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The evolution of commute work in the resource sectors in Canada and Australia

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ABSTRACT

Commute work in the resource sectors is characterized by rotational schedules, extended workdays and (usually) company-paid transportation and camp accommodations. In both Canada and Australia these work arrangements have become standard practice since the 1980s, replacing the earlier permanent residential resource town approach. Originally designed to address labour supply and permanent settlement problems in remote areas, the commodities boom of the 2000s, combined with limited labour supply and infrastructure availability, particularly housing, has seen the commute model adopted for resource operations near existing towns and even in such towns. The recent downturn in commodity prices suggests that "lean production" will be an important consideration for resource companies into the next growth cycle, further encouraging use of the commute model and placing further pressures on existing communities to accept this approach. Demand for labour will also likely to continue to encourage companies to target specific source communities for workers. The paper summarizes the evolution of the use of the commute model in Canada and Australia and considers how it might continue to evolve in the future.

1. Introduction

On September 9, 1947 the initial offshore well at the Kermac 16 site was spudded in the open sea of the Gulf of Mexico more than 52 miles from Berwick, Louisiana, the onshore support site. Oil began to flow on October 14 and the well was completed on November 14 (Pratt et al., 1997). There were several notable aspects of this event. While it was the first offshore oil production facility "out-of-sight-of-land," more significantly its design, a self-contained platform accompanied by a towable drilling tender to hold drilling machinery and consumables, was a technological breakpoint in the development of offshore drilling technologies (Nyman, 2015) and the transitional step toward the advent of the mobile drilling vessels that characterize offshore oil and gas exploration today.

In addition, the "commute" work practices developed here to supply labour to the operation have since been adopted by a wide variety of resource-related activities operating in remote areas. In this case the tender barge associated with the platform was used to hold supplies and provide living quarters for crews at the well construction site. Instead of making a daily commute back to shore, crews worked seven days on and seven off,[1] with standard shifts of twelve hours a day, and rotated to and from shore via former naval air-sea rescue boats converted into fast transport vessels (Pratt et al., 1997). On-board living quarters and a galley allowed Kerr-McGee, the operator, to expand drilling into a round-the-clock operation and the crew change routine became the model for those in effect today.

What is referred to here as the 'commute model' has been subsequently adopted by a variety of onshore resource developers, initially as an alternative to the need to construct "permanent" residential resource communities in remote locations, and by a number of other sectors, including construction, merchant marine, fishing and healthcare, as a means of supplying labour in situations where it is not available locally.

Data on the number of workers engaged in commute work are poor at best. The Commonwealth House of Representatives Committee in its enquiry into commute practices in Regional Australia (Australia, 2013), the Education and Health Standing Committee of the Government of Western Australia in its enquiry into the implications of commute work on mental health (Western Australia, 2015) and the Petroleum Labour Market Information Division of Enform in their report on Alberta's oil and gas commute workforce (PETROLMI, 2015) all noted the lack of authoritative national data and the difficulty of establishing the extent and use of commute work in the resource industry.

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[1] Schempf (2004) states that the work roster was two weeks on and two off.

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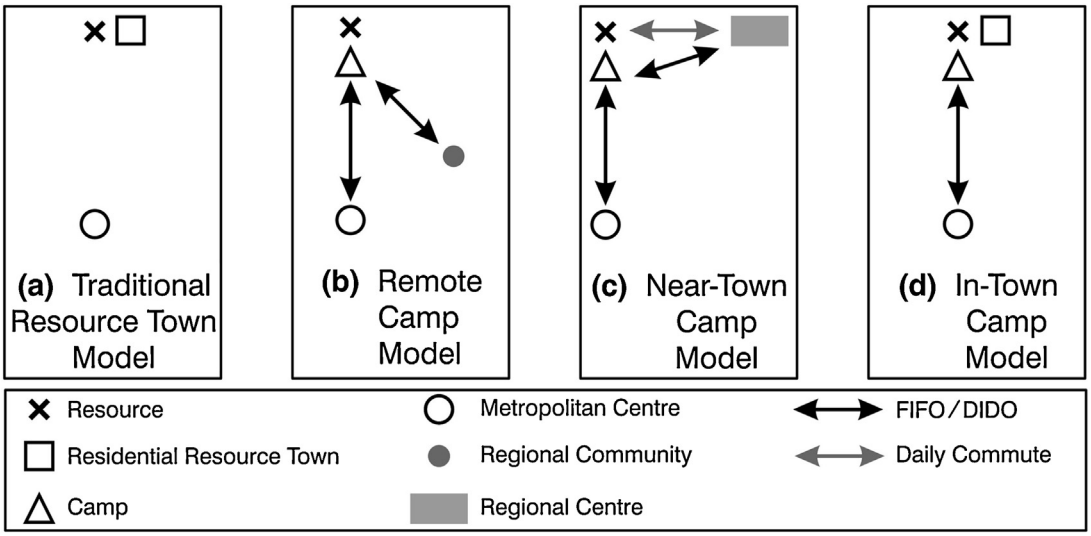

Fig. 1. Evolution of commute work arrangements.

Nevertheless there are clear indications of rapid growth in the numbers of commute workers, particularly during the most recent commodities boom circa 2003- 2014. In Western Australia, for example, the State Chamber of Minerals estimated that in 2014 of 102,300 construction and operations workers in the resources sector 67,000 were commute workers (Western Australia, 2015), an increase of 20,200 since 2011 (CMEWA, 2011). In Canada the number of workers living in camps in the Regional Municipality of Wood Buffalo and involved in construction and operations of oils sands projects increased from 7678 in 2004 to 39,271 in 2012 (RMWB, 2004, 2012). While in both cases many of these workers were engaged in construction, which typically involves more people over shorter time periods than operations activities, nevertheless, as projects have been completed and operations personnel hired, the number of commute workers in this group also increased.

'Going away to work' and living in 'temporary' accommodations has a long history, it is not a new phenomenon. Commute work as described here is simply a variant of this tradition, developed initially to meet specific geographic circumstances (offshore locations) and subsequently modified to meet particular commercial, political, social and other conditions in remote onshore situations.

What helps to distinguish the current era of commute work from earlier forms of geographic employment mobility is the structure of the work arrangements. These are characterized by four main elements: a rotational work schedule, i.e. a specified number of days at work, followed by a specified number of days off; an extended work day, e.g. 12 h shifts; accommodation of workers at or near the work site; and transportation (often paid for by the company) of workers between the worksite and specific pickup points. A particular significance of this model in the context of onshore resource projects, and specifically those in the mining and oil and gas sectors in Canada and Australia,[2] is that its increased use for new developments since the 1970s has resulted in a shift from a "new town" to a "no town" geography in both countries. Drawing on examples from a number of case studies for illustration, it is these changing spatial arrangements of resource production that are the primary focus of this paper.

The evolution from new town to no town is summarized in Fig. 1. A reaction to the traditional resource town model (Fig. 1a), the first onshore remote site commute operations (Fig. 1b) were seen as alternatives to town building in remote areas, the primary driver being commute costs compared to new town approval, construction and operation, including relative ease of start-up, shutdown, expansion and contraction (Jackson, 1987; Shrimpton and Storey, 1989; Houghton, 1993; Fortesque Metals, 2011). Since the turn of the century, however, with the recent commodities boom circa 2000–2014, and a variety of factors constraining labour supply, access to labour has become a key factor in driving the use of commute work arrangements. Higher commodity prices have allowed companies to offer higher wages and benefits including high-quality on-site accommodations and travel payments. Employment opportunities and benefits have allowed workers greater choice in where to work and live, and many have exercised their place preferences by choosing commuting from their "home" locations, i.e. their current place of residence, over relocation (see, for example, Rio Tinto, 2011; PETROLMI, 2015).

The growth of commute work has also been influenced by the inability of existing resource-based communities to meet demands for increased housing and municipal and regional services in the face of rapid growth. This has encouraged the use of commute work in near- and in-town situations (Fig. 1c and d); commute work is no longer only associated with resource development in the "North" or the "bush," but is increasingly becoming a feature of existing residential resource towns and their regions.

These changes have been particularly evident in Australia where employment growth in mining and onshore oil and gas production has been greatest this century. Over the ten-year period 2004–2005 to 2013–2014 direct mining employment in Australia grew by some 115 per cent to 186,920 (ABS, 2006, 2015). The five-year change to 2014 in metal ore mining was 33.1% and 22.9% in coal mining (Australia, 2014a), with most of this growth occurring in Western Australia and Queensland. In Canada as a whole mining employment (excluding oil and gas employment) increased by 19,027 (41%) from 2004 to 2013, while in Alberta, employment in

[2] While the focus here is on commute work in Canada and Australia, it is not unique to these countries. While work arrangements and geographic outcomes may be similar in the global offshore context, there can be significant local variations among onshore situations. For example, the *vakhtovyi metod* or shift method, has long been utilized in the development of oil, gas and mineral resources in the Russian North (see, for example, Slipchenko, 1979; Agapkin and Khaitun, 1990; Eilmsteiner-Saxinger, 2010). However, work, accommodation and travel arrangements are in many respects often significantly different here and taken together with earlier settlement history, government policy and other social and economic factors, the regional and community outcomes have been significantly different from those in Canada and Australia. As such commute arrangements in this and other jurisdictions are not discussed here.