



Mine Name	Mine ID	Operator	Activity Type	Region	Activity Date
Grosvenor Coal Mine	M102976	Anglo Coal (Grosvenor Management) Pty Ltd	inspection	Central	22/08/2016

Vision: Our Industries Free of Safety and Health Incidents

## Mine Record Entry

This report forms part of the Mine Record under s68 of the Coal Mining Safety and Health Act 1999, It must be placed in the Mine Record and displayed on Safety Notice Boards.

Note that inspection or audit activities conducted by the Mines Inspectorate are based upon sample techniques It remains the primary responsibility of Mine Personnel to identify hazards, and risks associated with Operations and ensure those risks are at an acceptable level.

Today, Monday 22 August 2016, at 1:00pm I attended Grosvenor Coal Mine and was met by Mr Adam Foulstone (SSE). The reason for my attendance was the following report of a High Potential Incident received by Inspector Graham Callinan who was the duty inspector for the weekend 19/20 August 2016.

Reported to duty Inspector Graham Callinan (Rocky area?) on weekend. No time of report indicated.

Over 1 hour since the Management were aware I would guess. Inspector does not arrive for 2 days after.

! Fall of ground occurred between 21 and 22ct in MGIOI (approximately 250.0 inbye of the LWIOI face). The distance of the fall from 2 lct is approximately 56.0m and the fall extends for 10m along 'B' heading".

This roof fall was the third in similar circumstances which would appear to be related in each case to the immediate unpredictable roof strata in the 'Domain A'.

The previous two incidents are described in MREs dated 6/6/16 and 5/7/16

There are also differences in each of the circumstances -

5/7/16 - this fall was in development MG 102 C Heading following a relaxation of the support system. Since that time a dead-weight support system has been installed without, so far, any roof control problems.

6/6/16 - a fall occurred at the MG end of LWIOI which came 314m in advance of the face from the rib side to the second megabolt. Remedial support of a centre-placed megabolt with a circular plate so far has controlled the centre-line cracking experienced before the failure.

20/8/16 - This roof fall is in the B heading of LW 101 travel road which will become the LW 102TG. LW 101 goaf is now fully established and full subsidence has occurred as the face has retreated 525m. Front abutment influence in this case appears to be a factor.

Looking at Pillar thickness as well as Megabolt density of the area of the fall would make more sense to me

Assume he has seen surface subsidence and is not just taking their word for it.

### 1.0 Introductory Meeting

Mr Foulstone briefed me in regard to the circumstances of the roof fall. The details are explained later in this MRE.

### 2.0 Inspection

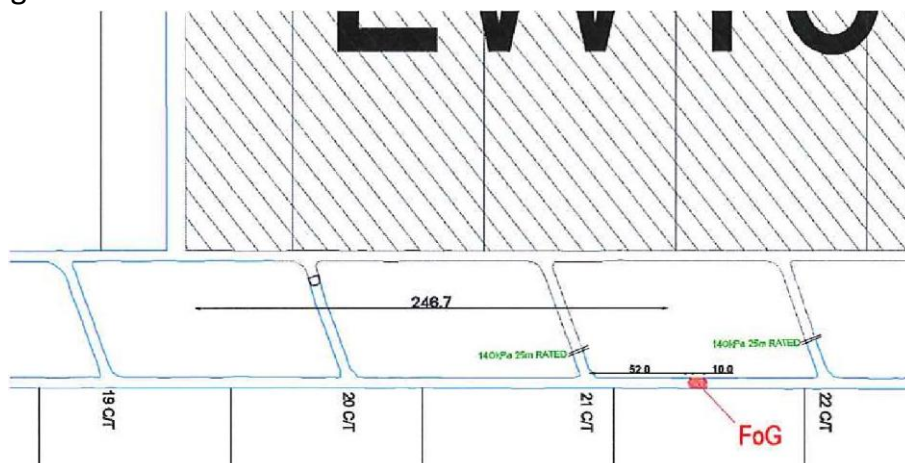
I was accompanied on the inspection by Mr Wayne Bull (UMM) and Mr Richard Whatman (Shift Supervisor).

We were met by Mr Alan McPhail (ERZ Controller) and examined the fall area and the remedial bolting completed in the LW 101 C Heading.

A description of the fall and photograph follow which were supplied by the Mine. They provide an accurate account and picture of the circumstances.

'A fall of ground occurred between the hours of 0530 and 0730 on the 20th August 2016 in Grosvenor Mine MGIOI B Heading, approximately 42m inbye of 21C,m intersection (Figure 1).

Figure 1 - Location Plan



The position of the longwal/ (LWIOI) is approximately 250m outbye of the fall of ground At the time of the fall} MG CH2034 and TG CH2037.5.

The undermanager on shift notified the appropriate people and reported that all crew members were safe and had retreated from the fall area.

The FOG was identified by the UM (R Whatman) and Geotechnical Engineer (A Seccombe) at 0700 on the 20th August 2016. Area was being inspected due to NS reports of roof bagging and movement The fall area was already No-Roaded by night shift ERZC "



**Where are the tell tales every 15m from previous falls?**

**Fall found by Whatman (Shift Supervisor) and A Seccombe (Geotechnical Engineer)**

There was no activity at the roof fall because the longwall was cutting the first of two shears before standing down. The fall recovery process had been risk assessed and included no activity at the cavity while cutting was in progress on the longwall.

The roadway outbye the fall had been re-supported to the lip and shotcreting commenced as part of the recovery. The window of time presented before the shotcrete hardened sufficiently, allowed the longwall to advance and be secured to deal with broken roof conditions

The longwall stand-down will allow the necessary remedial support to be installed in and around the roadways surrounding the longwall and far enough in advance of the longwall to, as far as possible, avoid more roof failures. The senior management team had assembled to identify the scope of the remedial work the deemed necessary.

**Mine on 3rd major roof fall in 6 weeks allowed to make its own decisions about how and what was done and will be dealt with in future, with no DNRME input.**

**No DIRECTIVE**

### 3.0 Close- out Meeting

I was provided with the following documentation which I read through before departing the Mine.

- Hazard and Incident Report Form
- Form IA
- Memo from Grosvenor Strata team to Adam Foulstone and Glen Britton titled MGIOI 21-22 B Hdg Fall of ground
- Risk Assessment- WRAC - Recovery of Fallen Ground MGIOI 21-22crr B Heading
- Risk Assessment TGIOI Single Entry and Work Scope for MGIOI Fall of Ground

[ was also forwarded the forwarded the following detail post inspection

- Grosvenor Seam Split domain A pian

I discussed the situation with Mr Adam Foulstone, Mr Wayne Bull and Mr Glen Britton (Executive Head of Underground Operations).

The circumstances of the fall were not in doubt and it is understood the full recovery and remedial work is still to be completed. I asked to be provided with the final report into the roof failure and remedial proposals to secure roadways in advance of the longwall.

The main concern is the unpredictable nature of the immediate roof in Domain A. The geological features are well known and it regularly shows potential failure characteristics.

The cut throughs between B and C heading gate-roads have significant supplementary support and show obvious roof disturbance but no roof falls have occurred.

The feature in each of the two non-longwall falls showed initial movement, predominantly centre-line cracking, followed by rapid deterioration to failure.

The development fall followed relaxation in support which has been addressed by installing dead-weight support.

**Main concern unpredictable roof in Domain A (SAME AS NTH GOONYELLA and MORANBAH NORTH learnt the hard way years ago**

**Cut throughs in gateroads already have lots of secondary support, are taking weight visually but have not fallen yet. (No mention of telltales every 15m again). They will fall when they take weight from the longwall.**

**Typical Goonyella Upper roof failure. Takes a bit of weight, bit of roof flake near rib, the road crack down the centre (above bolted horizon of 1.8m) and then fails quickly when**

it decides, hours, or days. That is why those mine megabolt as part of normal roof support and the centre line of roadways on the advance.

More bolts will do nothing. Only passive support has a slim hope. Big wooden props, steel cans and pigsty's.

Dead Weight Bolting. is. Megabolts, long tendons, cable bolts they all apply to getting 8 or more metres long. The 8m length I would guess have just been adopted from both operations as what actually works, though not the when and where.

BULL has worked at North Goonyella and Moranbah Northt.

Not the first time the roof deterioration has occurred and it got secondary support of failed area.

Area's only secondary supported as they fail not as part of fixing previous longwall fall 2 weeks earlier.

In regard to this incident, other lengths of roadways illustrating similar, but worse characteristics in that locale, received priority treatment because they showed early signs of movement. Despite this the failure occurred in an area which moved rapidly from early signs of centre-cracking to failure, This was seen by officials and the area isolated before failure and they are to be commended for their diligence.

Reported to duty Inspector Graham Callinan (Rocky area?) on weekend. No time of report indicated.

Over 1 hour since the Management were aware, I would guess. Inspector does not arrive for 2 days after.

Assume he has seen surface subsidence and is not just taking their word for it.

Makes little sense to me to be front abutment pressure, due to timing. Face has gone 250m past. Maybe side abutment pressure.

Looking at Pillar thickness as well as Megabolt density of the area of the fall would make more sense to me

Assume he has seen surface subsidence and is not just taking their word for it.

Where are the tell tales every 15m from previous falls?

Fall found by (Shift Supervisor) and A Seccombe (Geotechnical Engineer)

Mine on 3rd major roof fall in 6 weeks allowed to make its own decisions about how and what was done and will be dealt with in future, with no DNRME input.

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BULL has worked at North Goonyella and Moranbah North.

Not the first time the roof deterioration has occurred and it got secondary support of failed area.

Area's only secondary supported as they fail not as part of fixing previous longwall fall 2 weeks earlier.

Not one Directive, nothing.

Not one hint of DNRME suspending any mining pending investigation.

A handwritten signature in black ink, appearing to read 'R. Gould', with a stylized flourish at the end.

Richard Gouldstone  
Inspector of Mines  
Central Region