



Australian Government
Department of Education, Employment
and Workplace Relations



Employment Outlook for Mining



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Introduction

Mining is one of the most important industries in the Australian economy, even though the number of people directly employed in the industry is small relative to most other industries (171 500 or 1.6 per cent of the total workforce). Following the downturn of the late 1990s, the Mining industry has experienced exceptionally strong job growth in recent years, underpinned by the continued rapid industrialisation of China and other fast growing Asian economies.

The industry is roughly divided into seven areas: Coal Mining, Oil and Gas Extraction, Metal Ore Mining, Construction Material Mining, Other Non-Metallic Mineral Mining, Exploration, and Other Mining Services. The discussion below focuses on employment characteristics, trends and prospects in the Mining industry, and highlights specific sectors where job growth is strongest.

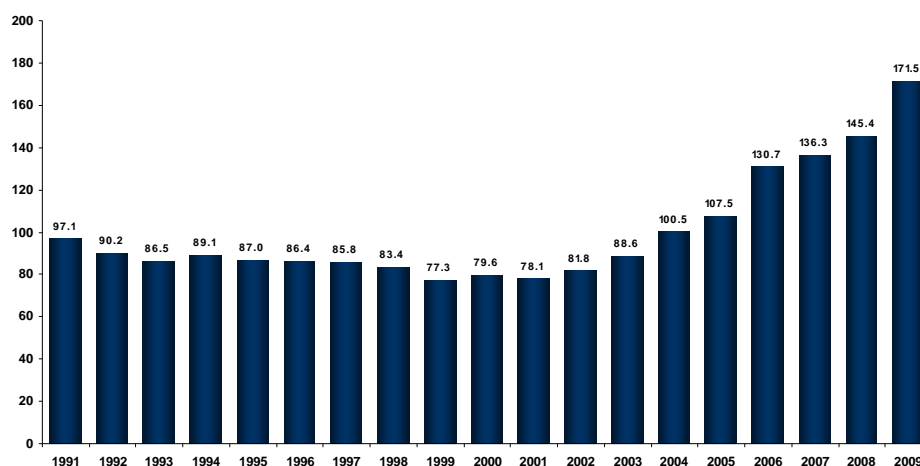
Employment Growth

Employment in the Mining industry is influenced by multiple factors within both the domestic and international economy, including exchange rate movements, international demand and the world supply of mining products. Employment growth in the Mining industry may reflect construction of projects as well as operational jobs as many mining companies manage on-site construction.

There has been very strong short-term growth in Mining employment, in response to favourable economic conditions for most mining sectors. In the five years to February 2009, Mining employment rose by 71 000 (or 70.6 per cent) to 171 500 (see Figure 1). This represents an average annual growth rate of 11.3 per cent, the strongest of all 19 broad Australian and New Zealand Industrial Classification (ANZSIC) industries.

This strong employment growth was preceded by falls in Mining employment throughout the 1990s. In the 10 years to February 2001, employment in Mining fell by 19 000 (or 19.6 per cent), reflecting a relatively slow decade for global economic growth. Throughout this period, there was limited growth in, or declining demand for, most mineral commodities. The economic crisis in Asia in the late 1990s reduced demand for many mineral commodities and fuelled further declines in metal prices.

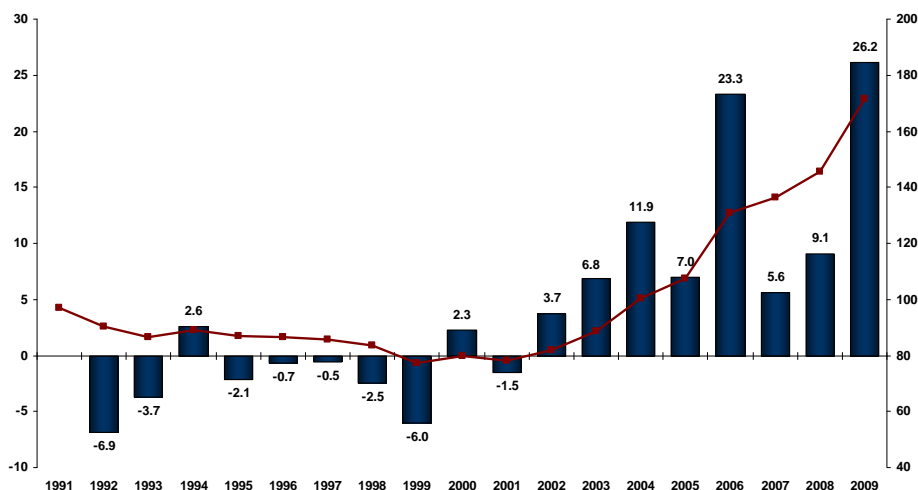
Figure 1: Employment Level ('000) - February 1991 to February 2009



Source: ABS Labour Force Survey (DEEWR trend data)

The largest annual employment gain since 1990 occurred in the year to February 2009 (see Figure 2). Strong employment growth in recent years reflects in part increased demand and price rises for most base metals, including zinc, nickel and aluminium in the mid to late 2000s. This stands in stark contrast to previous long-term trends and follows a decade when employment changes were quite variable and negative in seven years between 1991 and 2000.

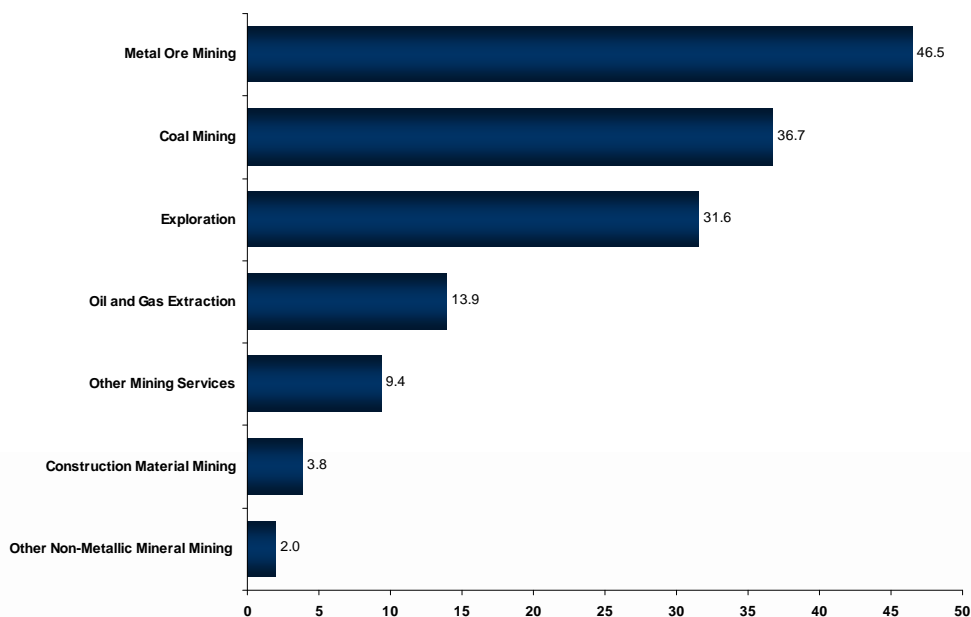
Figure 2: Employment Level (line RHS) and Annual Change ('000) - year to February (cols LHS)



Source: ABS Labour Force Survey (DEEWR trend data)

When employment in the Mining industry is broken down into specific sectors, the main contributors to employment can be identified. Industry employment is dominated by the Metal Ore Mining sector, which accounted for 46 500 workers (or 32.3 per cent of industry employment) as at February 2009 (see Figure 3). Coal Mining was the second largest source of employment, employing 36 700 workers (or 25.5 per cent), followed by Exploration with 31 600 workers (or 22.0 per cent). Other Non-Metallic Mineral Mining employed the smallest proportion of employees (2000 or 1.4 per cent).

Figure 3: Mining Sectors - Employment Level ('000) - February 2009



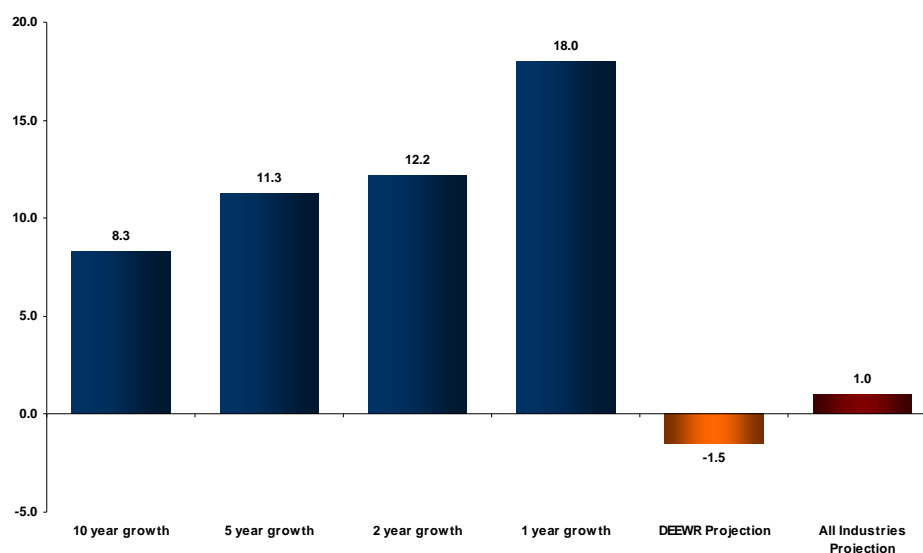
Source: ABS Labour Force Survey (DEEWR trend data)

Employment Prospects

The Department of Education, Employment and Workplace Relations (DEEWR) prepares annual updates of employment projections for industries for the next five years. These are based in part on the Monash model developed by the Centre of Policy Studies at Monash University, but also take into account recent employment trends and prospective industry developments. It should be noted that a certain degree of uncertainty is attached to these employment projections, especially for sectors within the broader Mining industry.

In the five years to 2013-14, employment in the Mining industry is expected to decrease at an average rate of 1.5 per cent per annum (see Figure 4). Employment across all industries is forecast to grow at an annual average growth rate of 1.0 per cent in the five years to 2013-14.

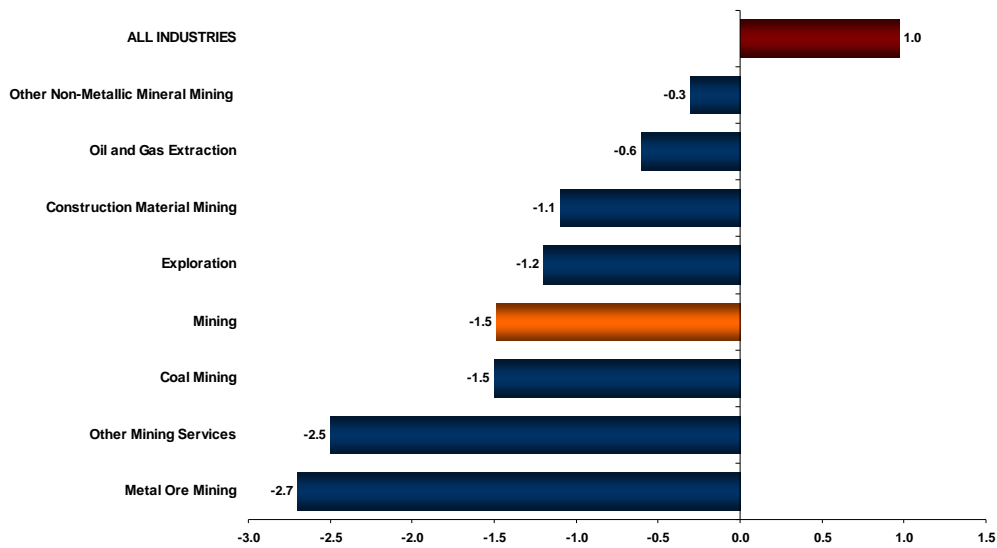
Figure 4: Recent and Projected Employment Growth (% pa) - to February 2009 (past) and 5 years to 2013-2014 (projected)



Source: ABS Labour Force Survey (DEEWR trend data); DEEWR projections

Employment growth is expected to vary across the seven specific Mining sectors over the next five years (see Figure 5). Other Non-Metallic Mineral Mining is forecast to have the smallest decrease in employment within the Mining industry (down by 0.3 per cent), while Metal Ore Mining is expected to have the largest decrease (2.7 per cent).

Figure 5: Mining Sectors - Projected Employment Growth by sector (% pa) - to 2013-2014

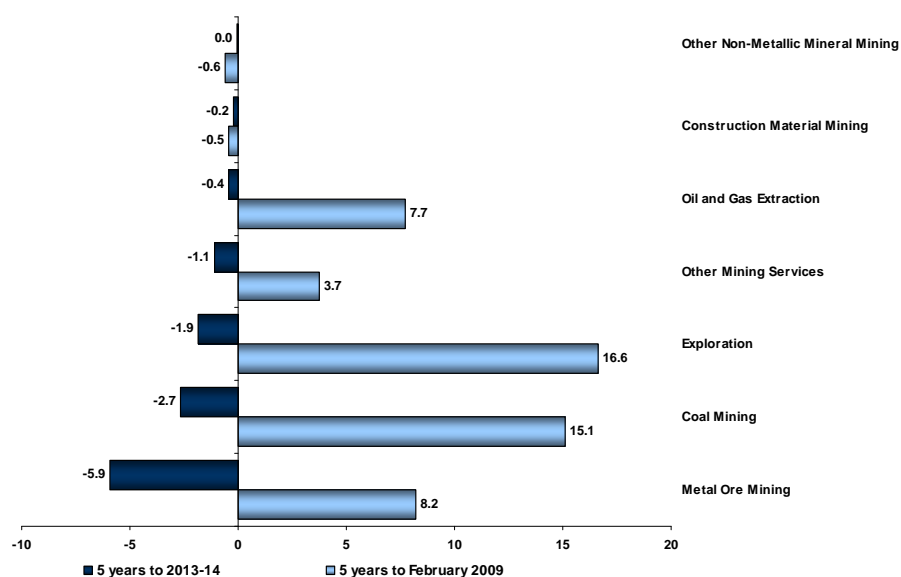


Source: DEEWR projections

In the five years to February 2009, Exploration experienced the largest employment gain (up by 16 600, see Figure 6), followed by Coal Mining and Metal Ore Mining (up by 15 100 and 8200 respectively). Other Non-Metallic Mineral Mining and Construction Material Mining both experienced a slight decline in employment over the same period (down by 600 and 500 respectively)

Looking ahead, in the five years to 2013-14, the largest decline in jobs is projected for Metal Ore Mining (down by 5900), followed by Coal Mining (2700) and Exploration (1900). The smallest employment decreases are expected to occur in Other Non-Metallic Mineral Mining (down by 600) and Construction Material Mining (500).

Figure 6: Mining Sectors - Recent and Future Employment Growth ('000) - 5 years to February 2009 (past) and to 2013-14 (projected)

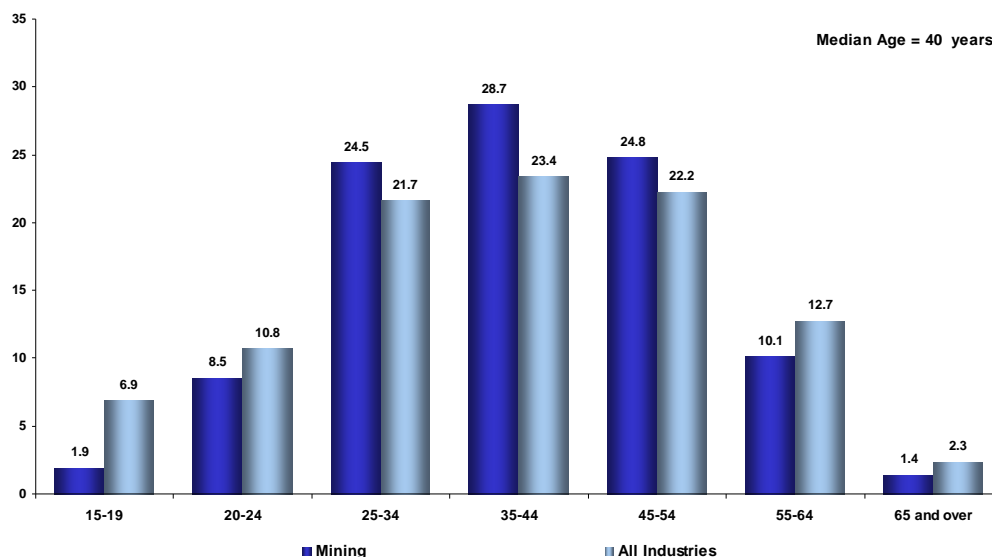


Source: ABS Labour Force Survey (DEEWR trend data); DEEWR projections

Workforce Ageing

Compared with other industries, the Mining industry's age profile is tilted towards workers aged 25 to 54 years (see Figure 7) with an above average share for 'prime age' workers (25 to 44 years) and those aged 45 to 54 years. Around half (53.2 per cent) of the Mining workforce is aged 25 to 44 years, compared with the average of 45.1 per cent for all industries. The share of youth, by contrast, is below the average (1.9 per cent compared with 6.9 per cent for all industries).

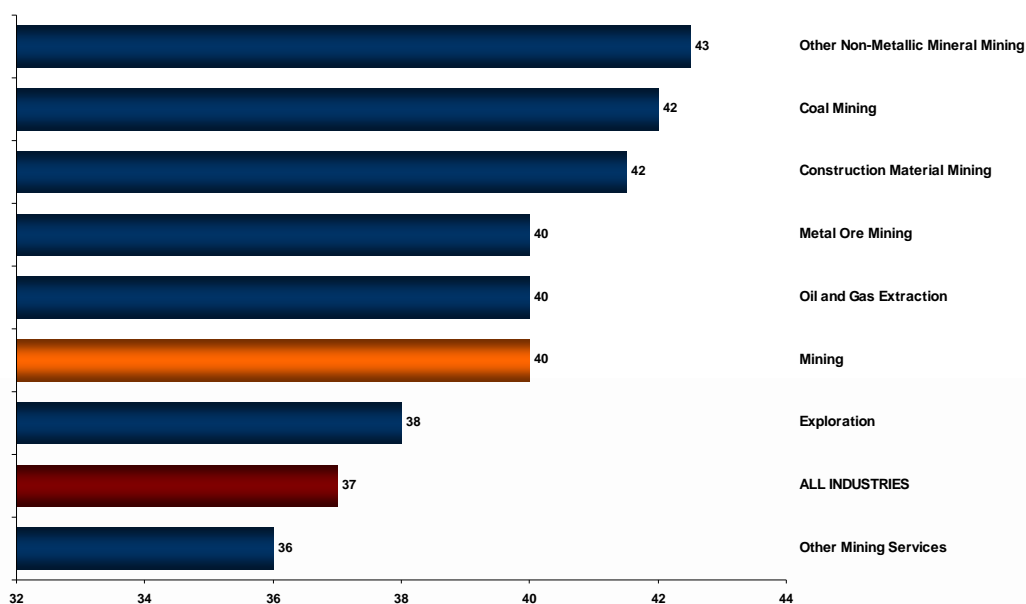
Figure 7: Employed Persons by Age Compared with All Industries (% share of employment) - 2008



Source: ABS Labour Force Survey

In 2008, the median age of workers in Mining was 40 years compared with a median age for all industries of 37 years (see Figure 8). Across sectors within the Mining industry, the median age varied, ranging from 43 years for Other Non-Metallic Mineral Mining, down to 36 years for Other Mining Services.

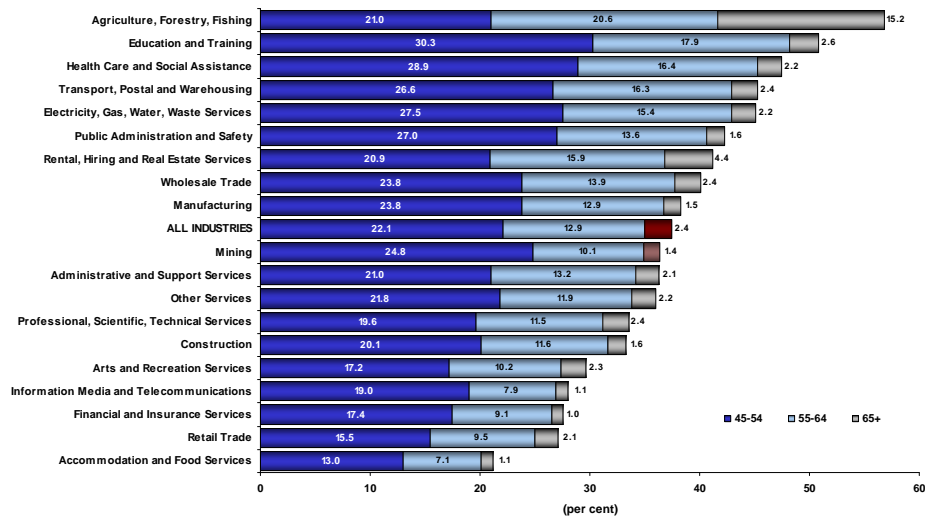
Figure 8: Mining Sectors - Median Age in years - 2008



Source: ABS Labour Force Survey

The Mining industry's mature age population distribution is similar to the all industries average, albeit representing a slightly lower share of employment. In 2008, 36.3 per cent of workers in the Mining industry were aged 45 years and over, compared with an average of 37.4 per cent for all industries (see Figure 9). However, the proportion of the Mining workforce aged 65 years and over was lower than the average for all industries (1.4 per cent compared with 2.4 per cent respectively).

Figure 9: Mature Age Workers (45+ years) % share of employment – 2008



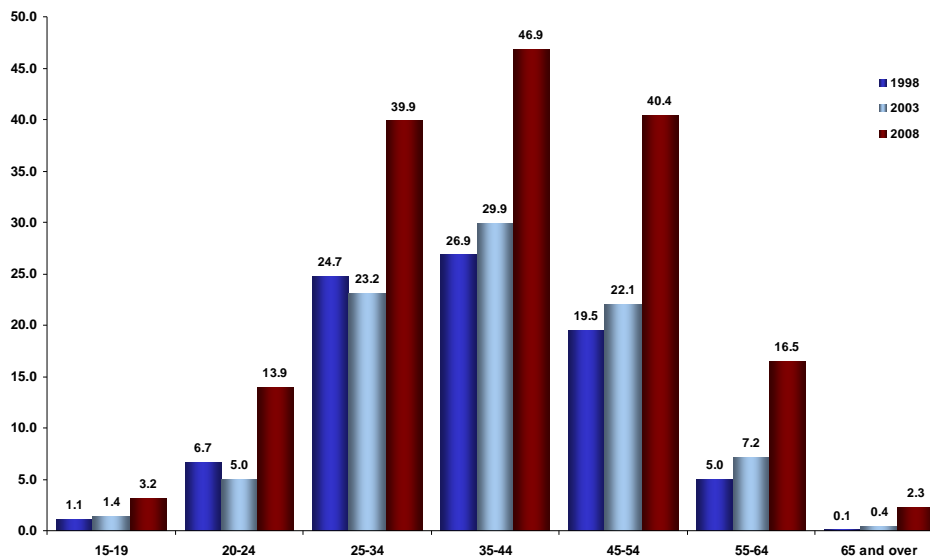
Source: ABS Labour Force Survey

Figure 10 shows employment by age group for three calendar years: 1998, 2003 and 2008. This provides a guide to changes in the employment mix by age group in the Mining industry.

Over the past decade, increases in mature age employment have been the main driver of industry employment growth.

In response to the strong growth in employment in recent years, there has been an influx of new workers in all age groups in the past decade, especially in the past five years. Workers aged between 45 and 54 years experienced the strongest employment growth in the 10 years to 2008 (up by 20 900). Workers aged from 35 to 44 years also contributed significantly to the increase in employment over ten years (up by 20 000).

Figure 10: Employed persons by age ('000) - 1998, 2003, 2008

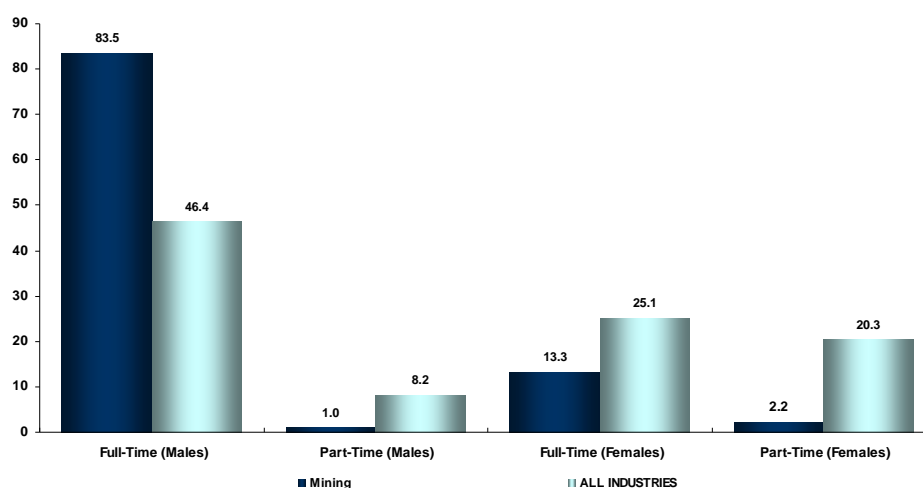


Source: ABS Labour Force Survey

Employment by Gender and Full-time/Part-time

The Mining industry has the lowest share of part-time employment and the second lowest share of female employment of all broad ANZSIC industries. In the year to February 2009, female workers made up just 15.5 per cent of the Mining industry workforce, compared with the average of 45.4 per cent for all industries (see Figure 11). In addition, part-time opportunities are rare in the Mining industry, only 3.2 per cent of Mining workers were part-time employees, compared with 28.5 per cent for all industries. Such characteristics can be attributed to the nature of the industry: the remoteness of mining sites, the physical demands of the work, and the lack of compatibility between the demands of the business and family responsibilities (for example, fly in/fly out working arrangements).

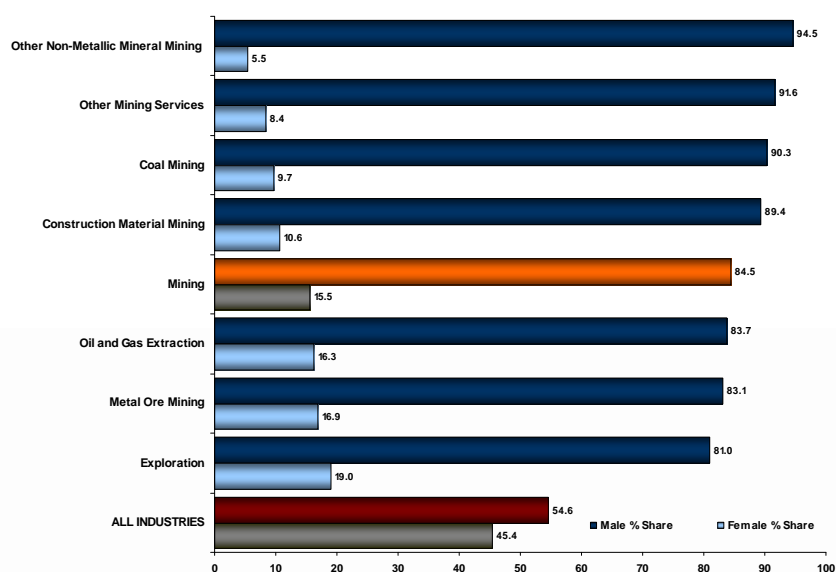
Figure 11: Employment by Gender and Full-time / Part-time (% share) - year to February 2009



Source: ABS Labour Force Survey

All Mining industry sectors employ significantly more males than females. Other Non-Metallic Mineral Mining, Other Mining Services and Coal Mining employ more than 90.0 per cent males (see Figure 12). Female employees were most apparent in Exploration (19.0 per cent).

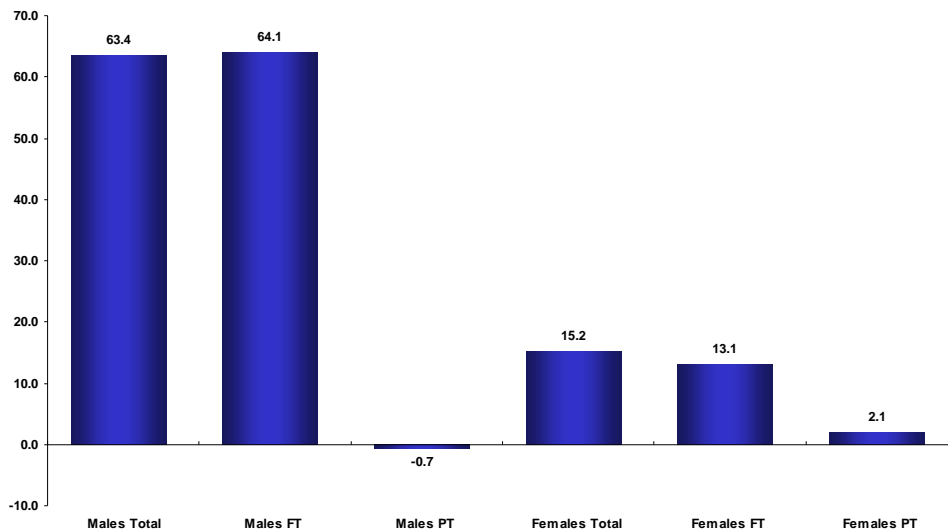
Figure 12: Mining Sectors - Employment by Gender (% share) - year to February 2009



Source: ABS Labour Force Survey

In the year to February 2009, male employment in Mining rose strongly (up by 63 400, see Figure 13), although there was slightly negative growth for part-time male employment (down by 700). Employment also grew for females over the same period (up by 15 200).

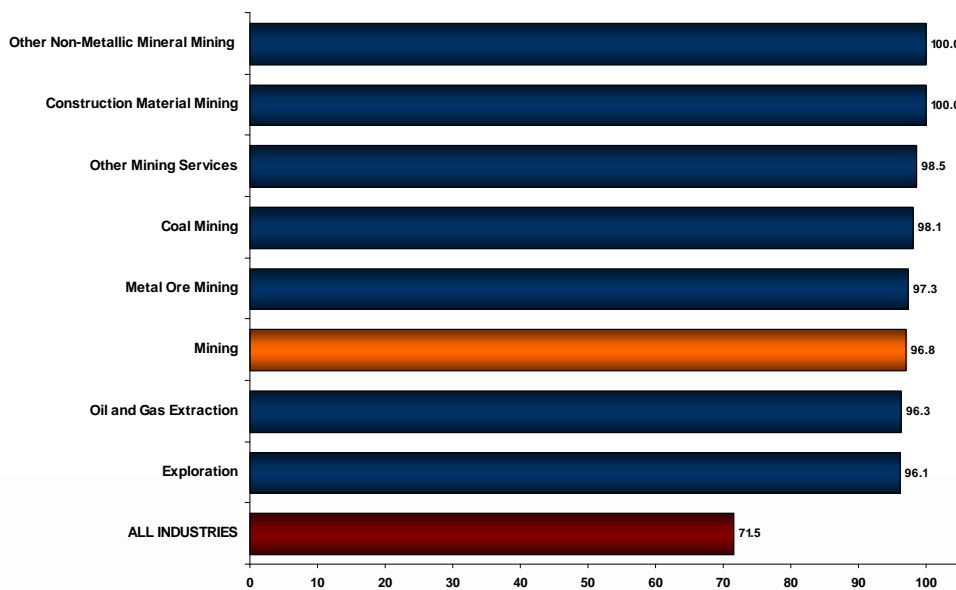
Figure 13: Employment Growth by Gender Full-time / Part-time ('000) - year to February 2009



Source: ABS Labour Force Survey

All of the Mining industry sectors have a higher full-time employment share than all industries (71.5 per cent, see Figure 14). The highest full-time employment shares within the industry can be found in Other Non-Metallic Mineral Mining and Construction Material Mining (both 100.0 per cent). Exploration accounted for a full-time employment share of 96.1 per cent and was the industry sector with the lowest share of full-time workers.

Figure 14: Mining Sectors - % working full-time, year to February 2009

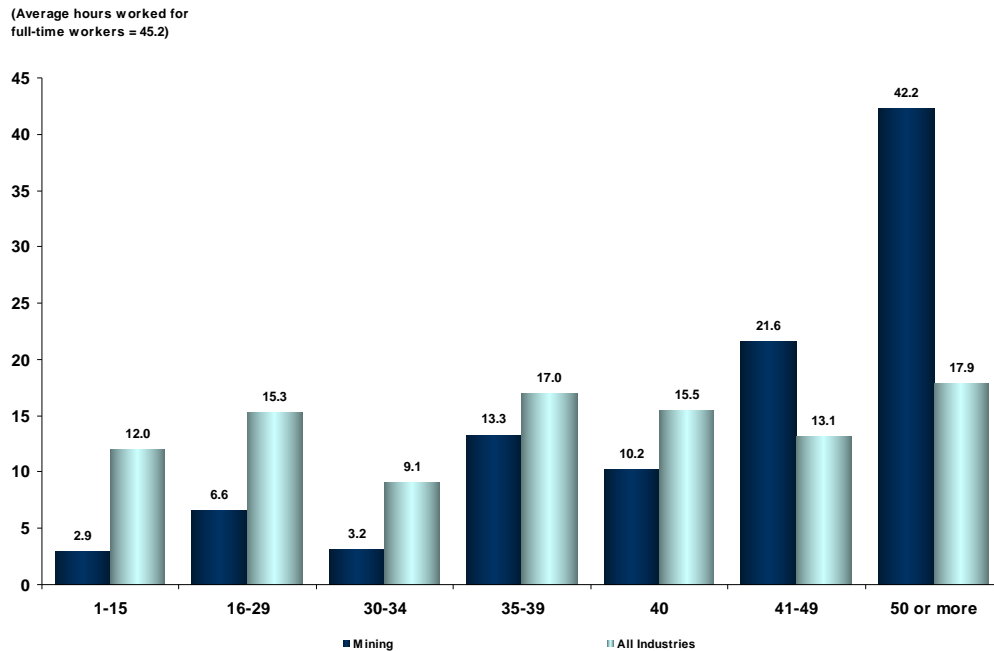


Source: ABS Labour Force Survey

Hours Worked

Work hours in the Mining industry can vary widely. In the year to February 2009, the average work week for a full-time worker in Mining was 45.2 hours, compared with the average of 41.3 hours for all industries (see Figure 15). Many workers in the Mining industry work 50 or more hours a week (42.2 per cent), reflecting the nature of work in this industry.

Figure 15: Hours of Work (% share) - year to February 2009



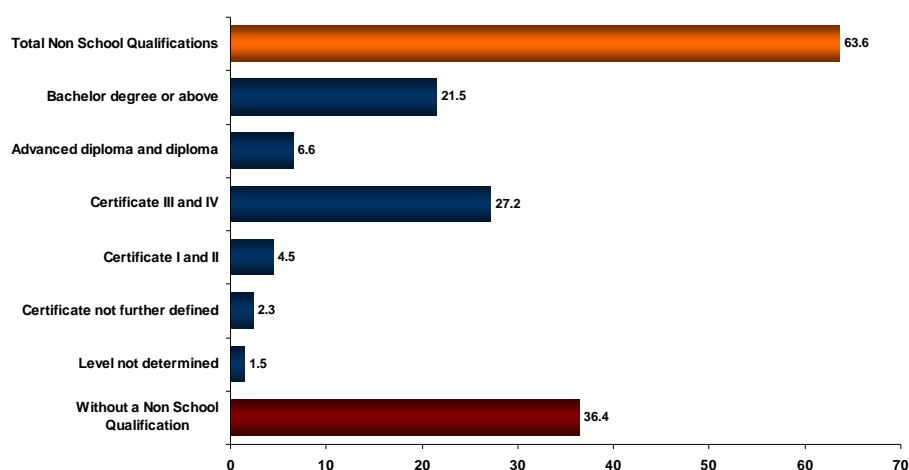
Source: ABS Labour Force Survey

Employment Characteristics

Educational Profile

In May 2008, nearly two thirds of workers (63.6 per cent) in the Mining industry had completed a non-school qualification, compared with 60.2 per cent for all industries (see Figure 16). The most prevalent non-school qualification is a Certificate III or IV (27.2 per cent), reflecting the importance of Trades occupations to the industry. Although formal qualifications are becoming more important, in the industry, particularly given the increasing complexity of machinery and operations, around a third (36.4 per cent) of workers in Mining were without a non-school qualification.

Figure 16: Educational Attainment - Share of Employment (% share of employment) - May 2008

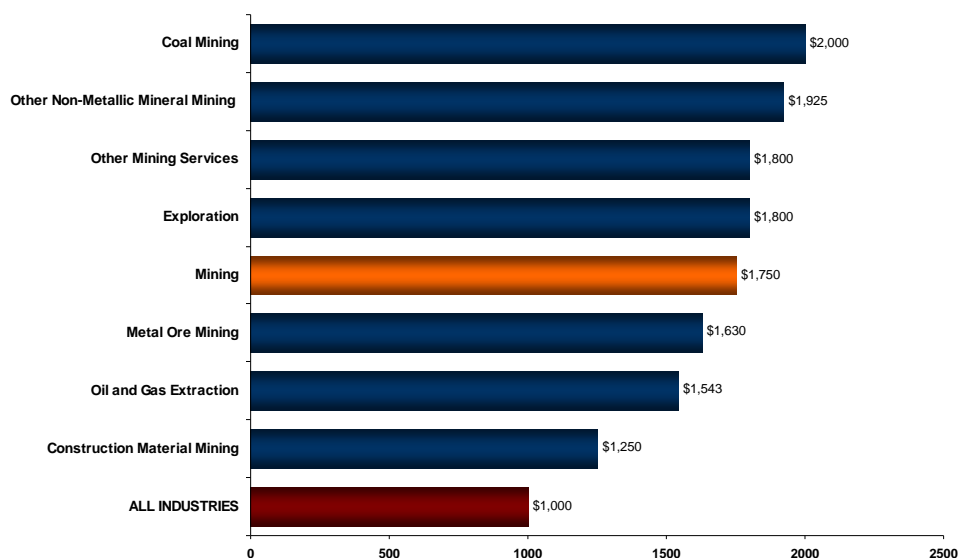


Source: ABS Education and Work, Cat. no. 6227.0

Median Weekly Earnings

In 2008 median weekly earnings of full-time workers in Mining were higher than for any other industry (\$1750 compared with \$1000 for all industries). Median full-time weekly earnings within the industry ranged from \$2000 for Coal Mining, down to \$1250 for Construction Material Mining (see Figure 17).

Figure 17: Mining Sectors - Median weekly earnings (full-time and before tax) – August 2008

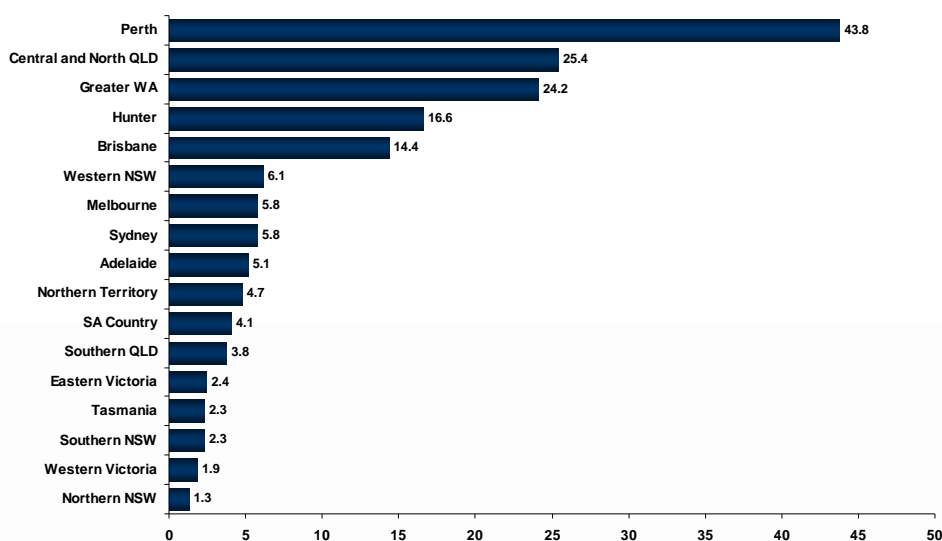


Source: ABS Employee Earnings, Benefits and Trade Union Membership, Cat. no. 6310.0

Employment by Region

Employment in Mining is strongly concentrated in Western Australia, Queensland, and New South Wales (see Figure 18). As mine sites are often located in remote areas, many workers tend to settle in remote townships, or arrange transport between their homes and the mine site (fly-in, fly-out). In the year to February 2009, the majority of workers in the Mining industry were employed in Perth (43 800) and Central and Northern Queensland (25 400), followed by Greater Western Australia (24 200) and Hunter (16 600).

Figure 18: Main Employing Regions ('000) – year to February 2009

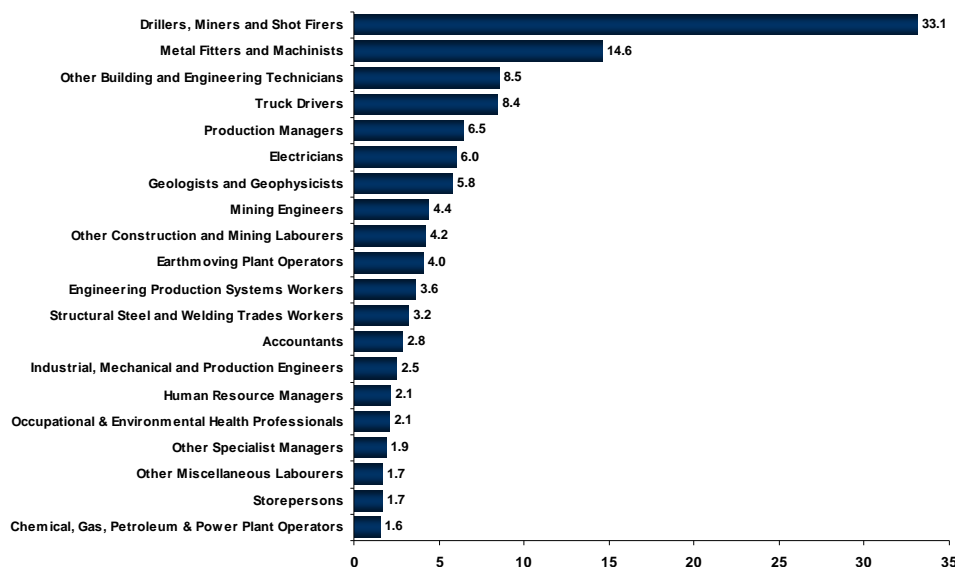


Source: ABS Labour Force Survey

Main Employing Occupations

Figure 19 below shows the top 20 occupations in the Mining industry. In 2008, the largest employing occupation in the Mining industry was Drillers, Miners and Shot Firers (33 100), followed by Metal Fitters and Machinists (14 600), Other Building and Engineering Technicians (8500) and Truck Drivers (8400).

Figure 19: Top 20 Employing Occupations ('000) – year to November 2008



Source: ABS Labour Force Survey

Further information on occupations is available on the Job Outlook website (www.joboutlook.gov.au)

For further information on the Mining industry (or other industries), visit the SkillsInfo website at skillsinfo.gov.au. SkillsInfo provides a range of skills related information for industries and regions. The website offers a broad range of information on employment, careers, education and training and skills issues – including workforce ageing, skills in demand, labour force data, ICT and employability skills, as well as quick links to skills information. Data are sourced mainly from the ABS Labour Force Survey.

SkillsInfo also brings together a large collection of links to external industry and skills related websites.