1. **DATE: 6/01/2018 TIME: 12:10am LOCATION: LW102 TG Return**

Made By: Trent Griffiths Company Position: SSE

Made To: Paul Brown Time: 8:56am Date:6/01/2018

Made To: Stephen Woods Time: 9:20am Date:6/01/2018

The shearer on the LW102 face was manually stopped at 100 roof support travelling to the TG as methane levels in the LW102 TG return began to increase peaking at 2.1% at the inbye monitor (located approximately 400 metres outbye of the face). Crew waited for methane levels to fall below to around 1.98% and then resumed the flit run toward the TG (as currently cutting uni directional). However upon reaching 127 roof support, the methane levels in the TG return began to increase, so shearer was manually stopped. Despite shearer being stopped, the methane levels continued to increase on the inbye monitor peaking at around 2.35%. However added with the methane emissions in the TG from the adjacent goaf, this resulted in a peak of 2.53% at the methane monitor at the outbye end of the LW102 return. The methane levels at this monitor were greater than 2.5% for approximately 2 minutes.

NOTE: At the time of the incident LW102 had retreated around 29 metres retreat since panel commencement.

1. **DATE: 8/01/2018 TIME: 03:00am LOCATION: LW102 TG Return**

Made By: Trent Griffiths Company Position: SSE

Made To: Richard Gouldstone Time: 6:03pm Date:8/01/2018

Made To: Stephen Woods Time: 6:06pm Date:8/01/2018

At around 1:50am, the shearer on the LW102 face was manually stopped at 110 roof support travelling to the MG after leaving the TG due to having to repair a broken shear pin on 149 roof support. The methane levels at this point in time in the LW TG Return were 1.65% at the inbye monitor (located approximately 400 metres outbye of the face).

Despite production being stopped for around 55 minutes, at around 2:45am just after repairing the broken shear pin and advancing 149 roof support, the methane levels increased on the inbye monitor peaking at around 2.15%. However added with the methane emissions in the TG from the adjacent goaf, this resulted in a peak of 2.57% at the methane monitor at the outbye end of the LW102 return. The methane levels at this monitor were greater than 2.5% for approximately 15 minutes.

NOTE: At the time of the incident LW102 had retreated around 40 metres retreat since panel commencement.

1. **DATE: 8/01/2018 TIME: 12:06pm LOCATION: LW102 TG Return**

Made By: Trent Griffiths Company Position: SSE

Made To: Richard Gouldstone Time: 6:03pm Date:8/01/2018

Made To: Stephen Woods Time: 6:06pm Date:8/01/2018

At around 11:57am, the shearer on the LW102 face was manually stopped at 66 roof support travelling to the MG due to increasing methane levels in the LW TG Return. The methane levels at this point in time in the LW TG Return increased to 2.06% at the inbye monitor (located approximately 400 metres outbye of the face). However added with the methane emissions in the TG from the adjacent goaf, this resulted in a peak of 2.56% at the methane monitor at the outbye end of the LW102 return. The methane levels at this monitor were greater than 2.5% for approximately 17 minutes.

NOTE: At the time of the incident LW102 had retreated around 40 metres retreat since panel commencement.

1. **DATE: 8/01/2018 TIME: 12:54pm LOCATION: LW102 TG Return**

Made By: Trent Griffiths Company Position: SSE

Made To: Richard Gouldstone Time: 6:03pm Date:8/01/2018

Made To: Stephen Woods Time: 6:06pm Date:8/01/2018

Despite production stopping at around 11:57am when the shearer on the LW102 face was manually stopped at 66 roof support travelling to the MG, the methane levels in the LW TG Return increased again at around 12:39pm to 2.07% at the inbye monitor (located approximately 400 metres outbye of the face). However added with the methane emissions in the TG from the adjacent goaf, this resulted in a peak of 2.53% at the methane monitor at the outbye end of the LW102 return. The methane levels at this monitor were greater than 2.5% for approximately 13 minutes.

NOTE: At the time of the incident LW102 had retreated around 40 metres retreat since panel commencement.

1. **DATE: 8/01/2018 TIME: 09:45am LOCATION: LW102 TG Return**

Made By: Trent Griffiths Company Position: SSE

Made To: Richard Gouldstone Time: 6:03pm Date:8/01/2018

Made To: Stephen Woods Time: 6:06pm Date:8/01/2018

At around 9:32am, the shearer on the LW102 face was manually stopped at 104 roof support travelling to the TG during a flit run (as currently cutting uni directional) due to increasing methane levels in the LW TG Return. The methane levels at this point in time in the LW TG Return increased to 2.09% at the inbye monitor (located approximately 400 metres outbye of the face). However added with the methane emissions in the TG from the adjacent goaf, this resulted in a peak of 2.56% at the methane monitor at the outbye end of the LW102 return. The methane levels at this monitor were greater than 2.5% for approximately 17 minutes.

NOTE: At the time of the incident LW102 had retreated around 40 metres retreat since panel commencement.

1. **DATE: 17/01/2018 TIME: 07:20am LOCATION: MG 103 Face road drivage**

Made By: Cec Ivers Company Position: UMM

Made To: Richard Gouldsone Time: 10.30am Date:17/01/2018

Made To: Stephen Woods Time: 10.33am (LM) Date:17/01/2018

A UIS drill rig was working at 25c/t MG 103 and at approx. 4.05am a plug of CH4 measuring 1.25% was recorded at the sensor located 7m inbye of the drillers stub. This sensor tripped all power inbye as it is required taking power away from the MG103 development section shutting down the Auxiliary fans. The fans were bagged ASAP after the trip while the electricians were called to reset power. The N/S ERZC reported 2% CH4 after bagging the fans. At 7.10am the day shift ERZC recorded 1.5% GB in the bleeder road however 2.7% GB at the back of the miner in the face road drivage. The auxiliary fans were restarted and the accumulation cleared immediately. The panel was not manned and there was no production at the time of the incident.

1. **DATE: 26/01/2018 TIME: 01:26am LOCATION: LW102 TG Return**

Made By: Trent Griffiths Company Position: SSE

Made To: Richard Gouldstone Time: 8:04am Date:26/01/2018

Made To: Stephen Woods Time: 8:08am Date:26/01/2018

Whilst producing with shearer cutting from the TG to the MG, the shearer reached 38 roof support when the methane levels in the LW TG Return increased quickly to around to 2.28% at 01:11am (was around 1.85% when shearer cut past midface) at the inbye monitor (located approximately 400 metres outbye of the face). The shearer was stopped immediately. However added with the methane emissions in the TG from the adjacent goaf, this resulted in a peak of 2.52% at the methane monitor at the outbye end of the LW102 return around 15 minutes later. The methane levels at this monitor were greater than 2.5% for approximately 3 minutes.

NOTE: At the time of the incident LW102 had retreated around 180 metres retreat since panel commencement.

1. **DATE: 22/02/2018 TIME: 3:00pm LOCATION: LW102 TG**

Made By: W. Niehaus Company Position: UMM

Made To: Les Marlborough Time: 4:35pm Date:22/02/2018

Made To: Steve Woods Time: 5:22pm Date:22/02/2018

Grosvenor lost incoming power supply at 3:00pm on Thursday the 22nd of February. As a result, the Main Ventilation Fans stopped for a period of approximately 20min.

Upon restarting the Mines Main Ventilation Fans, the CH4 levels in the TG of LW102 reached a maximum of 2.55% for a duration of 75sec. The maximum readings were recorded on the inbye sensor in the TG.

1. **DATE: 4/03/2018 TIME: 6:21am LOCATION: LW102 return inbye monitoring station**

While mining from TG-MG gas levels were 1.8%-1.9%. The Shearer cut out first pass in tailgate and stopped shearer at #126 shield (0455-0503 hrs). The Shearer recommenced cutting and reached #115 shield when outbye conveyor belt went down, immediately after stopping the levels on TG sensor reached 2.33% and rose to 2.55%. Levels stayed above 2.5% for 141 seconds as per the attached graph.

The Current Goaf Drainage system for LW102 relies on goaf wells drilled at 50m spacings to extract CH4 from the active goaf. The current situation has the three Goaf Drainage Holes in the active goaf, clostest to the LW face position not connected through to the active goaf. This situation has resulted in a reduced capacity to extract CH4 and contributed to higher CH4 levels in the TG return roadway.

An Investigation is currently underway to establish the cause of the holes not performing as designed and developing contingency plans to drain additional gas from the LW102 goaf. An IMT process has been established to control the situation and daily meetings are conducted to manage the situation.

Goaf Drainage Update:

The next vertical gaof drainage hole to come online is GR02V008, this hole has been cleared by a work-over drill rig and is currently 8m behind the LW face position (as at 10am 5/3/18) Based on previous experience, the hole is expected to start producing when the LW has retreated 20 to 30m past the hole. (5 - 15m from current location)

1. **DATE: 8/03/2018 TIME: 4:28am LOCATION: LW102 return outbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Richard Gouldstone Time: 8:36pm Date:8/03/2018

Made To: Stephen Woods Time: 8:41pm Date:8/03/2018

While double chocking across the LW102 face the TG gas levels in the return at Sensor 38 (outbye) exceeded 2.5% on two occasions. The first exceedance occurred at 3.13am which recorded 2.53% and remained above 2.5% until 3:17am.

The crew stopped the task of double chocking and waited for the CH4 levels to subside before recommencing the task. Double chocking recommenced and the CH4 levels again exceeded 2.5% at 4:28am reaching a max 2.54% at 4:39am and went below 2.5% at 5:01am.

The LW had been stopped from 1:44am and due to high gas levels in the TG and only produced 5 shears in the previous 12 hours.

1. **DATE: 12/03/2018 TIME10:55pm LOCATION: LW102 return inbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Richard Gouldstone Time: 7:51am Date:13/03/2018

Made To: Stephen Woods Time:7:54am Date:13/03/2018

I was notified of an exceedance of CH4 levels in the TG due to the goaf flushing in around the TG chock at 11:08pm on the 12th March 2018. I sourced the incident report on arrival at work at the first opportunity rang the Inspectorate and ISHR. In preparing the form 1a and downloading the plots I found that the plots, with all the other graph lines as requested, showing that neither sensor displayed greater than 2.5% at or around this time. The report stated that the CH4 reached 2.61% at 10:55pm and stayed at this level for approx. 60secs. I have used the zoomed in plot the CRO generated at 1:26am to show that the inbye sensor did reach 2.61% as an additional plot; the outbye sensor did not seem to change.

1. **DATE: 13/03/2018 TIME 8:09am LOCATION: LW102 return inbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Richard Gouldstone Time: 8:50am Date:13/03/2018

Made To: Stephen Woods Time: 9:07am Date:13/03/2018

At 8:15am this morning I was notified that the LW 102 TG gas levels at the inbye sensor reached 2.87% and the outbye sensor then followed this trend and reached 2.79%, the sensors remained above 2.5% for approx. 9 minutes. The shearer had just completed a 3rd cut in and out of the TG to bring the TG in front of the goaf, due to the poor TG roof conditions. As the crew commenced bringing over the TG chocks a gas flushing event occurred sending a stream of goaf gases over the inbye sensor to 2.87% and followed by the outbye sensor rising to 2.79% approx. 11 mins later. The shearer was stopped at the time and all the TG chocks were brought over to their next position.

The daily TG Gas Management IMT meeting was being held at the time of the notification.

***Goaf Drainage Update:***

***The last vertical goaf drainage hole that did not come online is GR02V008 as expected, this now makes the last 4 drainage holes that have not come on line and investigations are still ongoing. It does appear that in this area there is a clay band that is swelling and blocking the holes, this is yet to be confirmed.***

***The next hole that is due to come on line is GRV02V009 which is is 8m behind the TG. This hole has been redrilled to 10m above the coal seam and is expected to come on line at the 2288 to 2280 chainage. The face position at the time of this report was 2289m.***

***Other holes outbye of the face may be replaced with a holes in the vicinity if time allows. These holes will be fully cased below the troublesome clay band levels. As requested the plots asked for are below.***

1. **DATE: 13/03/2018 TIME 2:55pm LOCATION: LW102 return inbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Richard Gouldstone Time: 3:25m Date:13/03/2018

Made To: Stephen Woods Time: 3:27am Date:13/03/2018

At 2:55pm this afternoon I was notified that the LW 102 TG gas levels at the inbye sensor reached 2.52% and the outbye sensor then followed this trend and reached 2.53%, the sensors remained above 2.5% for approx. 1 minute. The shearer had just completed a 2nd cut in and out of the TG to bring the TG in front of the goaf; the chocks have to move over ASAP due to the poor TG roof conditions. As the crew commenced bringing over the TG chocks a gas flushing event occurred sending a stream of goaf gases over the inbye sensor to 2.52% and followed by the outbye sensor rising to 2.53% approx. 11 mins later. The shearer was stopped at the time and all the TG chocks were brought over to their next position except 149 chock which had a broken shear pin. The shear pin was changed and at 4:20pm chock 149 was brought over in line with the face. This action again caused a flushing issue and the inbye sensor went to 2.53% at 4:23pm. And at 4:36 pm the outbye sensor peaked 2.6% and remained above 2.5% for approx. 8 minutes.

1. **DATE: 13/03/2018 TIME 23:54pm LOCATION: LW102 return inbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Paul Brown Time: 9:15am Date:14/03/2018

Made To: Stephen Woods Time: 9:34am Date:14/03/2018

At 11:54pm the UMM was notified that the LW 102 TG gas levels at the in bye sensor reached 2.76% the sensors remained above 2.5% for approx. 70 seconds. The shearer had just completed a cut in and out of the TG and was parked at #115 shield while the crew commenced bringing over the TG chocks.

A gas flushing event occurred sending a stream of goaf gases over the tailgate gas sensor.

1. **DATE: 14/03/2018 TIME 2:47pm LOCATION: LW102 return outbye monitoring station**

At 2:47pm this afternoon I was notified that the LW 102 TG gas levels at the outbye sensor reached 2.5% and peaked at 2.59% the sensors remained above 2.5% for approx. 45 minutes. The shearer had parked at the MG since 8:40am and maintenance and TG support activities had been undertaken during the shift. At no time did the inbye sensor exceed 2.5%.

This event has been attributed to a goaf fall event that caused the increase in CH4 in the TG roadway. Prior to this event, all persons working in the TG had been removed.

1. **DATE: 14/03/2018 TIME 7:20am LOCATION: LW102 return inbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Paul Brown Time: 9:15am Date:14/03/2018

Made To: Stephen Woods Time: 9:34am Date:14/03/2018

At 7:20am this morning I was notified that the LW 102 TG gas levels at the inbye sensor reached 2.7% and the outbye sensor then followed this trend and reached 2.59%, the sensors remained above 2.5% for approx. 5 minutes. The shearer had just completed a 2nd cut in and out of the TG; the chocks have to move over ASAP due to the poor TG roof conditions. As the crew commenced bringing over the TG chocks a gas flushing event occurred sending a stream of goaf gases into the TG roadway. The shearer was stopped at the time.

1. **DATE: 14/03/2018 TIME 4:51am LOCATION: LW102 return inbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Paul Brown Time: 9:15am Date:14/03/2018

Made To: Stephen Woods Time: 9:34am Date:14/03/2018

An exceedance of >2.5% Methane occurred in the Tailgate roadway with the in bye gas sensors reaching 2.56% for 4 minutes and the out bye gas sensor reaching 2.73% for 5 min.

The ventilation path at the Tailgate at the time of was restricted by poor roof conditions.

1. **DATE: 14/03/2018 TIME 1:29pm LOCATION: LW102 return**

At 1:25pm this afternoon I was notified that the LW 102 TG gas levels at the outbye sensor reached 2.53% the sensors remained above 2.5% for approx. 9 minutes. The shearer had been parked at the Maingate and maintenance and support activities were being carried out during this time. Due to poor roof conditions in the TG roadway, support activities were taking place in this are when the CH4 exceedance was recorded and as a result people were withdrawn for the roadway. The CH4 exceedance was attributed to a goaf fall that caused an increase of gas to be released into the airway.

1. **DATE: 14/03/2018 TIME 3:37am LOCATION: LW102 return inbye monitoring**

Made By: Cec Ivers Company Position: UMM

Made To: Paul Brown Time: 9:15am Date:14/03/2018

Made To: Stephen Woods Time: 9:34am Date:14/03/2018

At 03:37am an exceedance of CH4 occurred in the Longwall 102 return airway while the shearer was cutting out the Tailgate corner of the face.

The inbye gas sensor reached 3.21% Ch4 for a duration of 60 seconds with the out bye sensor reaching 2.75%

1. **DATE: 15/03/2018 TIME 23:18am LOCATION: LW102 return inbye monitoring station**

Made By: Cec Ivers Company Position: UMM

Made To: Richard Gouldstone Time: 07:31am Date:16/03/2018

Made To: Stephen Woods Time: 07:53am Date:16/03/2018

An exceedance of >2.5% Methane occurred in the Longwall 102 tailgate roadway for 33 minutes with a peak reading of 2.62% CH4 being recorded. The Longwall was not producing and at the time of the exceedance. The ventilation path at the Tailgate drive was restricted by the goaf flushing over running the tailgate shield.

The AFC was started at 11:37pm reducing the obstruction of airway and increasing the ventilation flow reducing the Tailgate gas level back below 2.5%.

*Goaf Drainage Update:*

*The last 5 drainage holes that have not come on line and investigations are still ongoing. It does appear that in this area there is a clay band that is swelling and blocking the holes, this is yet to be confirmed.*

*The next hole due to come on line is GRV02V009 which is is 21m behind the TG. This hole has been redrilled to the top of the coal seam on the 15/3/18 and intersected a void approximately 1m above the target depth of the hole.*

*The face position at the time of this report was 2276m.*

*Pressure was observed in the casing at 350Kpg and bleed down out through 2” ball valve over a 6 minute time frame.*

*Seamgas set up skid on bore hole, the skid was left shut in and the bore hole pressure was monitored.*

*The pressure in the bore hole increased and the hole was placed on suction.*

*Flow from the well was observed in a short spike and dropped off to 16Lps.*

*12000L of water was flushed down bore hole to attempt to clear blockage.*

*Bore hole was placed back on suction with limited flow to surface (7-12Lps flow****).***

*Bore hole currently on suction and will be monitored by seamgas overnight****.***

1. **DATE: 22/03/2018 TIME 2015 to 2100 LOCATION: LW102 return inbye and outbye sensors**

Made By: Cec Ivers Company Position: UMM Phone: 0748403514

Made To: Richard Gouldstone Time: 12:35pm Date:22/03/2018

Made To: Stephen Woods Time: 12:40pm Date:22/03/2018

After cutting out tailgate once (Shearer located back at #130 shield) the TG roof flushed to the TG drive, restricting the ventilation, leading to goaf flush >2.5% CH4. The operator brought in tailgate over and roof flushed in 1.5m in front of face, with a small ventilation path left open, causing the 2nd flushing event. At the same time a load noise was witnessed at the crusher, so chain was turned off to investigate. Tailgate choked off further causing another exceedance of >2.5% again.

1. **DATE: 1/04/2018 TIME 2.27am LOCATION: LW102 return outbye sensors**

Made By: Cec Ivers Company Position: UMM

Made To: Robert Sherwood Time: 9:12am Date:1/04/2018

Made To: Stephen Woods Time: 9:00am Date:1/04/2018

The shearer was cutting into the TG after stopping at the stop zone, they cut into the TG and out and 13 mins later the outbye sensor jumped to 2.5% exactly and remained at this level for approx. 45 to 50 seconds before dropping down to 2.11% after 10 mins. The barometer had been falling a the time and

1. **DATE: 5/04/2018 TIME 1:16am LOCATION: LW102 return outbye sensor**

Made By: Cec Ivers Company Position: UMM

Made To: Les Marlborough Time: 8:38am Date:5/04/2018

Made To: Stephen Woods Time: 8:42am Date:5/04/2018

At 1:16am the outbye sensor in the LW102 TG reached and went above 2.5% and remained above 2.5% till 2:10am. The LW was not cutting at the time due to a dual feed power trip from the TX. At the same time as the exceedance Goaf well 11 which is approx. 155m behind the face experienced a sudden small increase in flow and a large increase in CH4 and then blocked up and had to be stopped to be cleaned. This would suggest that there was significant goaf event some distance behind the face, the face has retreated a total 745m from start up.

1. **DATE: 21/04/2018 TIME 1:13am LOCATION: LW102 return outbye sensor**

Made By: Cec Ivers Company Position: UMM Phone: 0748403514

Made To: Matt Kennedy Time: 8:57am Date:21/04/2018

Made To: Stephen Woods Time: 3:47pm Date:21/04/2018

At 1:13am the inbye sensor reached a maximum of 2.53% for a period of 30 seconds. At the time the shearer was at chock 139# heading into the TG for the first time. The TG was hanging up approximately 5-6m behind 149# prior to exceedance. The Goaf flushed to rear of 149# pushing air into the TG air stream. The mid panel Sensor at 15-16c/t only reached 2.24% at time of exceedance. Inbye sensor proved to be reading OK. Inbye sensor is at chainage 1503m. TG face position was 1840m at time of exceedance. Goaf well V017 pulling 865 l/s. Goaf well V018 at chainage 1850m only reading 29 l/s.

1. **DATE: 14/05/2018 TIME 9:48pm LOCATION: LW102 return inbye sensor**

Made By: Wouter Niehaus Company Position: UMM

Made To: Les Marlborough Time: 7:09am Date:15/05/2018

Made To: Stephen Woods Time: 7:03am Date:15/05/2018

During N/S on the 14th of May a goaf flushing event and a cavity on the LW face caused a restriction in the ventilation pathway on the LW102 face. The TG roadway flushed in level with the TG Shield (149) and the cavity was located above Shields 144 to 149. When shearer opened the airway, it resulted in the goaf gas flushing out and causing a spike in CH4 on sensor in return roadway. During the process of opening the airway on the LW face; three CH4 exceedances greater than 2.5% in TG 102 return on the inbye sensor were recorded. The 1st spike was at 21:48hrs (Peaked at 2.72% and was greater than 2.5% for a period of 1min 11s), 2nd spike occurred at 00:07hrs (Peaked at 3.22% and was greater than 2.5% for a period of 8min 26s) and the 3rd spike is at 00:39hrs (Peaked at 3.61% and was greater than 2.5% for a period of 2min 51s)

*Wouter*

*I would question a couple of things with this incident.*

*1 I believe this should be reported as an HPI not as an NRI. This more than a simple goaf fall and a flush of methane out of the goaf. There are 3 events that together cover a longer time span that the spikes. The second spike lasted longer than 8 minutes.*

*2 The first event happened at 9:48 PM on the evening of 14 May. Did the people on shift notify you of the Methane greater than 2.5% at that time and for each of the other 2 events?*

*3 After the first event occurred was there any risk management process used to re-open the airway into the TG and the potential for Methane greater than 2.5% to occur?*

*4 Was an IMT formed as per the GB Contaminants TARP?*

*5 Was this IMT documented? If so, could you send me a copy of the IMT Minutes/Actions?*

*6 Please could you send me a copy of the current TARP for GB Contaminants that is relevant for LW TG Gas Management?*

*Regards*

*Les Marlborough*

*Regional Inspector of Mines*

*Mackay*

*Hello Les,*

*In answer to your questions,*

*1. Please find attached revised HPI notification*

*2. I was notified of all three events.*

*3. After the first event we (The undermanager and myself) did discuss that there might be a potential to have additional exceedances if the ventilation is choked off again and as such the Undermanager went to the LW to oversee the activity. I am not aware of any formal risk management process followed.*

*4. Yes, the undermanager (Richard Whatman) on shift formed an IMT.*

*5. The IMT formed by the Undermanager was not documented. We have another IMT meeting scheduled for 3:30pm this afternoon and I will forward the meeting minutes to you when completed.*

*6. Please find attached the relevant GB TARP.*

*Regards*

*Wouter*

1. **DATE: 29/10/2018 TIME:2:50 LOCATION:MG104 22-23ct 60m CH**

Made By: W. Niehaus Company Position: UMM

Made To: Les Marlborough Time: 9:18am Date:29/10/2018

Made To: Steve Woods Time: 8:35am Date:29/10/2018

An incident occurred in MG104 Development Panel on the 29th of October at approximately 2:50am. The Continuous Miner was producing in C Hdg 22-23ct and was 60m from the last open C/T.

Miner at the face completed the cut cycle and started bolting with the Shuttle car at the boot end when a release of gas / floor heaved behind the C/M. (reading greater than 2.5 % recorded on the Miner Drivers PGD). The C/M tripped power correctly.

Floor heave could be observed after the event in the area from the 45 -50m mark up to the back end of the C/M.

*The area was quarantined and an investigation into the matter was commenced with the following actions completed:*

*Information gathered from the hand-held monitors on the miner,*

*Geotechnical inspection of the area completed,*

*Continuous miner de-gassed,*

*Preliminary findings indicate the following:*

*CH4 Background – 0.2% CH4*

*CH4 Peak at Panel Dogleg – 0.5% CH4*

*CH4 Generated – 132m³*

**27)** **DATE: 3/11/2018 TIME:12:15am LOCATION: MG104 B Hdg 22-23ct 60m CH**

Made By: W. Niehaus Company Position: UMM

Made To: John Kabel Time: 7:41am Date:3/11/2018

Made To: Jason Hill Time: 7:56am Date:3/11/2018

An incident occurred in MG104 Development Panel on the 3rd of November at approximately 12:15am. The Continuous Miner was producing in B Hdg 22-23ct and was approximately 60m from the last open C/T. The CM operator noticed a smell and noted that the CH4 sensor on the heads accelerated very quickly and tripped power to the CM. At this time the men retreated back to fresh air. The CM operator checked his Personal Gas Detector for peaks and noted a peak of 3.25% CH4 and 8 ppm H2S.

The ERZ controller conducted his inspection and found that the GB behind the CM was 0.3%, he found max layering of 0.5% CH4 at the CM. On Chris’s way back to the intersection he found fresh cracking on the floor from approx. the 25-50m mark.

At 12:30am the outbye general body gas sensor at the dogleg read a peak of 0.6% CH4.

Prior to recommencing production the CM was checked for gas (no purging required) and a venturi blowing towards the affected area was set up.

*The controls implemented for this hazard was to minimise the coal floor and conduct targeted gas drainage in the lower part of the GM seam below the Tonstein Band. Both controls were checked and found to have been implemented.*

*The area was quarantined and an investigation into the matter was commenced with the following actions completed:*

*Information gathered from the hand-held monitors on the miner,*

*Geotechnical inspection of the area completed,*

*Continuous miner de-gassed,*

*Preliminary findings indicate the following: CH4 Background – 0.2% CH4*

*CH4 Peak at Panel Dogleg – 0.6% CH4*

1. **DATE: 9/11/2018 TIME:12:55am LOCATION: MG104 B Hdg 22-23ct 140m CH**

Made By: W. Niehaus Company Position: UMM

Made To: Les Marlborough Time: 3:36pm Date:9/11/2018

Made To: Jason Hill Time: 3:38pm Date:9/11/2018

An incident occurred in MG104 Development Panel on the 9th of November at approximately 12:55am. The Continuous Miner was producing in B Hdg 22-23ct and was approximately 140m from the last open C/T. The crew on the continuous miner were conducting bolting activities when an increase in CH4 was noted. At this time the men retreated back to fresh air. The Gas Detector at the continuous miner recorded a peak reading of 3.6% CH4.

The outbye general body gas sensor at the dogleg read a peak of 0.36% CH4.

Prior to recommencing production the CM was checked for gas (no purging required) and the area was mapped for floor heave / cracking and geological structures,

*The controls implemented for this hazard was to minimise the coal floor and conduct targeted gas drainage in the lower part of the GM seam below the Tonstein Band. Both controls were checked and found to have been implemented.*

*Following the previous event additional controls were implemented to minimise the impact od any further events.*

*All coal in the floor has been mined out to leave only stone in the floor,*

*An additional auxiliary fan and vent line was installed to increase the ventilation at the face Additional hand held gas detectors placed at the face to capture gas data.*

*The area was quarantined and an investigation into the matter was commenced with the following actions completed:*

*Information gathered from the hand-held monitors on the miner,*

*Geotechnical inspection of the area completed,*

*Continuous miner de-gassed,*

*Preliminary findings indicate the following:*

*CH4 Background – 0.2% CH4*

*CH4 Peak at Panel Dogleg – 0.36% CH4*

**28)** **DATE: 23/11/2018 TIME:3:35pm LOCATION: MG104 24ct**

Made By: W. Niehaus Company Position: UMM

Made To: Peter Herbert Time: 7:38pm Date:23/11/2018

Made To: Jason Hill Time: 7:44pm Date:23/11/2018

An incident occurred in MG104 Development Panel on the 23rd of November at approximately 3:35pm. The Continuous Miner was producing in 24ct and was approximately 5m into the break off from C Hdg. A floor heave event occurred releasing CH4 gas into working face in MG104. The Gas release event caused the Continuous Miner to trip power on the GB gas sensor.

Hand held Gas Detector at the continuous miner recorded peak readings of 3.1% CH4 while the second unit presented an off scale reading.

The outbye general body gas sensor at the dogleg read a peak of 0.43% CH4. Ventilation at working face with both aux fans running was 29m3sec

*The area was quarantined and an investigation into the matter was commenced with the following actions completed:*

*Information gathered from the hand-held monitors on the miner,*

*Inspection of the area completed,*

*Continuous miner de-gassed,*

*Additional UIS Flanking holes are in the process of being drilled to investigate the drilling as a possible control for the gas release events*

1. **DATE: 1/12/2018 TIME: 2:28pm LOCATION: MG104 B Hdg 23-24ct**

Made By: W. Niehaus Company Position: UMM

Made To: Cres Bulger Time: 4:16pm Date:1/12/2018

Made To: Steve Woods Time: 4:21pm Date:1/12/2018

An incident occurred in MG104 Development Panel on the 1st of December at approximately 2:28pm. The Continuous Miner was producing in B Hdg 23-24ct and was approximately 66m from the last open ct. A floor heave event occurred releasing CH4 gas into working face in MG104. The Gas release event caused the Continuous Miner to trip power on the GB gas sensor.

Hand held Gas Detector at the continuous miner recorded peak readings of 1.1% CH4 while the second unit presented an offscale reading.

The outbye general body gas sensor at the dogleg read a peak of 0.34% CH4. Ventilation at working face with both aux fans running was 29m3sec

*The area was quarantined and an investigation into the matter was commenced with the following actions completed:*

*• Information gathered from the hand-held monitors on the miner,*

*• Inspection conducted by geotechnical engineer and area mapped,*

*• Continuous miner de-gassed,*

*• Additional UIS Flanking hole in B Hdg has been completed. The proximity of the drainage hole to B Hdg drilled from 22ct will only be at the designed location from 24ct inbye as per the attached plan.*