

03-04

Safety Performance

in the Western Australian Mineral Industry

Accident and Injury Statistics
2003-04



Department of
Industry and Resources
Safety and Health Division

Safety Performance in the
Western Australian Mineral Industry:
Accident and Injury Statistics 2003–04



Department of
Industry and Resources
Safety and Health Division

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Statistics from the Department of Industry and Resources (DoIR) AXTAT database for the year 2003–04 show a slight but continuing improvement in the overall safety performance of the Western Australian mining industry.

Over the ten-year period from 1994–95 to 2003–04, the lost time injury frequency rate (LTIFR) has fallen from 13.3 to 4.3 lost time injuries per million hours worked. The numbers of lost time injuries reported for these years were 762 and 394 respectively. The LTIFR for 2003–04 of 4.3 represents a marginal improvement over the 2002–03 figure of 4.4. The 394 lost time injuries (LTIs) reported in 2003–04 was 16 more than for 2002–03. The LTIFR figures, recorded since 1999–2000, display a steadily decreasing annual difference. Successive LTIFRs from 1999–00 to the present are 6.9, 5.6, 4.5, 4.4 and 4.3, a trend that appears to be approaching a plateau.

The number of serious injuries recorded since 1999–2000 has remained substantially constant from one year to another and although some variability is evident in the serious injury frequency rates, this is due primarily to fluctuations in the reported numbers of people employed. The proportion of serious injuries embedded in the LTI figures has fallen slightly, but the actual number of serious injuries reported has risen.

The injury duration rate (average work days lost per injury) has risen for the third successive year. The increase appears large in percentage terms but reflects six accidents that individually had durations exceeding one hundred days, against a relatively small background number of accidents. It is, nonetheless, an increase, which is a cause for concern. The traditional LTIFR indicator has again improved but the change is minor, suggesting that the curve has reached a plateau. For many years the focus has been on LTIs and how they can be managed more effectively, both in terms of the individual employee's welfare and the related issue of workers' compensation. Much has been achieved in this regard, and it is to industry's credit that considerable progress has been made in the areas of early return of employees to operational status, on-the-job post-accident rehabilitation, and retraining of personnel. The number of LTIs reported in recent years has become so small that the value of the LTIFR as an indicator of safety performance is questionable and recorded improvements in the rate are more marginal.

Since the beginning of fiscal 2001–02, DoIR has been collecting disabling injuries statistics. This program was initiated with a view to establishing a more effective safety performance indicator than the current LTI-based system. Allegations that LTIs are 'managed' to provide favourable accident reporting data have been made by various parties in recent times. Disabling injuries are, generally, not amenable to the mechanism alluded to above and are more numerous than LTIs. There were 496 disabling injuries recorded for 2003–04, an increase of 21 on the 2002–03 figure of 475. The 45 771 employees in the mining industry (a rise of 6%) worked a total of 92.11 million hours. Due to the increased number of mining industry employees, the incidence and frequency rates both display a slight improvement at 10.8 and 5.4 respectively.

All of the above suggest that the various indicator numbers are reaching plateaus and any further improvement is likely to be insignificant. Equally, a deterioration in performance cannot be discounted. Renewed effort on the part of all stakeholders is required, and new approaches to the issue of accident prevention are necessary to continue to improve safety.

Four mining industry employees lost their lives during the year, one less than for the previous year. All the accidents occurred on the surface at iron ore operations, and all but one victim were involved in maintenance functions at the time of the accident. The remaining person lost his life on a deconstruction project at a former iron ore processing site.

Through the Safety and Health Division, DoIR continues to regulate the mining industry by Statutory Inspections, Safety Management System and High Impact Function Audits. The Department continued to play an important role in providing education, training support and information to industry. During the year, safety meetings, presentations to mine site employees, and briefings to industry safety and health representatives complemented the inspection activities.

The Department is also participating in and assisting with the development of the National Mine Safety Framework, an initiative of the Ministerial Council on Mineral and Petroleum Resources. Some of the benefits expected to accrue from this are enhanced confidence within industry in addressing statutory requirements and cost effectiveness in implementing them.

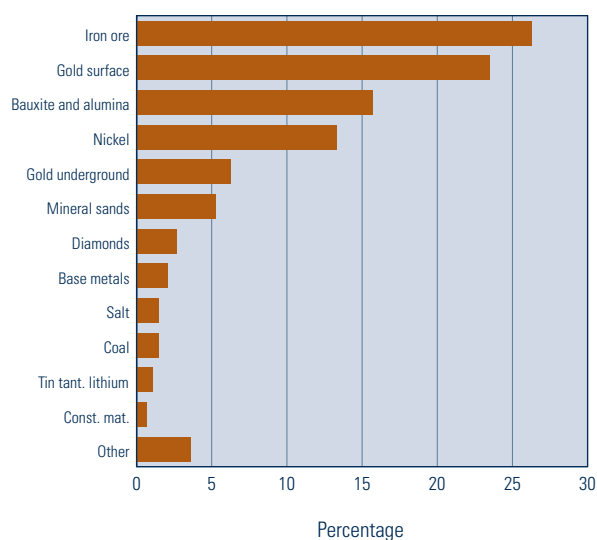
Statistical Summary

- There were four fatal accidents during 2003–04 and all occurred on the surface at iron ore operations.
- There were 394 LTIs during 2003–04, 16 more than the previous year (378 injuries in 2002–03). The breakdown of the number of injuries by commodity mined is shown in Appendix A.
- There was an average workforce of 45 771 employees in 2003–04, an increase of 6% over the previous year (43 285 employees in 2002–03). The breakdown of the number of employees by commodity mined is shown in Appendix A.
- The overall LTI duration rate deteriorated by 10% during 2003–04, rising from 19.6 to 21.5. The breakdown of the work days lost for each commodity mined is shown in Appendix A.
- The overall LTIFR improved slightly by 2% during 2003–04, falling from 4.4 to 4.3.
- The overall injury index deteriorated slightly by 7% during 2003–04, up from 86 to 92.
- Serious injuries in the mining industry during 2003–04 totalled 272, which is one more than for 2002–03.
- The overall serious injury frequency rate improved by 6% during 2003–04, falling from 3.2 to 3.0.
- The bauxite and alumina sector LTIFR deteriorated by 4% during 2003–04, rising from 2.7 to 2.8.
- The gold sector LTIFR improved by 14% during 2003–04, falling from 5.0 to 4.3.
- The iron ore sector LTIFR deteriorated by 38% during 2003–04, rising from 2.4 to 3.3.
- The nickel sector LTIFR improved by 19% during 2003–04, falling from 4.8 to 3.9.

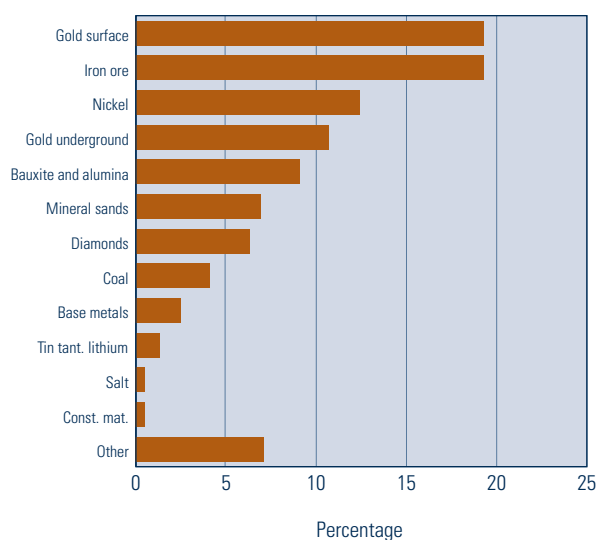
Appendix A

Western Australian mines 2003–04 394 injuries

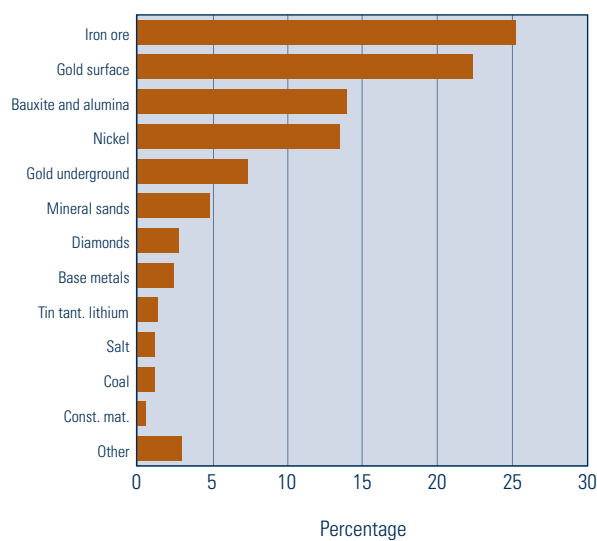
Percentage of employees



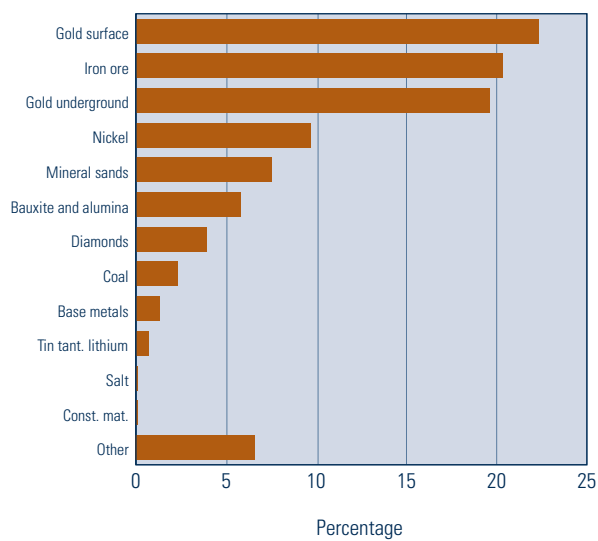
Percentage of injuries



Percentage of million hours worked

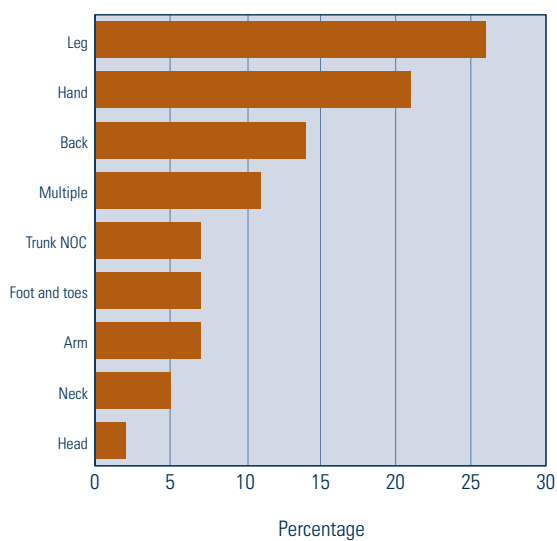


Percentage of work days lost

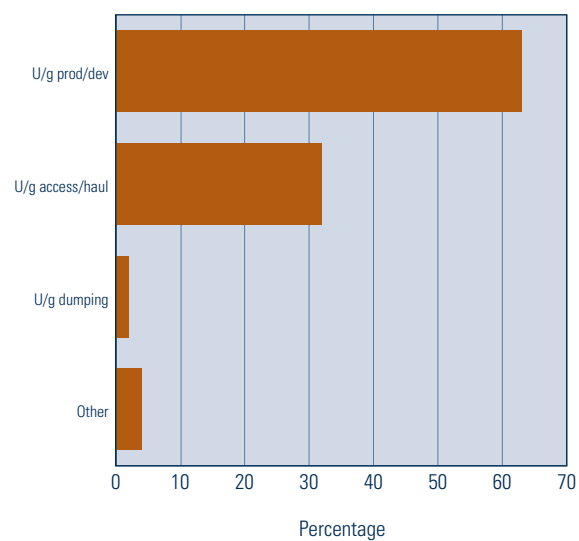


Serious injuries underground 2003–04 57 injuries

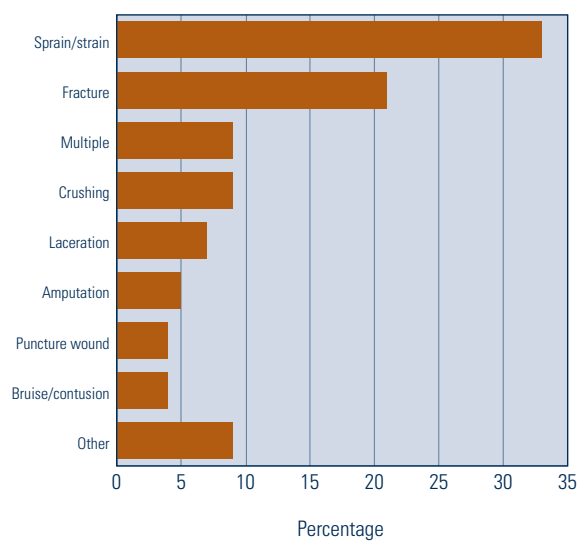
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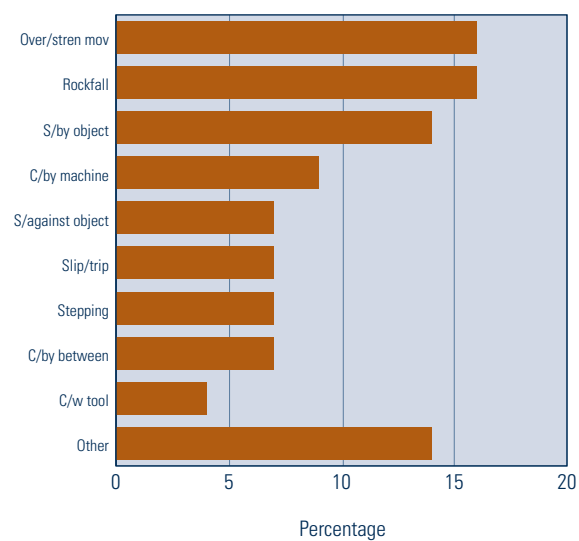
Location of accident



Nature of injury



Type of accident

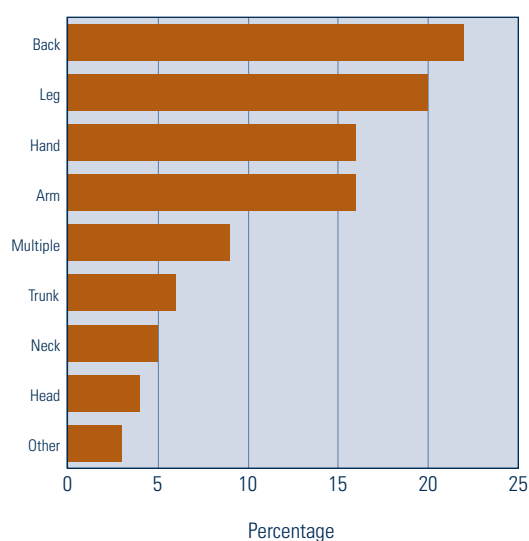


Appendix C

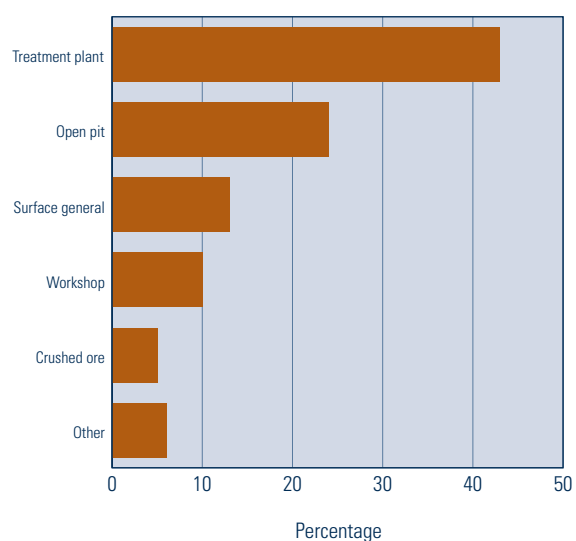
Serious injuries surface 2003–04

215 injuries

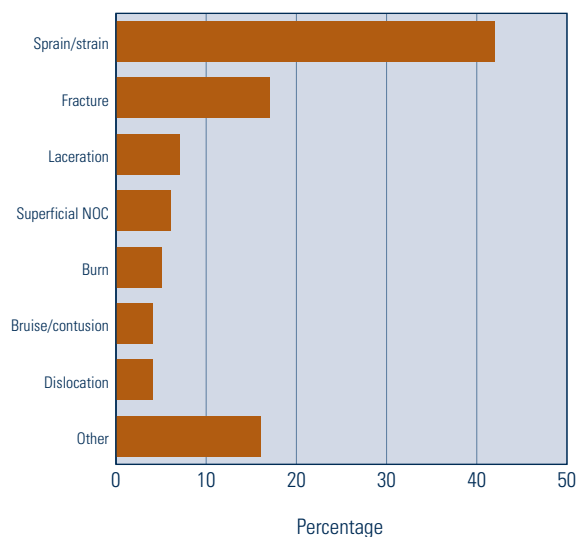
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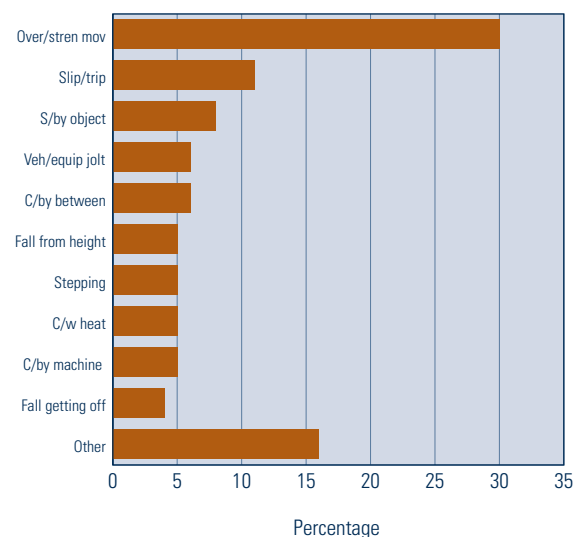
Location of accident



Nature of injury

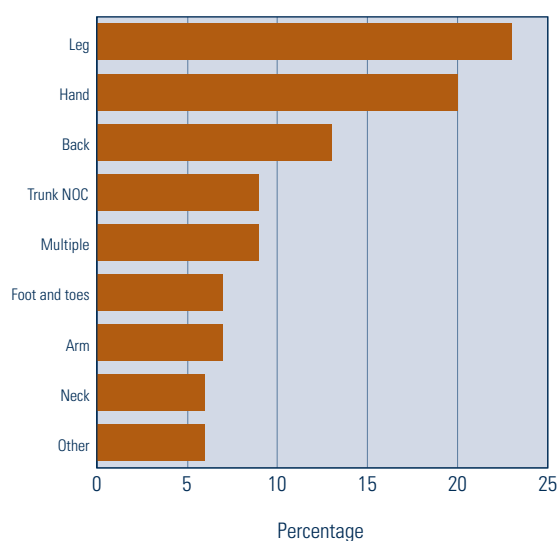


Type of accident

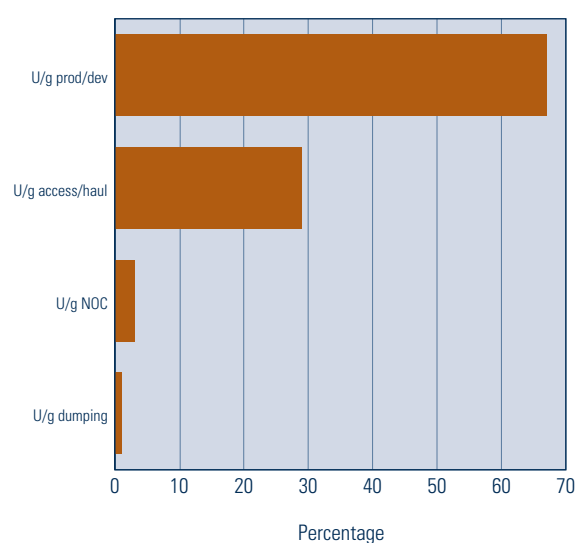


Metalliferous underground injuries 2003–04 69 injuries

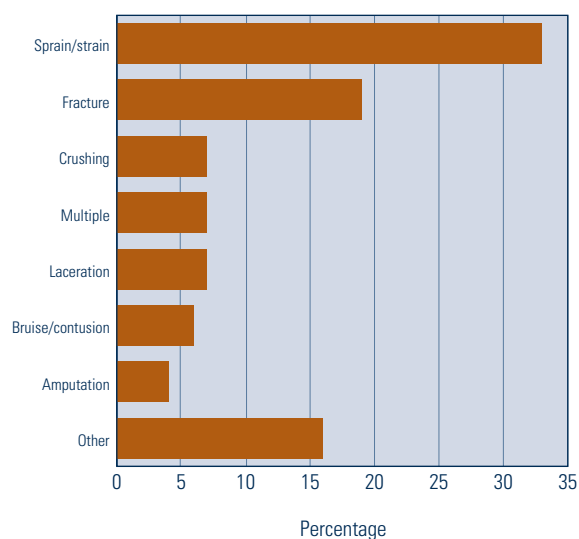
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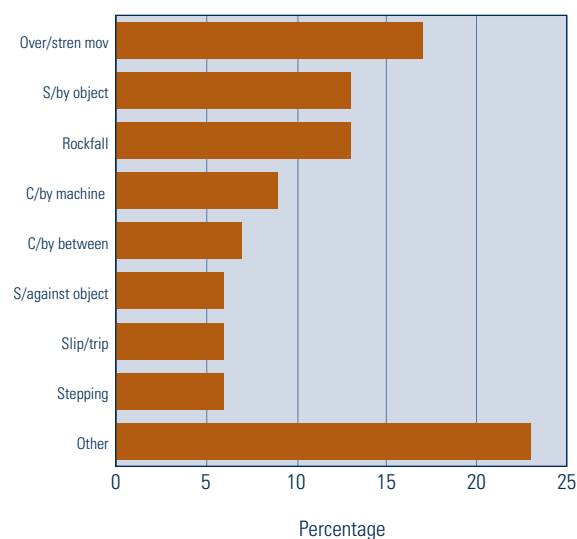
Location of accident



Nature of injury



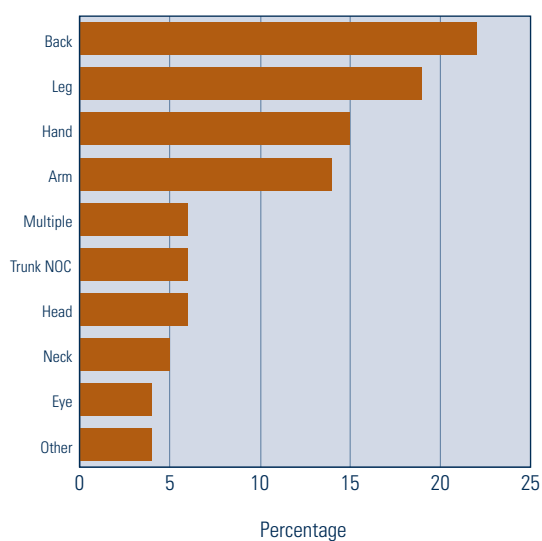
Type of accident



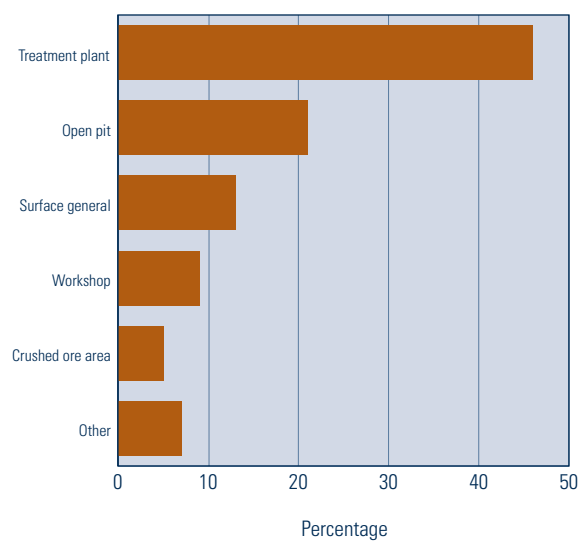
Appendix E

Metalliferous surface injuries 2003–04 309 injuries

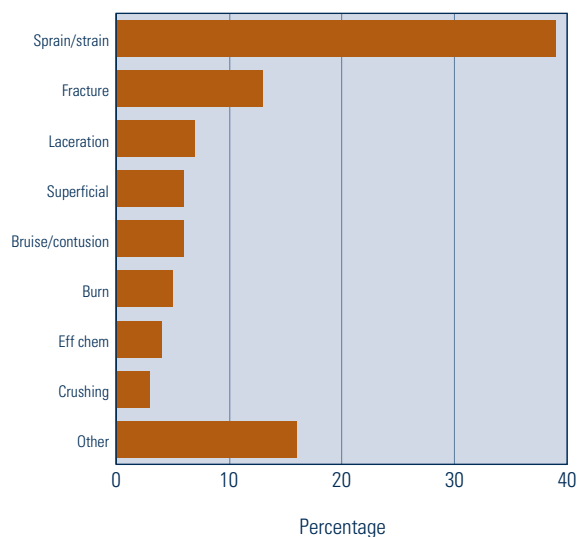
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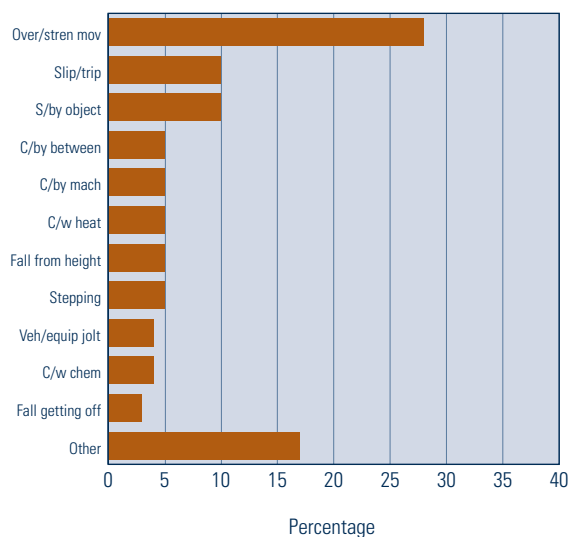
Location of accident



Nature of injury

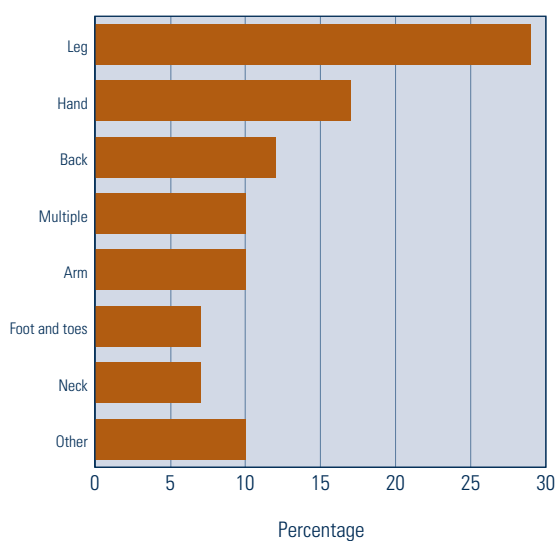


Type of accident

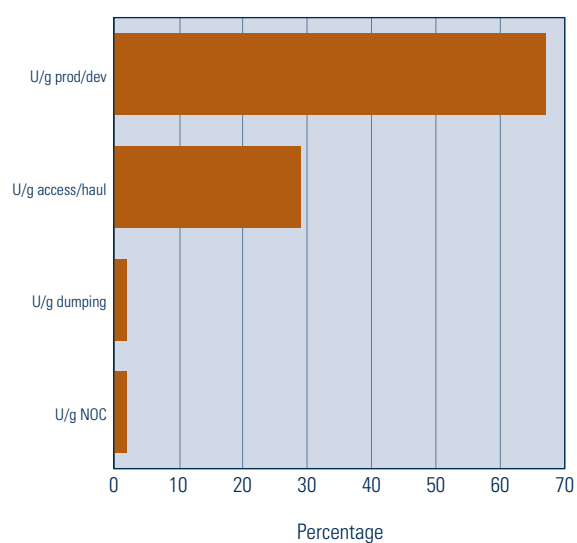


Gold underground injuries 2003–04 42 injuries

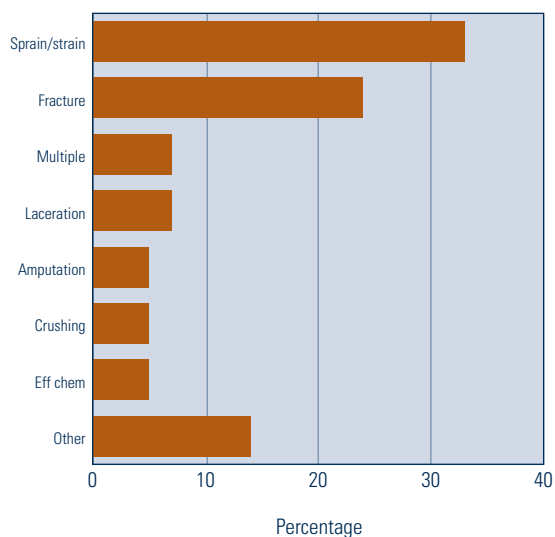
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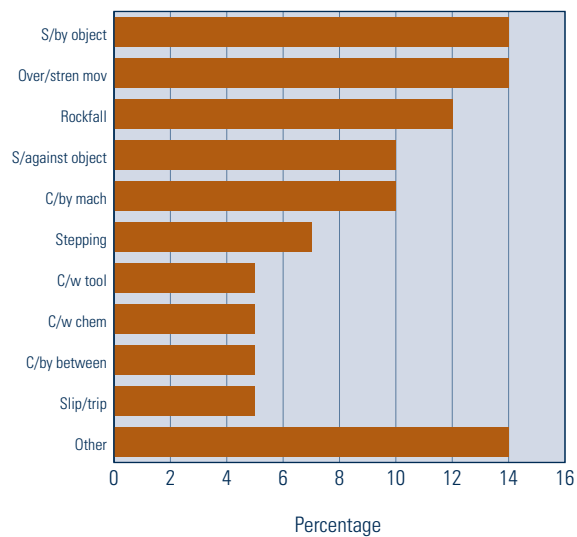
Location of accident



Nature of injury



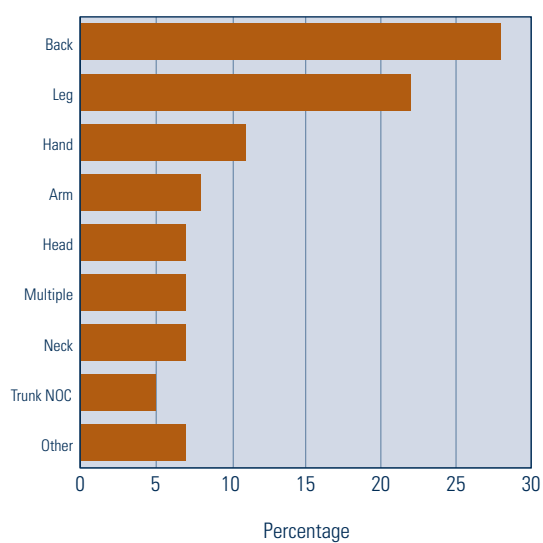
Type of accident



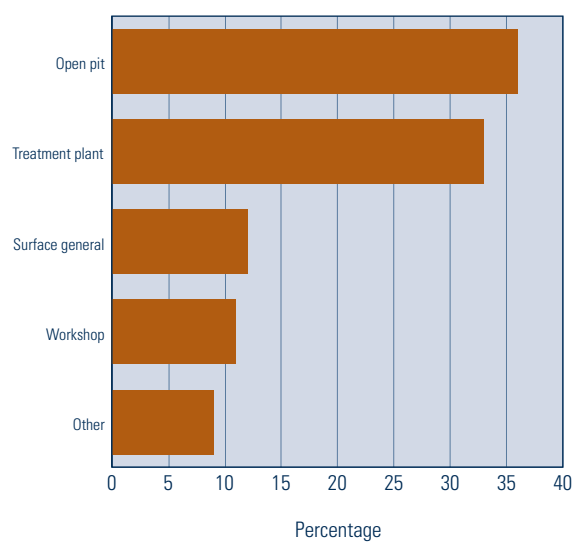
Appendix G

Gold surface injuries 2003–04 76 injuries

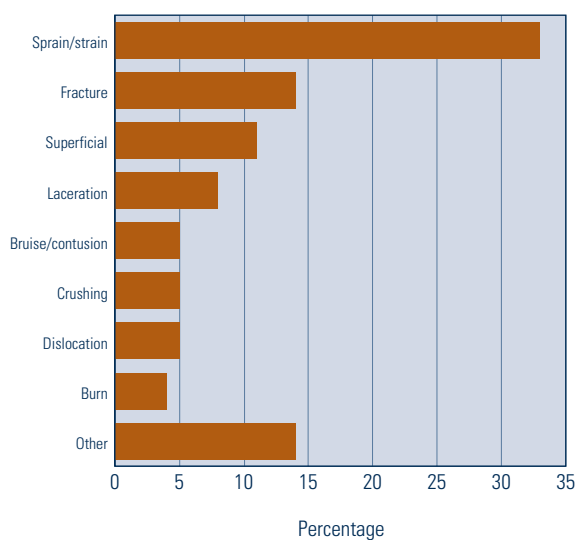
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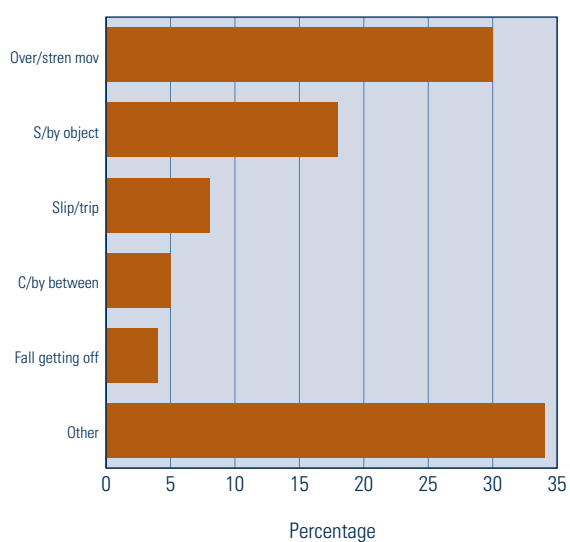
Location of accident



Nature of injury



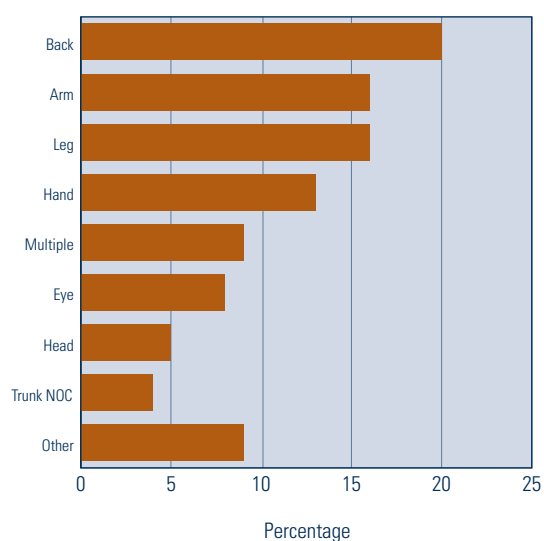
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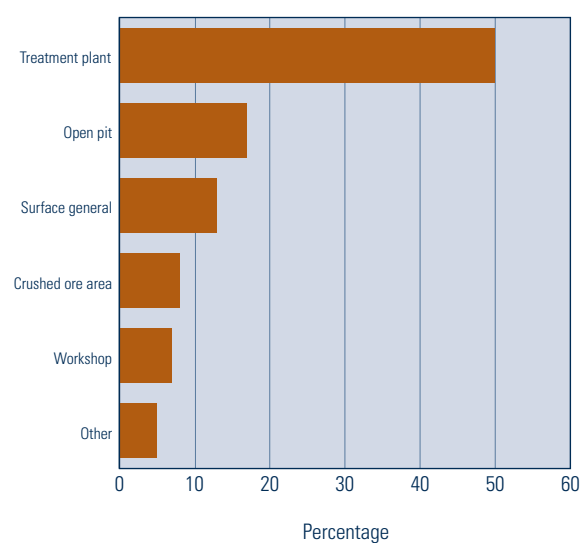
Iron ore injuries 2003–04

76 injuries

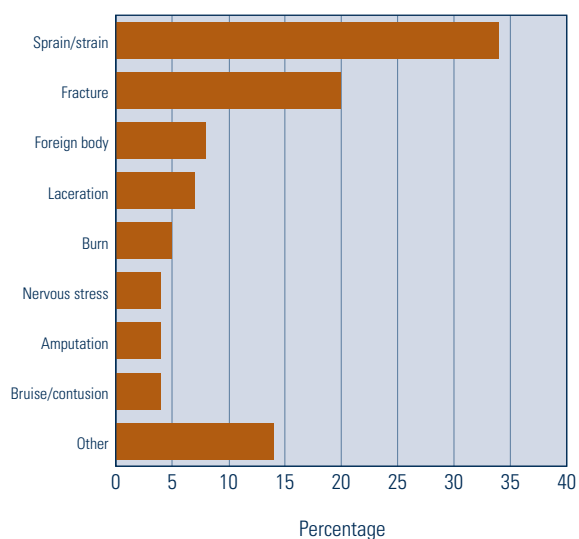
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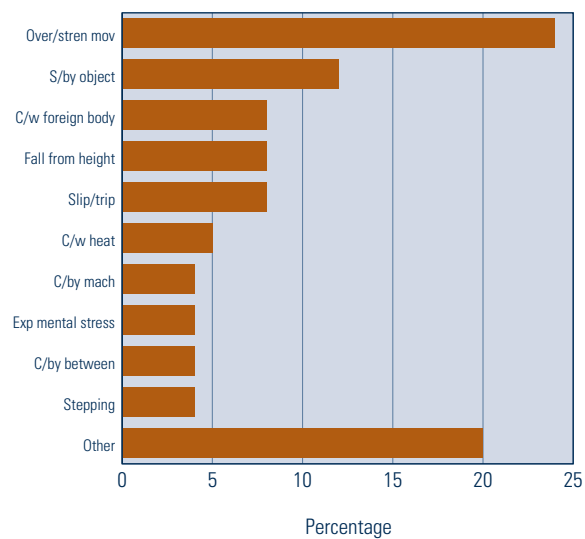
Location of accident



Nature of injury



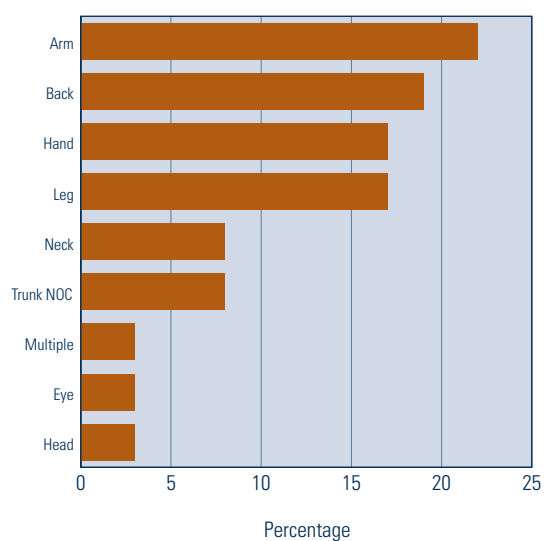
Type of accident



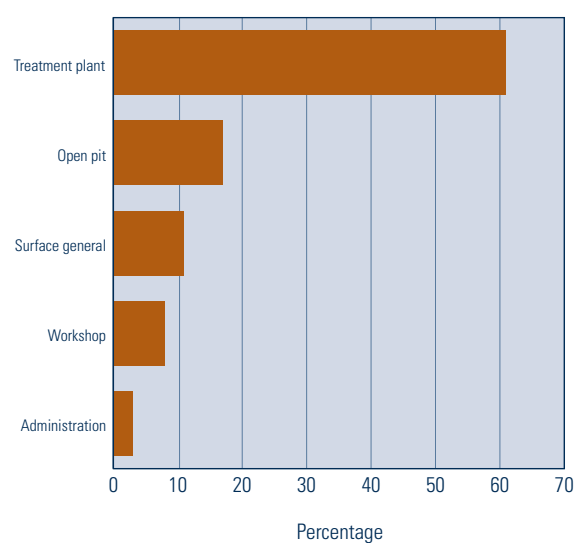
Appendix I

Bauxite and alumina injuries 2003–04 36 injuries

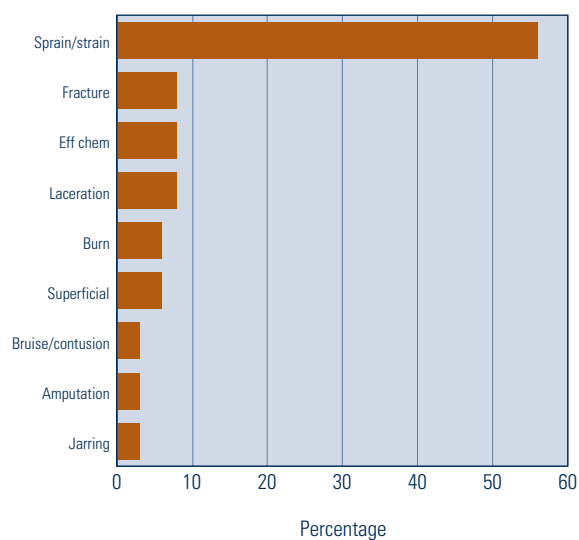
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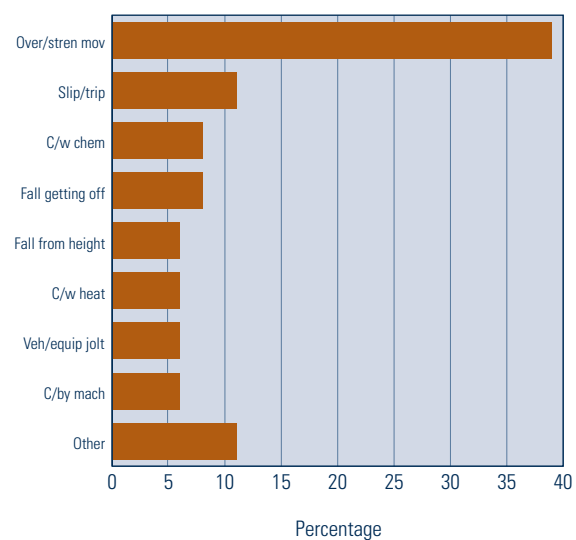
Location of accident



Nature of injury

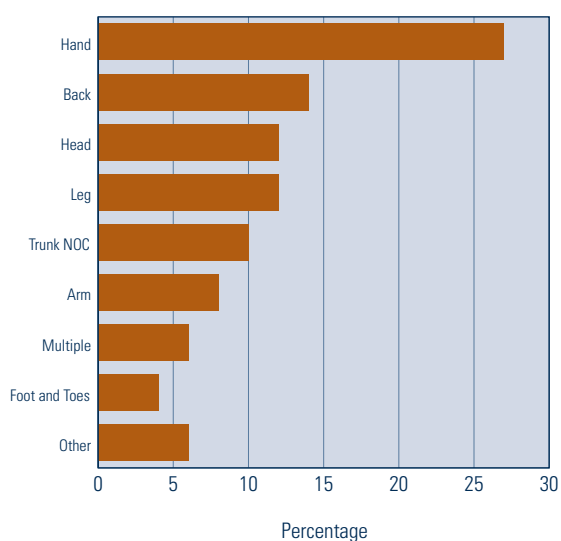


Type of accident

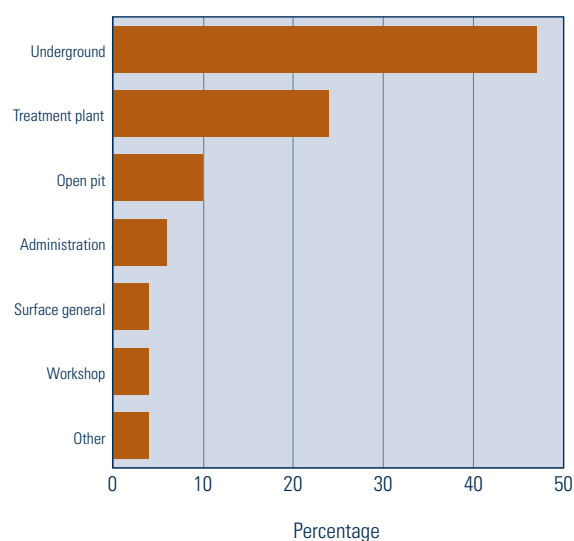


Nickel injuries 2003–04 49 injuries

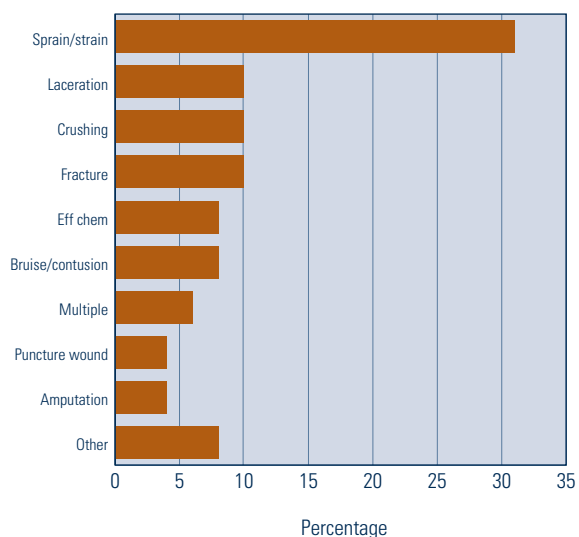
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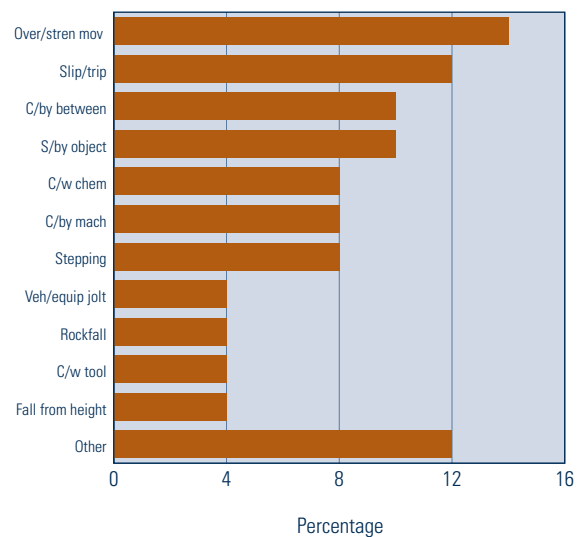
Location of accident



Nature of injury



Type of accident



Appendix K

Disabling injuries 2003–04

496 injuries

In addition to the 394 LTIs during 2003–04, there were 496 disabling injuries (DIs) reported (488 in metalliferous mines and 8 in coal mines), bringing the total number of reportable injuries to 890. A breakdown of these data with performance indicators is shown in the tables below.

Of the disabling injuries, 278 resulted in the injured person being disabled for two weeks or more.

Disabling injuries during 2003–04

Mines	No. of employees	Disabling injuries			All injuries (DIs and LTIs)		
		No. of injuries	Incidence	Frequency	No. of injuries	Incidence	Frequency
Metalliferous surface	40 811	407	10.0	5.1	716	17.5	8.9
Metalliferous underground	4319	81	18.8	7.7	150	34.7	14.3
Metalliferous total	45 130	488	10.8	5.4	866	19.2	9.5
Coal total	641	8	12.5	7.4	24	37.4	22.2
TOTAL MINING	45 771	496	10.8	5.4	890	19.4	9.7

Disabling injuries by mineral mined during 2003–04

Mines	No. of employees	Disabling injuries			All injuries (DIs and LTIs)		
		No. of injuries	Incidence	Frequency	No. of injuries	Incidence	Frequency
Gold	13 150	159	12.1	5.8	277	21.1	10.1
Iron ore	11 629	75	6.4	3.2	151	13.0	6.5
Bauxite and alumina	6955	143	20.6	11.1	179	25.7	13.9
Nickel	5886	70	11.9	5.6	119	20.2	9.6
Mineral sands	2345	7	3.0	1.5	34	14.5	7.5
Diamonds	1213	5	4.1	1.9	30	24.7	11.7
Base metals	915	18	19.7	7.9	28	30.6	12.3
Salt	658	0	0.0	0.0	2	3.0	1.8
Coal	641	8	12.5	7.4	24	37.4	22.2
Tin, tantalum and lithium	479	3	6.3	2.3	8	16.7	6.3
Construction materials	289	3	10.4	5.4	5	17.3	8.9
Other	1611	5	3.1	1.8	33	20.5	12.1
TOTAL MINING	45 771	496	10.8	5.4	890	19.4	9.7

Disabling injury (DI) — a work injury, not a lost time injury, that results in the injured person being unable to fully perform his or her ordinary occupation (regular job) any time after the day or shift on which the injury occurred, and where either alternative or light duties are performed.

This category would include where the injured person:

- is placed in a different occupation or job, whether on full or restricted work hours
- remains in his or her normal occupation or job, but is not able to perform the full range of work duties
- remains in his or her normal occupation or job, but on restricted hours.



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