

Positive Development for Female Geologists at George Fisher Mine, Mount Isa, Queensland.

ABSTRACT

The mining industry is historically male-dominated and culturally entrenched with a long-standing reputation for excluding women. The geologists at George Fisher Mine (GFM) comprise between 30% to 50% females. As a member of that group, I believe that gender does not form any barriers in my role. Of the total work force at GFM, 8% are female and skewed toward administration. In a male-dominated workforce GFM maintains a women-friendly environment. This paper explores the perspective of a recent-starting late-twenties female geologist working at GFM, covering the following points:

- The geology department is over one third female, and there is opportunity to work with other females in a larger technical group.
- The larger technical group generally has an under-forties demographic, comprising mature professionals with some members having had other careers.
- EEO, Harassment and Discrimination policies are reiterated every year to everyone.
- Mount Isa is a family oriented, residential town.
- The mining industry is experiencing a shortage of geologists and University intakes are having increasingly higher proportions of women.

Despite the stigma surrounding the mining industry for women, there is a supportive, dynamic atmosphere at GFM that has encouraged me to develop as a professional.

INTRODUCTION

The resources sector is experiencing strong growth, and this has highlighted the following issues (QRC, 2005):

- A shortage of skilled personnel
- An aging workforce and less young people taking up careers in the sector
- Remote location of operations a factor in the attractiveness of the industry to workers
- Advancing technologies requiring new skills and training
- Companies competing for workers

One solution is to employ more women, who are 45 per cent of the Australian labour force (ABS 6202.0, 2006) yet are still under-represented in the resources sector (they comprise approximately 6% of the sector (QRC, 2006)). There have been many articles written about the lack of, the need for, and the benefits of diversity in the resources sector (Pattendon, 1998; Hall, 2003; Keegan et al., 2001; Maclean, 2003). In a time of skills shortages, a company that embraces diversity is able to attract and retain the best talent from a larger segment of society, which has a significant bottom-line impact (Hall, 2003).

Maclean (2003) has shown that women-friendly workplaces are characterised by:

- Cultural norms and values that support positive relations between men and women
- Freedom from stereotyping of gender roles
- Conditions that include men and women
- A strong critical mass of women (usually 30% in the organisation)
- Advancement opportunities
- An emphasis on reducing unnecessary stress e.g. harassment and work-family conflict.

Workplace culture is defined as the various beliefs, attitudes, and practices that characterise a workplace. Some cultural characteristics may not be seen to affect women in particular; however there may be underlying attitudes or myths that result in unconscious discrimination or exclusion (Hall, 2003). In an industry such as mining that has a conservative, male-dominated work culture, there are practices and attitudes that “even if harassment and discrimination did not exist, there was frequently a perception that they did, and this impression persists today” (Hall, 2003).

Some of the barriers facing women in the male dominated minerals industry are (from Pattendon, 1998; Keegan et al., 2001):

- That harassment and discrimination remain a significant problem within the minerals industry; EEO policies and procedures are not broadcast through organisations, or their effectiveness is not monitored.

- There is a lack of female mentors and role models. “Young female professionals are disadvantaged in the assignment of mentor relationships due to the reluctance and lack of skill/competence of many senior males to mentor females. Further, expressions of paternalism within mentor relationships are detrimental to that relationship and can inhibit the professional development of the mentee” (Keegan et al., 2001).
- There is difficulty balancing work and family. Full time work rates for Australian women aged 25-34 are not affected by marriage (87.7% of women in a couple are employed, compared with 86.6% of single women), however the presence of children decreases the number of employed women in this age to just over 50% (Kelly et al., 2005). Employers may assume women take considerable time off from work to raise children and as a result are less likely to be hired or given key responsibilities. The mining industry has the longest average working hours in Australia, and this “limits the pool of potential employees to those without family or cultural/religious commitments. This directly inhibits diversity in the workforce” (Hall, 2003).
- Females are often excluded from networking opportunities during work-related social activities, or while partaking in these activities they are subjected to dominant male behaviour.

Xstrata has a company commitment to women’s employment issues and in my experience George Fisher Mine (GFM) is proactive with implementing and enforcing EEO procedures. This paper examines a specific workplace culture as perceived by a recent-starting late-twenties female geologist.

CURRENT SNAPSHOT OF GFM PROFESSIONAL WORKPLACE CULTURE

At George Fisher Mine (GFM) there are a large number of geologists, with approximately 13 male geologists, and 7 female geologists. The department is divided into separate groups - resource and capital drilling, core-logging, and “short-term operational” geologists. I work as a short-term operations geologist. There is a large work-load for all members of the geological department. Often the work is done alone and with little supervision although discussion is encouraged. For the short-term operational geologists, there is heavy involvement with other groups such as Planning, Operations and other members of the Technical Services department. There are 10-hour days at GFM, with unplanned overtime for urgent matters. Short-term operational geologists are also expected to do on-call weekends on a rotational basis. The short-term operational geologists are located together in an open plan area and this promotes frequent interaction within the group.

As a short-term operational geologist, my work involves:

Underground activities–

- Checking underground headings and giving directions on geology-controlled headings
- Checking production/grade control of stope sources and providing instruction on mining of these sources.
- Mapping crosscuts
- Liaising with diamond drillers, heavy machinery operators and shift supervisors.
- Checking drill-sites and core-drilling rigs.

Surface activities–

- Reporting the stope or bench reconciliations i.e. the total grade and waste dilution taken
- Updating orebody and fault boundaries – i.e. the geological model
- Designing, proposing and risk assessing diamond drilling
- Inputting daily grades
- Reporting the daily geological status of development headings and production stopes and benches
- Providing planning engineers with the orebody domains and geological memos for production stopes and benches
- Being actively involved in development and production designs and risk assessments

I have also had previous experience at GFM as a core-logger and production grade control geologist – spending 10 hours a day underground on crew working a 4 days on, 4 nights on and 4 days off roster. I have not found any of these roles physically demanding, although an

“underground fitness” is required, in terms of acclimatising to working in the underground environment.

I liaise with different departmental groups as part of the role. While personality is a factor, and GFM is no stranger to strong personalities (male or female), an important aspect of GFM culture is that everybody has a voice. At meetings, all have an opportunity to be listened to, and everyone is known as an individual. These aspects are what differentiate GFM from other white, male-dominated cultures such as the police or the army. These aspects contribute to creating a women-friendly workplace, despite the fact that the GFM workforce has only 8% women, of whom most of these are in administration. GFM is also very multicultural. While women may feel they need to outperform to be considered equal, non-whites and non-Australians may also feel the same way.

The GFM Technical Services department is characterised as younger (less than 40), intelligent, fun, with a relaxed hierarchy (management has an open door). The department joins other departments in playing sport (soccer and touch football) together, and this is strongly encouraged by management. Another aspect of the larger Technical Services culture is the strict Cakes Regulation, whereby anyone being promoted, or has their picture in the paper, or is having a birthday etc. must pay the penalty of providing cakes. Cakes in general occur on a frequency that averages between once a fortnight to once a month. During this time of workplace socialising all junior and senior members of the departments are flushed out and interact. I have not found any instances of dominating behaviour while enjoying a Tim Tam.

Some GFM geologists (and other members of the Technical Services department) have had other careers outside of the mining industry, and so do not have entrenched mining attitudes. They may have worked with women before. These previous careers add to the diversity of experience in the department, which is populated with mature, professional people. In my case, however, I have worked in the army and in comparison GFM is a relaxed, comfortable, less macho place to work. The geology department has had visitors who have commented on the friendliness of the workplace. In fact, there has been a consistent and visible effort to ensure that the workplace is a comfortable one for employees to excel, through reducing workplace bullying and harassment. This has been pushed from the top down by managers who are leading by example in their regular interactions with workers. The fact that workplace bullying and sexual harassment are framed together as issues in the male-dominated workplace increase the effectiveness of policies that combat them, particularly for women, who experience both (Hutchinson, 2004). As workplace bullying, discrimination and harassment affect the safety and health of employees, it must be managed like any other workplace safety and health hazard (DOCEP, 2006). At GFM, the active effort to improve emotional/psychological (as well as physical) safety in the workplace is in part enabled by a diversity of experience amongst workers. Factors that have also changed the general safety culture in mining are: company-wide proactive approaches that also put the onus of safety on workers; integration of safety policies and duty of care legislation; and an awareness of the benefits of improving safety and reducing risk (Keegan et al., 2001). The mining industry is generally resistant to change. An improved safety culture in mining, with a workplace of people with different attitudes, paves the way for accepting diversity, as the mining workplace culture is in flux.

While GFM has had a female geology superintendent and senior geologist in the past, there is a lack of females in management. Nonetheless, the number of female geologists with respect to male geologists means that there is a critical mass of women (and can fluctuate between 25-50%), so there is no tokenism (we are there on merit) or isolation. Women fill a number of team leader roles in the geology department and there is the opportunity to conduct day-to-day work with female members of other departments. Eveline and Booth (2002) note critical mass is not sufficient for a workplace to be women-friendly, critical acts, such as the reiteration and enforcement of EEO and Anti-discrimination/Anti-harassment policy are necessary. Critical acts are the support women receive from authority groups, the support they receive from each other, and how they are able to organise as a group and control or change an organisation's agendas (Eveline and Booth, 2002). “The most critical element in culture change is the leader's active and consistent support for women's full participation in the workplace.” (Maclean, 2003)

Xstrata Australia in its Mount Isa Mines operations had the following actions in 2005-2006 to this end (from the Xstrata report to the EOWA, 2006):

- Ongoing EEO training was conducted throughout the Operations in the form of new employee brochures and posters, toolbox sessions, and external / internal facilitators.
- All new employees continue to be trained in EEO issues through inductions. A majority of employees were also provided with training covering acceptable workplace behaviour and awareness of Company policies and changes to Legislation through external and internal training.
- Managers and supervisors receive ongoing coaching in managing EEO issues.
- New EEO brochures and posters have been developed and have been or are being implemented across the Operations.
- Each Mine has a contact officer network.
- All Mines monitor the workplace in at least two or more of the following ways: database of formal and/or informal complaints, performance appraisal/feedback meetings, exit interviews, Health and Safety Committee meetings, and consultation with contact officers.
- PostMaster was implemented (by the Information Systems Department) across the Business during 2005 to decrease harassing emails being received by employees.
- Complaints, whether informal or formal, are documented and collected using a contact report form.

While the incidence of reported complaints was very low, Xstrata recognises that it is not uncommon for some employees to be concerned about making a formal complaint. Accordingly, EEO and Anti-discrimination/Anti-harassment training sessions conducted in 2006 and onwards will highlight the Company's commitment to supporting employees with these issues and that employees are able to raise issues both formally and informally (Xstrata report to the EOWA, 2006). GFM managers have dealt with instances of harassment, to my knowledge, very summarily and supportively, and so my perception of management is that they can be trusted with any issues raised about harassment. In the real world, EEO and Anti-discrimination/Anti-harassment policy can only go so far. Active participation by all individuals is required for the policies to work. Otherwise they are meaningless. It is important to note that critical mass *with* critical acts, such as active support for EEO and Anti-discrimination/Anti-harassment policy, are effective *together* in creating a women-friendly workplace, however one without the other is less so. For example, there may be strong support for EEO policy but when a "diverse" person is isolated; more courage is required for them to complain. A critical mass of women may not be able to organise any workplace change if there is no support from management and each other, or others in the workplace.

EEO and Anti-discrimination/Anti-harassment policy provide workplace intervention, but what about less formal strategies, without manager involvement, to cope with inappropriate or discomforting behaviour? All people want to have a choice about how their interactions are managed. There are many levels of inappropriate behaviour and many ways to manage them. The role of a geologist makes avoidance easy as a strategy (I can go to the core-shed, underground, see other departments about work-related issues) however this is not a long-term solution as only the frequency of the negative situation is lessened rather than the impact. Having another considerate person present, or talking to other women at work about the issue are informal strategies that can lessen the impact of inappropriate behaviour (Handy, 2006). Unfortunately, despite the fact that everyone is responsible for his or her own appropriate behaviour, non-response to inappropriate behaviour can be interpreted as acceptance. Confronting the person, in order to *manage the interaction* and delineate boundaries, is a realistic coping strategy and is particularly effective when there is the support to do so.

WORK+LIFE+TOWN

Most of the GFM geologists are in dual-income relationships, so that where there are children, both partners have to share the child-rearing responsibility. However, the mother is usually the primary carer. For example, one of the GFM female geologists is the primary carer of her children and works part-time, whereas GFM male geologists with children are not primary carers and are able to work full-time. At GFM a part-time female geologist was given the opportunity to work in an operational geology role. However after some months in the production role the employee decided that her previous role (database management and core logging) was more flexible for her work/family balance. She then returned to her previous role

with no change in position. Xstrata Australia in its Mount Isa Mines operations has the following policies (from the Xstrata report to the EOWA, 2006):

- Negotiate alternative arrangements with employees to accommodate for a phased return from maternity leave. A number of work arrangements are in place to facilitate women returning to work, including working from home, job-sharing and part-time employment where the role / position can reasonably accommodate one of these arrangements.
- Accommodate family needs with work priorities, for example two female geologists (in the Mount Isa Mines operations) are now working a 40-hour week instead of the regular 50-hour week. This flexibility in hours assisted the employees and ensured their continued employment.
- Paid Parental Leave Policy. Employees who avail of maternity leave will be entitled to up to 10 weeks paid leave.
- There is no workplace-sponsored childcare however Xstrata is currently looking at childcare facilities.

Outside of GFM, Mount Isa has a population of approximately 22,000 residents (Mount Isa City Council) and there is plenty of opportunity to contribute positively to the social and civic life of the community, to be involved in activities or clubs and build a support network. The life-work balance is more achievable in a town rather than with a Fly In Fly Out (FIFO) operation. In a survey conducted on mining industry professionals (Venables et al., 2002), 31% of respondents in FIFO rosters thought that their work lifestyle allowed for a social and civic life, compared to 62% of those living locally to a mine. While FIFO rosters are considered to impede on opportunities for community involvement, town-based (residential) companies can also have practices that discourage or hinder community involvement (Brereton et al., 2003). For example, long working hours or difficult rosters can alienate workers from the community and places stress on families. At Mount Isa Mines, part-time work is available and flexible work schedules can be negotiated. At the Black Star Open Cut mine in Mount Isa and Ernest Henry (EHM) mine in Cloncurry, 9am – 3pm permanent part time truck operator rosters are available. At EHM the uptake on this roster is 100% women (Xstrata report to the EOWA, 2006). Mount Isa itself has a well-developed tourism industry – the outback is there to be explored, the town hosts the largest rodeo in Australia – and the locals are self-driven in terms of hobbies and entertainment. Mount Isa promotes a family-oriented community with its residential and commercial infrastructure. The community is generally tight-knit due to the city's remoteness.

Looking at the larger industry picture, much is made of the industry shortage of skilled workers. As a worker, I feel secure in an employees market. I know that even if companies would prefer to employ males, I would still get work due to the high demand for mining professionals. There are so many opportunities in an industry that has a lot of transience, and there are plenty of career opportunities available other than moving upwards. Experience can be gained from different companies, different mining operations, exploration or consulting. Looking at the pool of potential workers at university (Dobson, 2002), female students have comprised 53.1% of all Science students, and 41.6% of all Earth Science students (more than doubling between 1989 and 2002). So it appears there will be a healthy supply of female geologists leaving university. As Earth Sciences classes at university are co-educational, I believe this is a factor in the women-friendly culture of the GFM geology department, with which I have the closest working relationship.

There are negative aspects at GFM that are also industry-wide – such as a current lack of female role models or mentors especially in senior or management roles. My work conditions and development are good while I am a junior, but what about when I am ready to move upward? Long working hours and lack of on-site childcare facilities mean women with children can find work difficult although Xstrata has some concessions such as parents returning to work and flexible hours. The positive aspects are that the geology departmental workplace culture is women-friendly directly because:

- There is a critical mass of women; professionals are employed on ability not gender.
- EEO policies are in place and there is regular Anti-harassment and Anti-discrimination training. Management actively supports these policies.

- The GFM Technical Services department is diverse in other ways (individual experience of other industries, multicultural).
- The Technical Services department is a very dynamic, social, younger group that interacts well.

and indirectly because:

- Mount Isa is a residential outback city, not a pioneering town.
- Skills shortages mean more opportunities for women.
- Earth Sciences courses at university are becoming more co-educational.

It is important to realise that parental leave, flexible schedules and employing more women are not sufficient to building a women-friendly environment. Eliminating all forms of discrimination and harassment, fostering and embracing a comfortable work environment for all employees to excel is *everyone's responsibility*, as with safety, and it is critical that management supports this. The resources sector can further benefit from what is most important – its people.

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