perth Thursday, 24 October 2013. [http://www.parliament.wa.gov.au/Parliament/commit.nsf/\(Evidence+Lookup+by+Com+ID\)/B9E5E2351682CE6148257C1200264A83?opendocument](http://www.parliament.wa.gov.au/Parliament/commit.nsf/(Evidence+Lookup+by+Com+ID)/B9E5E2351682CE6148257C1200264A83?opendocument)

<sup>14</sup> <http://www.abc.net.au/news/2013-12-12/gorgon-gas-project-cost-blowout/5151982>, 12 December 2013: Chevron reveals second Gorgon gas project cost blowout

These are interesting sets of insights but they are uncommon in the discussion of the project. The major issue is, as has been suggested, much more likely to be cast in terms of wages and other apparent manifestations of unionism. The *Australian* newspaper summed up Krzywosinski's underlying concerns with labour thus: 'restrictive work practices, which have encouraged union activism on worksites'.<sup>15</sup>

The task in the following sections, the core of the report, is to examine in detail what workers themselves have said in focus groups and interviews. The purpose here is to shed more light on how the structure of the project and the nature of work have contributed to delays and cost over-runs. These sections present, with brief contextual introductions, accounts which are mostly in the workers' own words, illustrating potentially high-cost items and daily problems.

This research approach raises, of course, the issue of the credibility of the workers' responses. The striking element of this matter was the depth of the engagement with thinking about the project. From the workers' perspective, if they did their jobs well, then that would set them up as employees for the next job. Two typical statements from different workers sum up this way of thinking:

*There's that .... thought of the next contract, the next job, the next big thing, Wheatstone or whatever. That was what everyone was aiming for, to be able to make it work...*

*If you win more contracts and more jobs, there's no need to go anywhere else.*

This focus group exchange also makes this clear:

*Worker: It's the best job I've ever had, but the most frustrating*

*Facilitator: Frustrating because that's your job security?*

*Worker: Yeah. In order for it to work, we had to make it work.*

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<sup>15</sup> <http://www.theaustralian.com.au/top50/2013/roy-krzywosinski/story-fnhacdown-1226585191828#sthash.bwaI1Z0x.dpuf>. See also more from Krzywosinski himself at note 3 above.

The next section will address some of the obvious ‘big ticket’ items that the media and workers raised before moving in the next to a series of examples of everyday problems which illustrate why it is that the workers believe that there are fundamental flaws in the project.

#### **4. The ‘big ticket’ items**

Some of these matters can be dealt with quickly because they are already on public record. They are all very significant contributions to both cost and delay, and, obviously, these sorts of problems are not the ‘fault’ of the workforce.

##### ***4.1 The Barrow Island jetty***

In June 2012, a number of media outlets reported that the jetty and other marine structures had, in Australian dollar figures, ‘more than doubled in cost to \$1.85 billion’. This was a major undertaking, including the jetty itself (at over 2,000 metres in length), lifting facilities, pens for tugs and various navigation aids. The consortium had initially estimated the cost \$800 million. This soon became \$1.1 billion. Leightons then announced that the figure had been increased to \$1.85 billion. CEO Hamish Tyrwhitt attributed this to ‘weather challenges’ and difficulties with fabrication and transportation.<sup>16</sup>

##### ***4.2 Combi-Dock and the submarine***

In July 2013 the Australian naval submarine HMAS Sheean was hit by a vessel chartered to the Gorgon project, Combi-Dock III. The latter was impounded for two months by the Australian Government. The company and its insurer, agreed to pay up to \$10 million.

This matter came up in a focus group discussion with stevedores. The workers reminded each other of this incident – one they considered to be a low-point in the project – and a very expensive one. The last speaker all but captured newspaper headlines from memory:

- *[It] blew across the wharf onto one of our Navy subs and caused \$13 million damage.*

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<sup>16</sup> This account is from <http://m.perthnow.com.au/business/gorgon-jetty-blows-out-to-185bn/story-e6f8g2qc-1226397417406>, dated 16 June 2012.

- *How many million do you reckon that would have cost, then?*
- *Wasn't it \$13 million?*
- *It was about \$13 million, I think.*
- *'Boat left mooring, comes out and slammed into Australian submarine, causing \$13 million of damage'.*

#### ***4.3 Sustained delays at sea***

Seafarers reported several examples of delays which they regard as endemic to the project. They take different forms and arise for different reasons but, plainly enough when combined, they are constitutive of major delays and additional cost imposition.

One matter which was often referred to in differing contexts was lack of space in the lay-down areas on Barrow Island. As one source reported:

*We had vessels up there, international vessels, at Barrow Island, not discharging cargo because they had nowhere to put the cargo. So for each day if you take into account what one vessel would cost in a day and sometimes it can be up to \$400,000 or \$500,000 a day with the vessel being loaded it could be sitting there for three months at a time.*

And again:

*We had one occasion where we went up there, arrived up at Barrow Island, and were told there was no room at the docks for us, so we sat out at anchor for a week.*

*Another time we went up there, got in, and docked, and then were told that there was another ship that was more important so we sat there for two days and had nothing taken off the ship at all. Just sat there waiting for them to get around to getting to us.*

Others reported major delays at sea, in some cases, a whole swing of 35 days. Seafarers reported delays 'on the pick [anchor]' on vessels, speaking of whole swings [rostered periods] of four or five weeks in which none of the planned work was done. In the words of one seafarer:

*So for 35 days the vessel hasn't moved, the guys have literally sat on the back deck. They might be chipping and painting and there's only so much painting you can do on the vessel. But there is no productive work for them to do for that four - for that whole five weeks. Now, that's not because our guys are saying we refuse to sail, we've refused to tow a barge, we refused to - they're not refusing to do anything. It's just that there is no work that is provided for them.*

These allegations point to significant wastage in labour and fuel costs as well as delay, as suggested by this exchange, in the claim that materials are at times sent back to the Australian Marine Complex at Henderson and unloaded. (This is the port outside the major port of Fremantle where the barges are loaded to transport materials for the construction site at Barrow Island.)

*Worker 1: No there's no room on Barrow Island.*

*Worker 2: There was no room on island so they spent two days going around the island...*

*Worker 3: Towing the barge around.*

*Worker 2: ...towing the barge around two days and then they said we've got no room, send them back to Henderson ... they load it up for Barrow Island it gets taken up there because obviously [the stevedore company] wants to get it up there as well, there's no point - send it up there, there's no room on Barrow Island to unload it so they just keep towing it around Barrow Island ... circling for two days.*

*Worker 1: Then bring it back down here again. There's no room so they have to send it back up there ... that's because they [the company] gets paid when they get it off the dock.*

## **5. At work on the Gorgon project**

This section outlines just some of the dozens of examples which emerged in discussions. The topics covered begin with claimed problems with getting onto the job itself and then moves to discuss on-the-job regulation and the complexity of the contacting arrangements.

### **5.1 Getting to work**

One of the concerns commonly voiced by industry sources is about inefficiencies, or ‘red tape’, interfering with work performance. This is usually attributed to governments or unions. However, on a complex project such as this, there is necessarily a great deal of ‘bureaucracy’ generated by and within the companies themselves. These administrative complexities begin with the process of getting on the job itself. As do some other resource sector employers in Australia, Chevron has all the contractors use Enterprise Risk Management Solutions (ERMS) to hire employees. ERMS coordinates between employers and workers and organises transport and inductions.

Many sources claim that the system is too cumbersome for dealing with the exigencies of maritime work: it has been suggested that even when crew are ready to go (and the immediate employer is happy), delays in crewing take place. Delays were noted in the early stages. According to one senior union official:

*We've had instances where the - where ERMS have told the contractors that they can't get hold of referees, but the referees saying that they've never been contacted by ERMS. Particularly in the start-up phase of the project it was a complete disaster ... where there's mobilisation of a lot of people in a relatively short period of time ... so that's ... probably where a lot of the inefficiencies start ... an employer that has a critical labour shortage can't get people onto the project.*

Because the physical geography of the project requires a fly-in-fly-out labour force, there is no doubting the complexity and cost of supplying labour to the site. However, many workers resent the hold of ERMS over their travel arrangements:

*Particularly at the start up phase of the project where you've got limited flight schedules, we're having employees sort of mucked around no end. So it was causing the employer a lot of difficulty, because they couldn't book the flights to suit the employee and it was causing our members a lot of difficulties, because instead of getting home at a timely hour, they were getting mucked around at Onslow Airport, or down in Perth, because ERMS, which was bureaucracy second to none, that were*

*booking their flights. It was very difficult for them to ring up and change flights that were clearly wrong, because there was a third party involved.*

*They couldn't just pick up the phone to the employer and say look, can you change the flights back to something that actually works? For guys on the east coast, they've been away for weeks and the last thing they want to do is sit at the airport for an extra eight hours.*

Once hired, the employees have to be inducted – itself occasioning time delays – and frustration among experienced workers. The same source reported that:

*You've got an induction process that lasts two weeks. Now, we're talking about, in some cases, construction workers that have been working on construction sites around the country for 30, 40 years. The last thing that they need is a two-week induction process, being told how to do their job.*

## **5.2 Safety at work**

The induction processes, of course, put a high priority on workplace health and safety (WHS), as on any resources project. However, the very complex safety provisions and processes and the overlap between contractors and workers' own experiences make for an unhappy mix. New and experienced workers have to be familiar with the safety policies and procedures in Chevron itself and with the many contractors. Workers claim the processes are often unnecessarily cumbersome.

In this overall context, cynicism abounds, as this union interviewee makes plain:

*I can point to those volumes of black folders sitting there, that would only be 10 per cent of the OH&S policies and procedures that our members on the Gorgon Project have to comply with. Yet somehow our guys have to understand them and to follow them. But they're there basically to be used a sacking tool against our members. So when it's convenient, something goes wrong, it's very easy for the employer to drag one of those policies out saying, well, you went through a two-week induction you should know what you have to do.*

Despite all the formal procedures, problems persist, variations in conditions persist. Consider this exchange about galley work at sea:

*Worker 1: I think people need to also understand it's a vessel at sea so the sea state affects people's work as well, particularly in the galley, in every way.*

*Facilitator: What sort of things?*

*Worker 2: Boilers. The boiler pots didn't have safety release valves on them or pressure gauges. No latches on oven doors, so when they're open they just swing around like that.*

As to the question of enforcement, there will always be problems when so many commentators if not managers regard safety disputes as trivial. As another seafarer said:

*I think everyone would agree that they've had this situation occur where at the end of the day we're demonised but all we're doing is saying hang on there's a standard here. Just like there's a quarantine standard there's a safety standard and we need to comply. So we are demonised because we actually say something.*

What can also be discerned here – and seems to be the fundamental issue in workers' minds – is concern about where responsibility lies in the production and contracting chain. A maritime union official sums up the workers' perspective on this vital matter:

*Every company that goes onto the project have to have their own workplace policies ... but sitting right at the top of all this you've got Chevron's policies and procedures. They've got a safety management plan that ties in with the project managers' policies and procedures and that for most of the contract is this KJV, or in some cases you've got SLC, which is part of the Leighton's consortium on the project. So they're the two main principal contractors working on the Gorgon Project and then you've got the sub-contractors that work below that. In the case of Patrick Projects down at the AMC, you had a fourth layer in there, because you had a company called Agility that had the contract with KJV. So you had Chevron at the top, KJV, you had Agility and then you had OMSA, who were the employer before Patrick Projects took over. So*

*you had four different companies involved. You had four policies and procedures that applied to Occupational Health and Safety.*

This leads to the next general issue – the complexity of the contracting arrangements.

### **5.3 The contractual arrangements**

The Gorgon project, like any megaproject, has many contactors and sub-contractors engaged on the work. Stevedores reported many frustrations over policy inconsistencies and daily work practices. This focus group exchange exemplifies many of the issues they were raising:

*So [planning] goes through four carriers, then - Patrick, Agility, KJV, Chevron and then back from Chevron all the way back down the line.*

*You forget about the insurance as well. When we were loading the barges, the Combi-dock, we had all of them guys all playing their part but then all of a sudden the insurer comes along and says, hang on a minute, it's not lashed the way that we want and we're not going to allow it to go until it's done our way.*

*Which turned into our fault.*

*Yep.*

*Because we were told by KJV how to lash it, and then all of a sudden the ... Marine Surveyor comes in and says, no I don't want it that way. We said, well we asked for the lashing plan; this is the lashing plan that we got; we lashed it to the lashing plan. Then they say no. Sometimes it's a half a day going over it ... re-lashing the job again. Sometimes it's a day.*

*Then they'll pull another crew in to help them or a certain amount of guys to help them deal with it.*

Others reflected on the same matter and pointed in so doing to another issue, the relative inexperience of some of the newer contractors:

*So instead of getting a better system they just tell people to cut their manning. So we've suffered a bit with that and no doubt suffer it again shortly in terms of kicking people off the job. But they're getting rid of the planners, the managers, even the guys that actually could do the job, they're getting rid of them. So they're getting to a point where there's hardly anybody there who can actually plan a vessel.*

There were wider concerns about inconsistencies within the project around the application of safe working procedures, once again arising from the complexity of the project structure:

*... like the quarantine stuff, Chevron have their own safety policies. I mean, they set them. They're set out. We talk about it at the inductions. They're drilled into us. So they can't expect a vessel to come into the country and for it not to operate according to our own policy, so it's an absolute nonsense when this sort of stuff goes on. The last - the vessel I'm on at the moment, Chevron had a look at it. Everyone had inspected it in Singapore before it came. Now they have .... standards, safety standards, quarantine standards, et cetera, et cetera. They cleared it to come down. Obviously it's not going to get anywhere near Australian standard, Chevron standard.*

These observations are indicative of more general concerns about the structure of contracting arrangements.

## **6. Delays at work**

Much of the material present thus far goes some way to explaining delays in the project's timeline. In addition to that evidence, the focus group discussions revealed many instances of unproductive practices, stemming from various levels of the project's management.

### **6.1 Unloading and re-loading**

Stevedores repeatedly claimed that ‘lashing’ and ‘re-lashing’ materials were causing very significant delays at Henderson. As this example reveals, workers also claim the plans for how to stow the cargoes are often changed and re-changed:

*I mean they had barges where ... the stevedores are saying ... no you can't load that on there because the deck loading - it's not loaded for it. They're going too high and they're saying, no no no no, that's all good. But you can't lash it when you haven't got enough lashing stuff.*

*So you load the barge too high.*

*So everyone, right through the gang, we've done a health assessment of it and they say they'll have a meeting so that goes through all the things and they go over and have a little meeting and then come back and go, no it's all good. Then in the meantime we're saying, well while you're having a meeting instead of us loading we can just keep on the lower tier so that if you have to take them off we don't have to take them off the top so it's no double handling. Then what happens is that you go away the next day and you come back and they're unloading it because we were right.*

*I think it's important to also state that the stow plans for some of the barges and the vessels, sometimes it wasn't unusual for the stow plans to change up to three or four times a day.*

The workers were asked whether this was common practice on the waterfront. They denied it was a usual practice:

*Facilitator: Are you used to this on the waterfront?*

*Worker 1: If they were working over the road here for Patricks in bulk and general or ... one of these mobs, you would be just dealing with a port captain and your own plans within your own company.*

*Worker 2: Yeah. The planners get together normally just say - I did a little bit over here when I was with DP World and all that, they sent me off on a*

*week course over Easter and that. What they used to do is get all the planners together and everything else. Before the ship's even berthed they got the sequence sheets worked out.*

*Worker 3: So that's what stevedoring companies do. It's what they're good at ... If they get to a point where they can't sequence what's going on a vessel ... they're doing something wrong.*

In some cases, the workers attributed delays to the performance indicators used to manage the project:

*There was a stage where we were double-handling and triple-handling stuff ...we were actually loading stuff and taking it off for the trailers coming in, putting it on the ground and then another time, we would pick it up from a trailer, then we'd take it off the trailer and put it back on the ground.*

## **6.2 Cranes and wind-speed**

Several workers complained that time was wasted at Henderson because of the limits on the use of loading cranes in winds. In their leading-hand logs, stevedores consistently reported that no work could take place because of wind. They maintain that the rules on wind speed were unnecessarily restrictive and that it took over two years for all the commercial parties concerned to get agreements from the manufacturer to change the speed for crane operation. It is worth emphasising that it was the workers themselves who considered the limits impracticable because of local (windy) conditions and sought to have them changed. Once again, an exchange between workers is reported verbatim to tell the story to best effect:

- *Well everyone was complaining because the cranes are rated for like 14 to 16 metres a second, but the Chevron policy said 10. So all the cranes around us were working...*
- *And we're stopping.*
- *...and we're stopped.*
- *Because Chevron's told us to.*
- *...saying, what did you stop for?*
- *But they were still [unclear] jobs when they were outside the contracted role...*
- *So even though the crane's good for another four to six metres a second higher...*

- *Guaranteed by the manufacturer.*
- *Or even some of the tower cranes and all that, say 20 metres a second extra.*
- *KJV, Agility, even Chevron, they're with their own safety blokes. The only people there that are trying to make the job work is us. We'll have KJV come and stop the job and we'll say, well listen...*
- *...here's your procedure. How could we do - you tell us how we can do it and comply with this stupid procedure?*

### **6.3 The birds**

One episode reported with much glee suggests that the vagaries of nature have caused significant delays and, although, as the end of the story makes clear, little addition to capital costs. As has been explained earlier, because Barrow Island is a nature reserve, all material shipped from outside has to be quarantined. This can go awry in sometimes remarkable ways:

- *We had a couple of barges that were doing the rounds and they were on the anchor just out from us. When they brought it all in, the [whole quarantine] knocked back the whole barge because of the build-up of...*
- *Bird shit.*
- *Bird shit on it.*
- *So we had to take off all the containers, hundreds of containers off, go through the system, get them all washed and cleaned and...*
- *Reloaded.*
- *... remediated and reloaded ... the whole barge. Probably a couple of hundred, at least, roundabout.*
- *... we took them all off, put them in the yard, went through the wash bay, gave them all a hose off...*
- *Cleaned the barge.*
- *Cleaned, inspected.*
- *Cleaned the barge, rewashed the barge down.*
- *How long did that all take?*
- *It takes a day to wash the barge, probably two or three days to...*
- *Yeah, you're probably looking five to six days turnaround from...*
- *They say there's money in shit though, don't they?*

- ... but it came to a point where KJV ... was talking about how they could get something to cover up the barges when they were out on the berth so they don't get bird shit on them, because they've been sitting there that long, they've got to put that so that they can do some sort of - it's just a problem that always happens, I suppose.

Nothing can be added to this account by way of useful editorial comment.

## **7. Unproductive work practices**

In the course of the research, workers produced many stories about particular aspects of the job which, they argued, were examples of delay or waste and which, combined, might begin to explain some of the problems with the Gorgon project. Much of the discussion of Gorgon says or implies that workers are to blame for poor productivity. Here, that claim is turned on its head, in story after story.

### ***7.1 Company policies which undermine efficiency***

Workers employed by contractors in the assembly area at Henderson, assembling and preparing materials for the construction site on Barrow Island, reported that what they saw as bureaucratic imposition of rules was both inconsistent and obstructive. In this example, a skilled and experienced boilermaker complains about how these policies in response to a mistake by a trades' apprentice (TA) interfere with his own work:

*There was a TA - an electrical TA cutting a piece of steel with a cutting disc who had his shirt hanging out and the shirt caught on fire ... the guy suffered some fairly bad burns. Now from that they've banned all cutting discs. I'm a tradesman, I'm a boilermaker tradesman, I have been for x amount of years. So what they've done now is if you are trying to make something ... I would grab a grinder. I would put a cutting disc in it and I would cut the end of it off. Now you can't do that. So they are saying it's a safety issue. So I would have to either go and get a sabre saw or the oxy or something like that. Sometimes the guys leave the oxy empty sometimes, sometimes not, so then it's got to be filled so it's more time.*

*Grid mesh, you cannot cut a grid mesh without a cutting disc; you cannot. The guys out there doing pipework ... when they put the pipework together they put bullets in them, what they call bullets, a bit of steel and a tap at each side so it holds the pipe together. They couldn't cut them out. They were trying to get them to cut them out with a hacksaw at one stage.*

*Like I said, I've been in the game a long time. I'm not allowed to go and get a cutting disc and cut a bit of steel off yet they [apprentices] are allowed to go and get - a second year apprentice, who's a pipey apprentice, because the pipey is allowed to use a cutting disc now, to get him to cut it as long as it's round.*

## **7.2 The imposition of locally inappropriate policies**

Among the skilled trades-workers at Henderson, one of the most commonly discussed incidents arose from policies surrounding the wearing of safety harnesses in the assembly workshop. In this exchange between these workers, recorded in one focus group, this story is told. It reveals the basis for the workers' claim that the safety policy being deployed is not only inappropriate but unworkable. The worker are discussing a safety harness that makes sense to them when there is no other protection for workers up on scaffolds but, they say, makes no sense in Australia. In fact, they claim, they are pointless:

*- In America ... what they've done, because somebody ... fell off an incomplete scaffold and hurt themselves, is they said that everybody throughout the world has got to wear a harness on a scaffold.*

*- Every ... employee has to wear a harness ... even though the scaffold in Australia is built to Australian standards and the ones that we're working on are completely enclosed [unlike in the USA]. So they've got all ledges and then they've got mesh and stuff on the outside. So you couldn't fall out of it...*

*- You couldn't throw a cat off them.*

*- No matter what you did ....*

*- But what that does means that every tradesman, before he can go on that scaffold, has got to go find a harness, put it on; he doesn't even have to have a lanyard, he just has to have the harness on.*

*- The reason behind that is if you're about to fall off ... we can rescue you.*

- *We can pluck you up [with] the harness.*
- *The funny thing about it is ... a guy [from another contractor] can come along, he can get on that ladder, get up there on the scaff, but you can't; you've got to have that harness on.*
- *The contractors that do the insulation and the painting .... lagging and insulation. They don't have to wear one.*
- *Because [our employer] ... made a decision globally .... [although] our standard of scaffolding, English and Australian standard of scaffolding is higher than the American standard.*

### **7.3 Unnecessary paperwork – cost and delays**

The workshops are the site of assembly work where the workers say – as in other workplaces – complications and flaws in the production system inevitably arise. However, they felt that this case was unusual because of the added layers of administration which, they claim, slow the work up. In this instance, a skilled trades-worker explains how the simple matter of having access to the right bolts had been made unnecessarily complicated:

*Normally when you're putting up structural steel you have a bin with all the different sized bolts in it and you put the bolt through, [but] that might be a bit long, so you just take that down and go down and get another bolt, put that in there, that's the right size so we'll use all that sort of bolt. You've got a bolt list as well that tells you the right size bolts but sometimes ... [the] bolt looks wrong, put the right one in.*

*What they made us do [on this job] is you had to go to the - to your supervisor, saying I need this many bolts. Then he had to go and see the engineer and get it checked off with him and then you had to - then he had to go down to the store with the supervisor, open the door and make sure you've got the right bolts. Then you've just got a bag of bolts for just that job. That is different because normally you just have... a box of bolts.*

*The cheapest thing on the whole job and normally you'd just have big bins with all the bolts in them and you just go down and help yourself, stick them in.*

*That was early on in the job and it lasted for about four or five months but they lost a mega amount of time. As it went on they finally let you get access to the bolt store, the supervisor got access to it and then he could go in there and say oh well, we've got this job, I'll get two boxes of this ... but you still don't have a bin like you normally have on normal jobs.*

#### **7.4 Not abiding by supplier specifications – cryogenic units**

Air Products, one of the companies that supplies equipment used in freezing LNG has, as one would expect, conditions around its warranty. Trades-workers employed to fit out these units at Henderson explained what happened when, according to them, a local representative of the supplier instructed the contractors how to ‘torque the bolts to a certain degree’. This exchange among the workers in one focus group reveals what they believe happened next:

- *[One of the major contractors] ignored him and said just go ahead, we'll do it the way we want to do it. So then what happened is he went back to [the USA] ... and he said they haven't torqued them to the right specifications ... So then it [news] came back from Houston: 'you've got to do it because we won't get the warranty if you don't go back. So then they ... had to jack it up, put it on the SMPs [self-propelled modular-trailer] and take it down to the ... big rolling shed, stick it in there, rescaffold it, take the lagging off, take all the bolts out, retorque them all and then put it all back. That took five months.*
- *... Nobody knows how much that cost.*
- *Plus the thing they stand it on, that wouldn't be cheap to hire because it's like a big bed with all these wheels on it...*
- *Self-propelled ....*
- *It wouldn't be cheap to hire.*
- *There's \$30 million there.*
- *So that was all because they didn't listen to that guy [who] told them to torque them to these specifics and they didn't listen to him; they just went ahead and did what they wanted to do.*
- *Five months to refit it?*
- *They had to pull all the lagging off and get in there and change all the bolts.*

### **7.5 Reworking – time, cost and false economies**

The modules, racks, units and other structures for the LNG plant and its associated facilities are being prepared in six sites across Asia – Ulsan in South Korea, Qingdao in China, Lumut in Malaysia and Batam, Bandar Lampung and Karimun in Indonesia – before being shipped to Australia. This may have been done to reduce production costs but the outcome appears to have been that it has contributed to the delays on the project. Workers point to a significant amount of repair and reworking that has been necessary after the arrival of equipment at the Henderson engineering workshop.

In this long discussion among fitters, boilermakers and riggers, many of the allegations of everyday problems and more endemic flaws were made. These workers have long experience in assembly on a variety of projects. Here they claim that the inherent complexities of the project have been exacerbated by the project management:

*Worker 1: Well, the biggest [delay] I've seen since ... here is that everything has to be fabricated on shore and then disassembled, maybe two or three times, assembled, disassembled, and then taken to Barrow Island and reassembled again which I find incredible.*

*Facilitator: Why is it like that?*

*Worker 1: I don't know! An example: I was on a job for three months building a flare, quite an impressive bit of pipe, right on the pipe bed. I'm a rigger, I'm the crane operator, I drive the crane, so I lift the pipes up for the pipe fitters and their project was to put this very elaborate bit of flare together, this great big pipe, pressure test it, seal it. It's all beautiful; now let's cut it up, put it in the container and take it to Barrow Island. Three months of a crew of 20 to 30 guys doing that 24 hours a day.*

*I'm not a mathematician but I'm guessing that cost a lot of money. Then when it gets to Barrow Island, what do you reckon they're going to do? They're going to stick it all back together, pressure test it, reassemble it. I just - that's just one very small example.*

*Facilitator: How else could that have been done then?*

*Worker 1: Well if it was done by professionals who had their drawings, why wouldn't you just assemble it on Barrow Island. On site. Why wouldn't you just have shipped it there and done it once or...*

*Worker 2: Shipped it in one piece.*

*Worker 1: No because it's - you couldn't have done it in one piece; it was huge and it was really weird, it was like all over. But every aspect of the job is like that; it doesn't matter what the job is. Like there are guys who do grid mesh all week. Monday, Tuesday they put the grid mesh in, Thursday, Friday they take it back out. That's just the way this job has gone since I've got - and I've only been there six months.*

*Facilitator: What's grid mesh?*

*Worker 2: The grid mesh is the floor that you stand on ...*

*Worker 1: ... this is the whole project and like I said I've been there for six months; there are guys that have been there for years. From day one, when I started there, the guy said this is the most bizarre job that I've ever been in. Like he said Monday, Tuesday we put things together, Thursday, Friday take them apart.*

## **8. Getting the most from the workforce**

It is unsurprising that the workforce do not see themselves as the problem. What, however, is striking is that the workers who were critical of so many aspects of the project were also committed to their jobs. This emerged in two ways in the focus group discussions: the skills and tacit knowledge the workforce have to offer; and the ways in which they take pride in the job.

### ***8.1 Using the workers' skills***

The interviews and focus groups revealed deep tensions around the way in which work was being organised, with many claims being made that the skills of experienced workers were not being harnessed.

This came through with all the groups of workers examined here. We can begin with one of the stevedores:

*The experience we have down there with a lot of the guys with many, many years' experience. We know how to lash things on boats, whether it be a ship, whether it be a barge or whatever. We know how it should be done and we're told to do it a different way.*

And another:

*That's what's frustrating for the boys when they say, look, we know how to do the job. We'll make you look good, no worries. You don't know what you're doing. We all know how to do it. Leave us alone and we'll do it. They just want to tell you how to do it, make you do it this way.*

Similarly on construction sites:

*The old days when you ... used to have site managers and project managers that have at one stage worked on the tools and they've worked their way up. They've got the respect of their employees, they know the job, they understand the industry and they know that we're dealing with people as well. We're not machines. But they also actually know how to build. What we're finding is at Barrow Island there's a lot of people that have - they're probably quite intelligent, I don't know, but you probably wouldn't know actually talking to them that they are.*

As for trades-workers in assembly, the frustration with the contractors' engineers wasting their own time and money was marked:

*I've had one of them come out to me and give me three [drawings] to do one job. Every time I marked it out it was wrong; he came back three times and gave me the right drawing in the end. He was working it out and I could have worked it out for him to start with. That's just - that's how we've got to follow the protocol. You wait for the engineer's approval and ... so it just slows the job up.*

This, too, played out in claims of unnecessary organisational complexity:

*But part of the industrial relations complexity of Barrow Island is not just the fact that you've got people that don't know what they're doing, but you've also got the third party KJV that wants to stick its nose into the relationship between the employee and the employer. Every bit of correspondence that the union sends Gorgon contractors in relation to the Gorgon Project has to go to KJV. That's part of the contract that KJV has with the employer.*

In short, the most deep-rooted elements of these tensions were expressed thus, by one leading unionist:

*They [Chevron] see us as being irrelevant to their business operations, as opposed to constructive input that we could've had that probably would've saved them tens of millions of dollars if not hundreds of millions of dollars.*

## **8.2 Shirking on the job?**

All the discussions with workers came to this matter at some stage. It is an important question because much of the reasoning about delays sheets the problem home to lack of commitment to the job. It has even been suggested, as was noted earlier, that workers were deliberately 'going slow'. A rationale is often suggested for this, albeit disapprovingly, that working slowly keeps the workers employed in these jobs.

In truth, the seafarers were proud of their work. A supervisor makes this clear:

*Getting a good job is always a good thing because it gives you a bit of pride. The boys are happier, they can see a bit of improvement [on the ship]. I normally allocate the jobs to who I think is capable of doing that sort of job. It might be the bloke who can't even do up a spanner or a nut so they can [put a bit on the] on a paint brush. But other people will construct things, build things, modify things just to improve the whole boat more or less. The skipper of the moment will come down ... 'that's really good you know'. You feel good about it. It gives you a bit of satisfaction knowing*

*that you've done a decent job and things like that. So everyone appreciates it so it makes you feel better.*

Being at sea makes commitment to the job more, not less, a feature of work:

*I don't know, working at sea, it takes so much time from your life. You... end up almost defining yourself as a seafarer. So if you work's shitty then you're probably not a great seafarer.*

No-one put all these concerns better than this worker for whom it was not just about this job, or the next but something bigger still:

*It's really important that we do our job really well. For me personally I believe that - we just have stewardship of our jobs and that our jobs will then go to the next generation of Australia seafarers, that's what I believe personally. I believe that we have a culture of this so I'm very driven by that. That's why I get involved as often as I can, putting as much effort as I can because I really firmly believe that. For me this isn't just about a job. For me this is part of my work culture if you can understand that.*

## **9. Conclusions**

If the delays and cost pressures on the Gorgon project are to be understood, then, plainly, the question becomes one of causation and, with that, remedy. Most of the discussion thus far in Australia itself has concentrated on labour – be it labour law, labour unions, labour costs or labour effort. There are problems with most of these criticisms. Not only are wages a small part of the costs, but most of the figures used in public debate are misleading. The massive blow-out in costs simply must be explained by other components of the project. Part of the answer is in fact the other much-discussed problem: delays. Obviously enough, as with other megaprojects, delays in themselves are expensive.

Even if the details of the dominant narrative about Gorgon could be substantiated, then ‘fixing’ labour relations – be that through legislative change or attacking the MUA – would not solve the problems. The logic and the end-point of this report is, instead, to insist that focussing so heavily on ‘labour’ is part of the problem: that mindset is, in itself, evidence that the real issues are simply not being addressed.

What flows from this investigation thus far? There are four major conclusions:

1. In the context of the general problems that plague megaprojects, there should be further investigation of the particular problems with Gorgon. This report details many incidents – both major events and daily episodes – that suggest a pattern of problems which begin to explain delay and cost. These and other aspects of work on the project deserve closer interrogation: the nature of the contracts; the relationship between Chevron and those contractors; the ‘red tape’, imposed, not by governments or unions but by relationships within the construction and production networks; arguably, lack of incentive to complete the project.
2. It is plain that whoever their direct employer may be, workers regard Chevron as having the responsibility for the contracting chain and, ultimately, the costs and delays. Having set up the structures to manage the project and deliver the gas, Chevron is best positioned to inquire into and address the problems in the project.
3. There is scope for a dialogue between workers, their union representatives and project managers. A persistent feature in how workers themselves analyse the projects problems is the claim that time and money could have been saved by a closer engagement with the workforce. The workers are keenly aware of the media accounts which play up ‘capital flight’ – the claim that investors and resource companies will take their business elsewhere if they are unhappy with local conditions. Those workers do not want to see that happen.
4. The commonly accepted assumptions about the problems on the project are so unhelpful that they must be addressed. It is in the interests of shareholders and investors, workers and managers to have a better informed discussion of the issues.

This research shows that workers themselves are committed to the project and are frustrated by the way in which discussion of it is framed.

Having undertaken this preliminary research based on in-depth discussions with those on the frontline, it is apparent that there are scores of stories from the workforce which are suggestive of inefficiencies in the execution of the project. Combined, they shed new light on familiar problems. The experiences of the workers have been presented here with little editorial comment. It is up to others to assess them in the light of other data about the project.

If the standard explanations for the project's problems are flawed, then this raises significant questions about how the cost and time difficulties should be addressed. It follows logically from what is presented in this report that somehow 'fixing' labour relations will not solve the problems; neither will blaming the unions. The logic of this report also means that management and commentators needs to recast their thinking: if Gorgon's problems are simply and continually attributed to the workers, then there would appear to be little prospect of management practices and contracting arrangements being changed on this project or others. Meantime, neither Chevron nor the partners and contractors appear to see themselves as in any way accountable for the failings on their project. In short, both the evidence presented here and the pattern of blame-shifting raise questions about management practice and management accountability.

## Appendix 1: Research methods

I was asked by the ITF to carry out focus group discussions and interviews to examine closely the claims that workers were making about the Gorgon project. The ITF met the costs of my research.

I gained detailed background on the workforce through recorded interviews with leaders of the three major unions covering the workforce. Contextual information was also sourced from the extensive media coverage in Australia. Company positions are made clear in extensive media briefings as well as publicly available presentations. Employer lobby groups, notably AMMA and APPEA are also a rich source for explaining company concerns about cost and delay.

In April, I carried out my research, with a research protocol and questions approved by the University of Sydney's Ethics Office, and with anonymity guaranteed (as is standard) to all workers who participated. The discussions were designed to follow up on the survey with questions probing the 'on-the-job' work experience, attitudes to work, satisfaction and the general operation of the project.

Conducted over three days, the focus groups and initial interviews were supplemented by extensive follow-ups emails and shorter interviews. After from the contextual interviews with union leaders, the focus groups were undertaken as the centrepiece of the research project, covering seafarers, stevedores and trades workers. All of these meetings were recorded. The audio files were then transcribed for closer analysis. I spoke to a total of almost 40 workers and their union leaders. No claim is made for the groups being a representative sample. Reliability is instead gained from the relationship between this material and other sources – notably the publicly available written sources – and from the unique depth of detail and 'lived experience' which statistical data-sets cannot match.

This research method is widely accepted in the social sciences. Interviews allow researchers to draw upon '[d]etailed, vivid and inclusive accounts of events and processes'.<sup>17</sup> These details reported upon here would have been impossible to capture without long and detailed interviews and focus groups which privilege the voices of workers themselves. The report presented large amounts of material verbatim from those sources. This enables 'the reader to "hear" what the researcher heard'.<sup>18</sup>

In short, the task of the research was to give voice to the workers on the Chevron Gorgon project to try to answer the questions set up initially about the puzzle in explaining cost and time blow-outs. No-one suggests that this report tells us all we need to know about Gorgon but it certainly does offer insights that are valid in understanding what is happening on the project.

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<sup>17</sup> Whipp, R. 'Qualitative Methods: Technique or Size?', in K. Whitfield and G. Strauss, G. (eds) *Researching the World of Work: Strategies and Methods in Studying Industrial Relations*. Ithaca: Cornell University Press, 1998, p. 54.

<sup>18</sup> Reinharz, S. *Feminist Methods in Social Research*. New York: Oxford University Press, 1992, p. 39.