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| Mine Name | Mine ID | Operator | Activity Type | Region | Activity Date |
| Grosvenor Coal Mine | M102976 | Anglo Coal (Grosvenor Management) Pty Ltd | Inspection | Central | 26/10/2017 |

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, Thursday 26 October 2017 arriving at 8am l, Inspector of Mines Richard Gouldstone, conducted an inspection of Grosvenor Mine. I was met by Mr Adam Garde (SSE) and Mr Wayne Bull (UMM).

1.0 Introductory Meeting

1.1 Mine Status

## LWIOI to LW102

Supports are being taken off LWIOI and sent to the surface for hose replacement which is a major unplanned exercise. The reasons for the degrading of the internal structure of the hoses was explained and the implications in terms of timing and financial damage incurred. Joy as suppliers are closely involved. The implications and, the link to considerable roof control problems on LWIOI were discussed, in particular, in relation to health monitoring and performance of the supports when installed on LW102.

The sealing plan for LWIOI has been submitted to DNRM and I have acknowledged the plan. The Mine gave a number of additions they have made to the plan provided and I asked them to formalise those additions in writing. I understood that they were additions rather fundamental than changes to the original plan.

LW 102 has the AFC complete and BSL close to completion with an expectation to run them within 24 hours.

### MG 103 Development

The Development has progressed beyond 29CT where the sequence was amended to include a short drill stub in the 29CT to allow coring and two flanking holes for B and C headings.

This was as a result of recent floor-blow incidents dated as follows -

30/08/17 - estimated that 240 cubic metres of methane (above normal background) was liberated - 1200mm floor coal left in floor.

4/10/17 - estimated that 60 cubic metres of methane was liberated 600mm floor coal left in floor.

26/10/17 - last night there was another minor event where again floor coal had been left just inbye 29CT in C heading, details are still to be assimilated.

**FLOOR HEAVE/METHANE INRUSH EVENTS STILL OCCURRING IN DEVELOPMENT.**

**WHAT WAS THE METHANE CONCENTRATION PUT THROUGH THE AUXILLIARY FAN?**

**ADDITIONAL HOLES DRILLED FOR COMPLIANCE CORES AND FLANKING HOLES**

Floor heave has been a feature occurring over 300m depth but the gas emitted has not always been identified.MG 102 had problems with floor heave in cut throughs where heavy roof conditions were also present (tell tale movement and centre line cracking) however the floor lift in MGI 03 is in the roadways and the cross cuts are generally more stable . The support regime in MG 103 has been upgraded from that originally installed in MG 102. Mr Bull indicated that upon 'digging-out' the sites of the floor-blow incidents the lifting was not deep seated but just the bottom ply failing.

In future methane drainage holes will be drilled to periodically touch floor as at the moment most are in the upper half of the seam and it appears that the Tonstein band is acting as a cap rock.

**HOW HARD IS THE TONSTEIN BAND?**

**IS IT CONVENIENT TO USE THE TONSTEIN BAND AS A FLOOR HORIZON IN DEVELOPMENT?**

The Mine has instigated a Floor Heave and Gas Release Management team who are continuously monitoring progress and all parameters to identify potential causes and solutions. I have read through the sets of minutes provided to familiarise myself with the action being taken.

The matter is receiving constant attention with monitoring of the environment under continuous scrutiny,

**WHO IS ON THE “FLOOR HEAVE and GAS RELEASE MANAGEMENT TEAM?**

**ARE ANY ERZC’S, SSHR’S (SITE SAFETY AND HEALTH REPRESENTATIVES**

### Mains Development

This development is now establishing the infrastructure roads at the outbye end of MG104 and today conveyor clearance and ventilation are being rearranged.

1.2 Documentation and discussion

### 1.2M Accidents and Incidents

#### Documentation Recent Mine Accidents and Incidents Summary sheet

 Hand Injuries Intervention as Weekly Safety Focus

This included hand injury statistics and action built out of learnings.

Accidents reviewed were

28/06/17 Hand Injury MG102 Face Bl

While off-siding the QDS drill rig the employee has pinched his right hand middle finger between the drill mast and retracting slide cylinder blocks when the drill rig operator retracted the drill motor. this has been subject to the hand injury initiative and a reappraisal of all drilling equipment.

**ANOTHER HAND INJURY USING BOLTING RIGS**

09/07/17 Gas Plant shutdown causing a spike in the LWIOI TG return of 3.1 % Methane.

An ICAM has already been forwarded to DNRM relating to this matter and deals with appropriate remedial action.

#### 27/07/17 Surface Compressor Fire at Shaft N07

A fire on two surface compressors was found at approximately 05:45am by some surface workers. The compressors ventilate a blind shaft, Shaft 7, above 29CT MG103. Shaft 7 is not connected to underground workings. The surface fire response team was mobilised and the fire contained by 06:20am without injury.

The investigation highlighted a number of improvements which could be made associated with, design operation and maintenance of compressors including how they are introduced to site and the precautions in regard to fire. This included the standard of installation, fire barriers, with inclusion of thermography and vibration monitoring.

30/07/17 Broken Camera Lens LWIOI

An earlier incident had occurred which resulted in an injury which drove the decision to remove the 'chock-stoppers' on the main-gate drive. This subsequently put the MG camera in line of fire and the lens was damaged when a support was lowered damaging and compromising FLP enclosure.

The Mine has repositioned the camera accordingly.

**CHANGE MANAGEMENT PROCESS INEFFECTIVE**

31/07/17 CMW received laceration to left wrist from rib mesh & 03/08/17 CMW twisted knee (both relatively minor)

04/08/17 Fallen Monorail

LW Monorail 'A frames at the surface Longwall laydown area fell over due to wind after shade sail had been hung over them which acted as a sail in blustery wind. Without the weight of the monorail sections to keep the A Frames secure the unsecured "structure" blew over. The closest person was operating a fork-lift some 10m away.

Operational change has meant storage is minimised and temporary structures will be more rigorously constructed with high winds given consideration.

29/08/17 Ventilation peak of 4.64% Methane through Auxiliary Fan

This was as a result of a floor blow incident and is covered later in this MRE.

**JUST UNDER THE LOWER EXPLOSIVE LIMIT**

10/09/17 CMWs finger pinched between feed frame and 23/10/17 MG 1 03 Finger injury

Neither incident has been reported as a HPI but both are very much on the cusp of being HPls. The Mine is clearly trying very hard in raising awareness of potential for hand/finger injuries as demonstrated by the documentation and also Peer on Peer approach.

**MORE HAND INJURIES USING BOLTING RIGS**

Further Documentation provided -

 Briefing notes for LWIOI Take off

 Safety Communication Peer on Peer

 Daily Safety Communications 26/10/17

This referenced Mine inspection zones, Peer on Peer, LW support transport rote, knuckle injury and accident statistics, Hygiene reports and dangerous substances. Also included was the Mine's response to the learnings from the recent Goonyella Riverside fatal accident.

e Development status documents for Mains & MG103 Developments

#### Weekly 103 Floor heave and Gas release Management minutes for 6/10/17 and

10/10/17 & 19/10/17 chaired by Trent Griffiths (TSM)

 Permit to Mine ref GRO-9671-PTM-MG103

#### Grosvenor Report LWIOI Issues and Learnings For LW102

I undertook to read and contact the Mine with feedback by separate means in regard to this document.

Mr Garde gave me an account of three CMWs who been injured and explained the Mine's on-going work to assist their recovery both mental and physical.

### 2.0 Inspection

I conducted an inspection of MG103 Development and was accompanied by Mr Bull

Mr Garry Morrissey Shift Supervisor

Mr Mark Johnston - Ventilation and Gas Superintendent

Mr Rick Halpin - Mining Development Coordinator

### 2.1 Control Room

I inspected the Control Room on my return to the surface and the CRO was able to clearly and quickly demonstrate his role and the current alarms.

There is facility to view monitoring of the ventilation trends in the MG103 development and I suggested that it may be worth putting that on screen for regular observations by the CRO to identify any characteristics that may be the prelude to a floor-blow incident. I was assured by Mr Johnston that each incident had been investigated and the sampling trends pre-incident examined for any tell-tale signs.

#### 2.2 General Comments

As usual the travel surfaces throughout the inspection were good and all interactions properly conducted. The few problem areas, E5 intersection on Mains and MG 103 25CT were known with plans to rectify problems of either wet roads or dusty roads already in hand,

Water for dust suppression in the drift has been limited for traction reasons while supports ex LWIOI are transported to the surface so close monitoring of the potential for intake pollution will be needed.

All Inspection boards were well presented, current and with sufficient attention to detail.

I suggested that where tape is placed to identify danger, a hazard or for information it must always have an information tag and be completely removed when no longer required.

**STILL A PROBLEM**

#### 2.3 MG 103 Development

The crib room was in good condition with all appropriate facilities and reference matter. We examined the district fully and I was shown all the characteristics relevant to the floor emissions recently encountered and the site of the precautionary/exploratory coring and relief holes established in 29CT.

Those characteristics were as described earlier and referenced in the multitude of documentation surrounding the activity which demonstrates a very conservative and safety first approach to the current situation.

The newly established cooling shaft at 28CT was suitably barricaded. I was also shown the precautionary relieving holes drilled from the LHS of B heading.

I spoke with ERZ Controller Mr Alan Simonsen throughout the inspection on various routine matters but also about his responsibilities regarding the current floor emission hazard. I also spoke to four CMW who were able to recount in detail the basics of the Mine intervention regarding finger injuries with, in particular, drilling activities and also to the current controls being exercised in regard to managing the hazard of floor emissions.

I observed a hosed over methane hole in B heading and suggest that the Mine might need to reconsider the dimensions/configuration of the valves and couplings. The installation viewed protruded approximately 300/400mm into the roadway but since it was just below roof cut height it did not present a hazard. However if the same coupling were to be at mid cut height or below then it would be vulnerable to impact damage from passing traffic.

The site of the previous night's minor floor-blow incident was viewed and it was apparent that the floor grade and road height through the intersection C29 was variable, with a swilley before the intersection and a hump inbye the intersection at the site of the incident.

3.0 Close-out Meeting This meeting involved 

#### Mr Garde Mr Bull

Mr Gary Needham - Development Superintendent

We covered the items detailed in this MRE and there was no need to give either a Directive or SCP. Mr Needham explained in detail each of the Development briefing documents listed earlier.

I undertook to read the Grosvenor LWIOI Issues and Learnings for LW102 document dated September 2017 and provide feedback to Mr Garde.

While the number of hand injuries continue to be an unwanted feature I do not believe the Mine to be complacent about the matter and I understand that engineering solutions as well as behavioural solutions are being sought. This will be pursued on future inspections and interactions with the Mine.

I departed the Mine at 2:15pm.



Richard Gouldstone

Inspector of Mines

Central Region

**METHANE INRUSHES**

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