

DONALDSON COAL

ABEL MINE

SMP Area 2

Mine Design SMP Compliance Audit

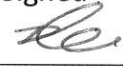


Panel 21

Document Control

Description

Document No.	
Title	Mine Design SMP Compliance Audit
General Description	Plan for the control of mining to meet the mine design specifications as documented in the approved Abel Mine - Subsidence Management Plan.
Key Support Documents	<ul style="list-style-type: none"> • Abel Mine - Subsidence Management Plan Application • Abel Mine - Subsidence Management Plan DTIRIS Approval Letter • Abel Mine - Subsidence Management Plan: Surface Subsidence Monitoring Program • Abel Mine - Subsidence Management Plan: Underground Subsidence Monitoring Program

Approvals

ORIGINATOR	Name Daniel Lee	Position Registered Surveyor	Signed 	Date 15/7/13
REVIEWED	Name Matthew Wright	Position Registered Mine Surveyor	Signed 	Date 15/7/13
APPROVED	Name Tony Sutherland	Position: Technical Services Manager – Underground Operations	Signed 	Date 15/7/13

Revisions

Version #	Date	Description	By	Checked	Approved	
					Name	Signed
1	3/07/13	Full review & document control	DL	Grant Lord	Tony Sutherland	

Consultation

Version#	Date	Name	Position

The nominated Coordinators for this document is	Technical Services Manager - Underground Operations
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1. Introduction

This internal compliance audit checklist has been developed to confirm that mining complies with the Department of Trade & Investment, Regional Infrastructure & Services (DTIRIS) approved Subsidence Management Plan (SMP) as per Condition 22 of the Abel Mine Area 2 SMP Variation approval dated 3/9/12 (Ref OUT 12/21626).

The results of the audit are to be reported to the Inspector of Coal Mines and the Principal Subsidence Engineer within three months of completion of each panel.

2. Definitions

Active Mining Zone (AMZ) report - A report completed by the Panel Team Leader (Deputy) and countersigned by the Area Leader (Shift Undermanager) detailing lifts taken, hazards identified, tell-tale information and comments on conditions and actions taken.

Authority to Mine (ATM) Plan - A plan prepared by the Tech Services Dept and approved by the Production Manager showing lifts to be taken, mine hazards, borehole information, lift depths, stooks, remnant pillar sizes and sequence of extraction.

Pre Extraction Mining Review - A review conducted by the Technical Services team checking that approvals, plans and training are in place prior to extraction commencing.

Risk Assessments - The overall process of risk analysis, evaluation and controls.

Subsidence Control Zones (SCZ) – Areas designated for control of subsidence to protect sensitive surface features.

Trigger Action Response Plan (TARP) - A TARP is a system under which pre-determined actions are initiated in response to risk triggers. For example, an increase in roof bolting density may occur in response to the presence of a fault being encountered.

Weekly Pillar Extraction Audits – A weekly audit of pillar extraction panels undertaken by the shift Area Leader, Technical staff and other members of the workforce. The audit aims to ensure compliance with the mine's Work Health and Safety Management Systems and to identify and manage hazards in the production area.

3. Checklist

SMP Criteria	Monitoring	Audit	Audit Results
<i>"The Leaseholder must ensure that the proposed mining be controlled to meet the mine design specifications, as documented in the SMP"</i>			
Lift depths to confirm remnant pillar size	<p>Shown on ATM plan</p> <p>Team Leaders sign off on AMZ report showing lifts taken and tell-tale information</p> <p>Surveyor's inspections and goaf surveys</p> <p>WHSMS 7.1 Inspection System</p> <p>Weekly pillar extraction audit checked by Geotechnical representative</p>	<p>Daily review of AMZ reports by Undermanager and Technical Services team members & signed off by Area Leader at end of shift</p> <p>Record of AMZ's, Surveyor inspections and goaf surveys used to update mine plan</p> <p>Folder of all weekly pillar extraction audits kept on file</p>	In Compliance
Approved Surface Subsidence monitoring program	Monitoring of panel subsidence, tilts, strains	<p>Registered Mine Surveyor to:</p> <ul style="list-style-type: none"> • confirm compliance with approved program • Checking results against predictions • Notification as per TARP and approval conditions 	In Compliance

SMP Criteria	Monitoring	Audit	Audit Results
Approved Underground Subsidence Monitoring Program	Monitoring of tell-tale extensometers WHSMS 7.1 Inspection System Weekly pillar extraction audit checked by Geotechnical representative	Daily review of AMZ reports by Area Leader and Technical Services team members & signed off by Area Leader at end of shift Tell-tales recorded on AMZ reports as part of statutory inspections Folder of all weekly pillar extraction audits kept on file	In Compliance
Training	Pre extraction training on importance of design including lift depth, angle, SCZ's, stook and remnant pillar dimensions etc	Training registers Confirm appropriate personnel trained	In Compliance
SCZ's	SCZ, including exclusion zones identified on approved plan are replicated on to ATM plans Displayed in the surface operation room and icentre Underground section plan displayed in crib room	Confirmed by Registered Mine Surveyor	In Compliance Exclusion zones set up around Proposed Catholic School Church Development

SMP Criteria	Monitoring	Audit	Audit Results
Depth of cover (restriction on mining) No extraction less than 50m No first workings less than 30m	Surface and underground surveys to confirm depth of cover	Confirm surveys conducted Depth of cover greater than 50m for entire panel	In Compliance
Mark up Stook X, Y and roadway centrelines	Stooks marked up prior to extraction Offline roadway centrelines marked	WHSMS 7.1 Inspection System Weekly pillar extraction audit	In Compliance
Risk assessments (including SMP and CL88)	Additional controls applicable to panel	Confirm any required controls implemented	In Compliance

4. Subsidence Results Summary

PANEL 21			
	Predicted	Measured as of 16/05/2013	Comment
Subsidence	< 0.150m	0.058m	Measured subsidence < prediction

5. Audit Summary

Overall the design and implementation of the internal controls appears to be appropriate and no inappropriate activity was noted.

It can be concluded that mining in Panel 21 at Abel Mine has been undertaken in accordance with the mine design specifications.

6. Appendices

Appendix A: Panel 21 Active Mining Zone (AMZ) Report Examples

Crew: 3 Panel: 21 Shift: (N) D A Sequence Start: 127 Sequence End:

The pillar extraction hazard identification process is to be completed by the panel team leader in addition to other routine inspections.

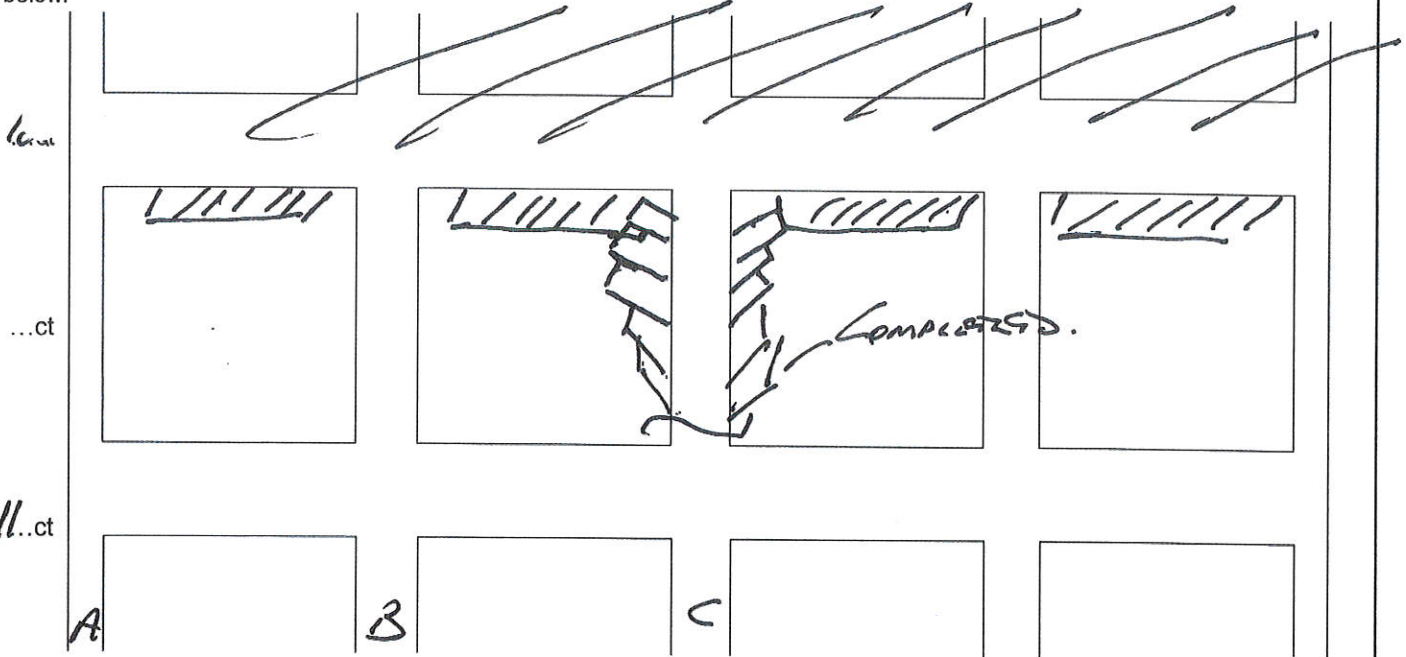
WHERE	WHEN	INITIAL	TIME
1. The roadway to be extracted during shift	Prior to extraction	<i>AB</i>	10.45
2. The roadway to be extracted next	During shift	<i>AB</i>	10.45
3. The wheeling roads	During shift	<i>AB</i>	10.45

HAZARDS IDENTIFIED

Coal Tops <input checked="" type="checkbox"/>	Joints	Cornices	Floor Heave	Rib Height
Broken Roof	Gutters <input checked="" type="checkbox"/>	Faults	Dykes	Coal Cleat
Cutters	Rib Spall <input checked="" type="checkbox"/>	Soft Floor	Soft Roof	Greasybacks
Tell-tale	Bolt Loading	Off-centre Driveage	Housekeeping	

RISK ASSESSMENT

When any of the above hazards are identified the hazard is to be assessed. If the assessed risk is unacceptable the hazard is to be identified and communicated then eliminated or controlled. Briefly detail actions following risk assessment in the comments section below.



Rib-line distance from intersection centre at start of shift: Rib-line distance from intersection centre at end of shift:
 Fl. coal taken Y/N estimated extraction height at back of lift:m

Comments / Actions Taken:

NO FALLS DURING SHIFT
NO FALLS AT EOS.

COMPLETED < HDG 11-12 cft.

Tell-tale information			
Location	Time	Total	Lower

Goafing / Caving Estimates:
 estimation standing ALL
 estimation coal left behind MINIMAL
 estimation dilution MINIMAL.

Offgoing Team Leader Signature *[Signature]* Date 9.1.13
 Oncoming Team Leader Signature Date Area Leader Signature *[Signature]* Date 9.1.13

3519

FRM 2.4.2

Crew: A/S Panel: 21 Shift: N D A Sequence Start: 4.5 Sequence End:

The pillar extraction hazard identification process is to be completed by the panel team leader in addition to other routine inspections.

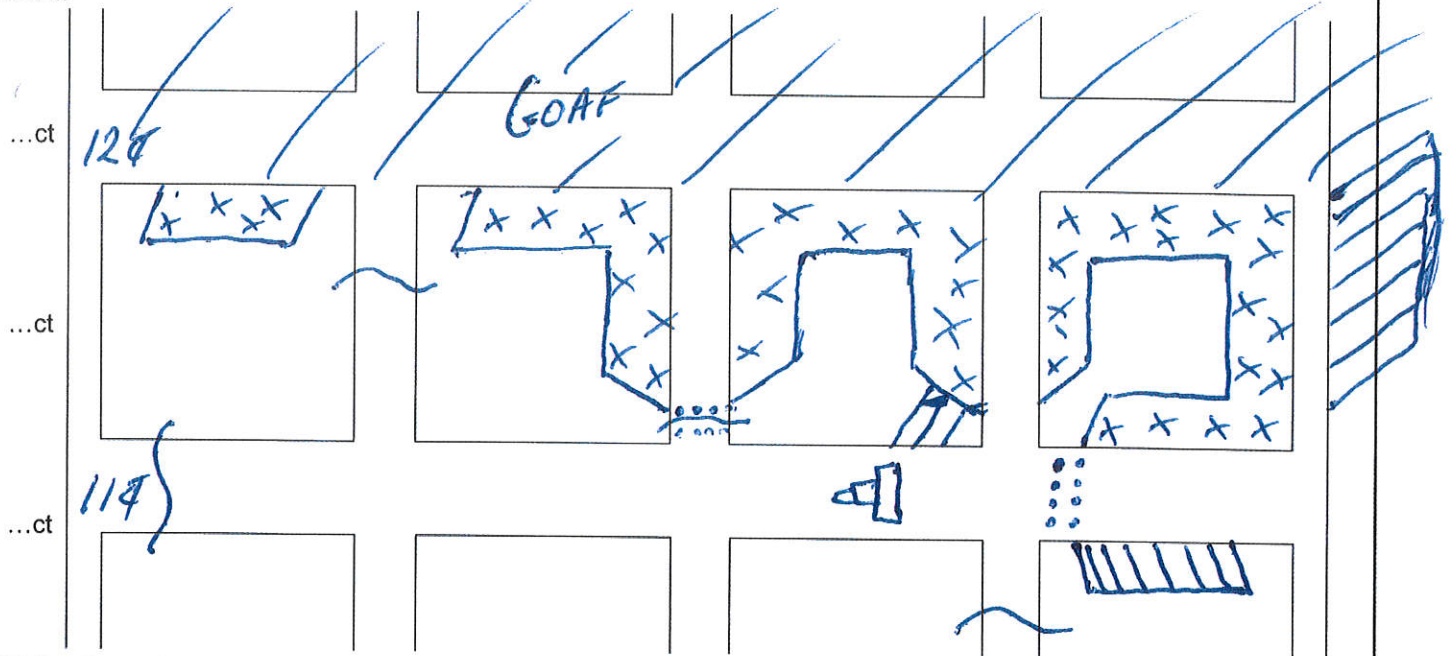
WHERE	WHEN	INITIAL	TIME
1. The roadway to be extracted during shift	Prior to extraction	<u>AL</u>	<u>3:45</u>
2. The roadway to be extracted next	During shift	<u>AL</u>	<u>3:45</u>
3. The wheeling roads	During shift	<u>AL</u>	

HAZARDS IDENTIFIED

Coal Tops <input checked="" type="checkbox"/>	Joints	Cornices <input checked="" type="checkbox"/>	Floor Heave	Rib Height <input checked="" type="checkbox"/>
Broken Roof	Gutters	Faults	Dykes	Coal Cleat
Cutters	Rib Spall <input checked="" type="checkbox"/>	Soft Floor	Soft Roof	Greasybacks
Tell-tale	Bolt Loading	Off-centre Driveage	Housekeeping	

RISK ASSESSMENT

When any of the above hazards are identified the hazard is to be assessed. If the assessed risk is unacceptable the hazard is to be identified and communicated then eliminated or controlled. Briefly detail actions following risk assessment in the comments section below.



Rib-line distance from intersection centre at start of shift: Rib-line distance from intersection centre at end of shift:

Floor coal taken / N estimated extraction height at back of lift:m

Comments / Actions Taken:

NO FALLS DURING SHIFT.

Tell-tale information

Location	Time	Total	Lower

Goafing / Caving Estimates:

estimation standing ALL
 estimation coal left behind MIN
 estimation dilution MIN.

Offgoing Team Leader Signature: [Signature] Date: 11-1-13.

Oncoming Team Leader Signature: Date: Area Leader Signature: [Signature] Date: 11-1-13

4031

FRM 2.4.2

Crew: 3 Panel: 21 Shift: **N** D A

Sequence Start: 59 Sequence End: 64

The pillar extraction hazard identification process is to be completed by the panel team leader in addition to other routine inspections.

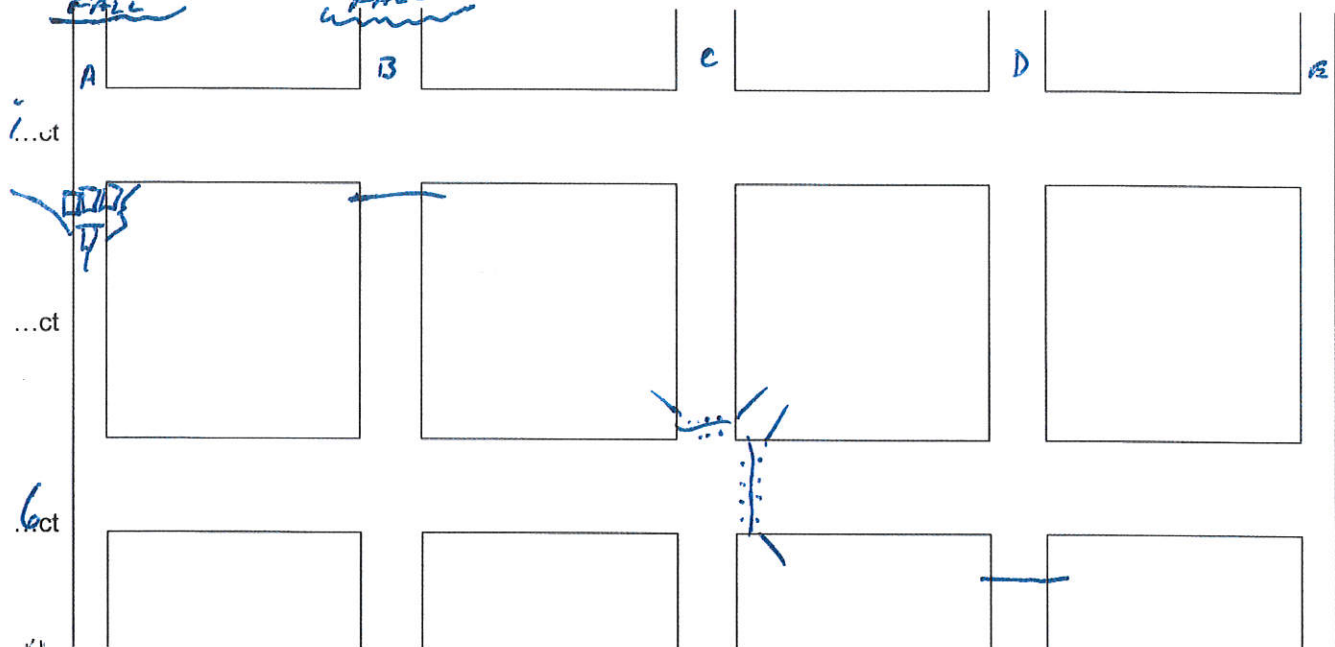
WHERE	WHEN	INITIAL	TIME
1. The roadway to be extracted during shift	Prior to extraction	CP	10:15
2. The roadway to be extracted next	During shift	CP	10:25
3. The wheeling roads	During shift	CP	10:35

HAZARDS IDENTIFIED

Coal Tops	Joints	Cornices	Floor Heave	Rib Height <input checked="" type="checkbox"/>
Broken Roof	Gutters	Faults	Dykes	Coal Cleat
Cutters	Rib Spall <input checked="" type="checkbox"/>	Soft Floor	Soft Roof	Greasybacks
Tell-tale	Bolt Loading	Off-centre Driveage	Housekeeping	

RISK ASSESSMENT

When any of the above hazards are identified the hazard is to be assessed. If the assessed risk is unacceptable the hazard is to be identified and communicated then eliminated or controlled. Briefly detail actions following risk assessment in the comments section below.



Rib-line distance from intersection centre at start of shift: Rib-line distance from intersection centre at end of shift:
 Fl coal taken Y/N estimated extraction height at back of lift:m

Comments / Actions Taken:

3x GOAF FALL DURING SHIFT BETWEEN
 7ct AND 8ct B HDG
 POOR RIBS AT C HDG 6ct INTERSECTION
 RIBS SPALLING ON RUN INS

Tell-tale information

Location	Time	Total	Lower

Goafing / Caving Estimates:

estimation standing **MOST**
 estimation coal left behind
 estimation dilution

Offgoing Team Leader Signature: *C.P.* Date: 28-2-13

Oncoming Team Leader Signature: Date: Area Leader Signature: *S.M.J.* Date: 28-2-13

Pillar Extraction - Active Mining Zone Report

4347

FRM 2.4.2

Crew: ALS Panel: 21 Shift: N D (A)

Sequence Start: 109 Sequence End: 113

The pillar extraction hazard identification process is to be completed by the panel team leader in addition to other routine inspections.

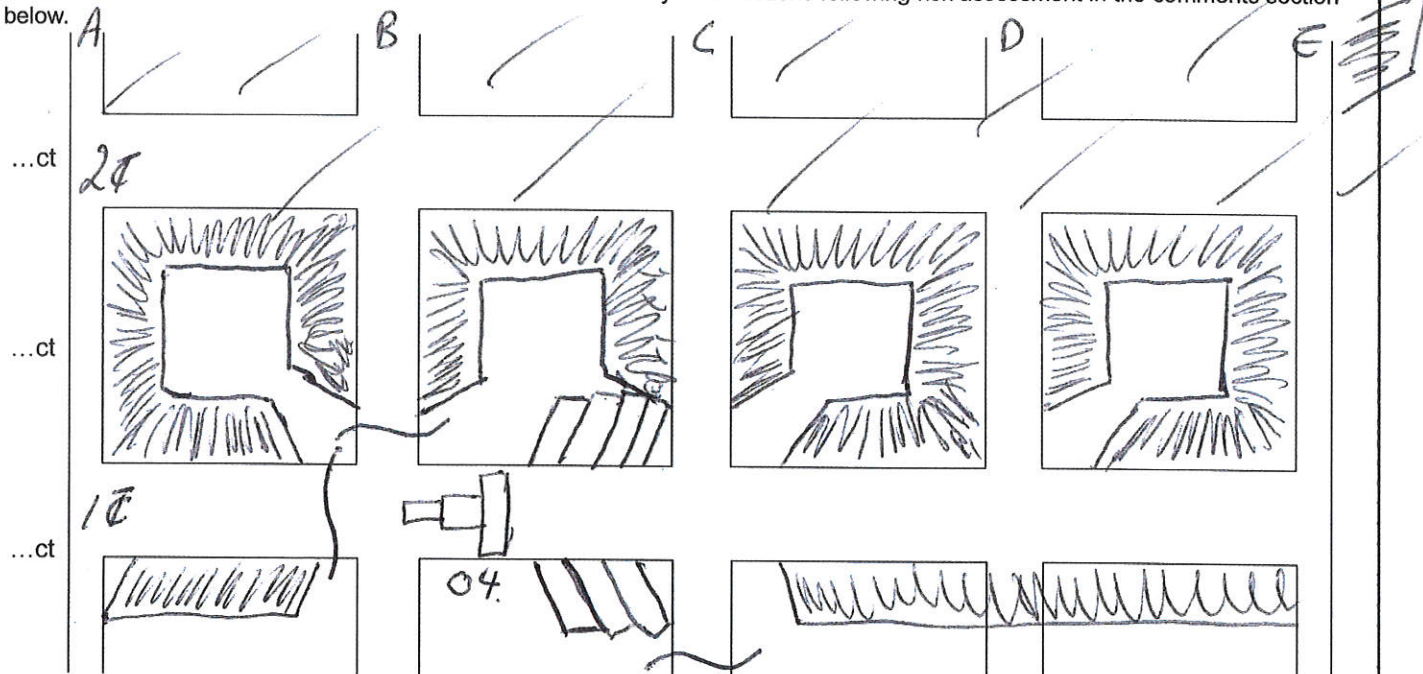
WHERE	WHEN	INITIAL	TIME
1. The roadway to be extracted during shift	Prior to extraction	<u>J</u>	<u>4:30pm</u>
2. The roadway to be extracted next	During shift	<u>J</u>	<u>4:25pm</u>
3. The wheeling roads	During shift	<u>J</u>	<u>4:20pm</u>

HAZARDS IDENTIFIED

Coal Tops <input checked="" type="checkbox"/>	Joints <input type="checkbox"/>	Cornices <input checked="" type="checkbox"/>	Floor Heave <input type="checkbox"/>	Rib Height <input checked="" type="checkbox"/>
Broken Roof <input type="checkbox"/>	Gutters <input type="checkbox"/>	Faults <input type="checkbox"/>	Dykes <input type="checkbox"/>	Coal Cleat <input checked="" type="checkbox"/>
Cutters <input type="checkbox"/>	Rib Spall <input checked="" type="checkbox"/>	Soft Floor <input type="checkbox"/>	Soft Roof <input type="checkbox"/>	Greasybacks <input type="checkbox"/>
Tell-tale <input type="checkbox"/>	Bolt Loading <input type="checkbox"/>	Off-centre Driveage <input type="checkbox"/>	Housekeeping <input type="checkbox"/>	

RISK ASSESSMENT

When any of the above hazards are identified the hazard is to be assessed. If the assessed risk is unacceptable the hazard is to be identified and communicated then eliminated or controlled. Briefly detail actions following risk assessment in the comments section below.



Distance from intersection centre at start of shift: Rib-line distance from intersection centre at end of shift:
 Floor coal taken (Y/N) estimated extraction height at back of lift:m

Comments / Actions Taken:

NO FALLS S-O-S. CAUTION WITH RIBS SLABBING OFF
NO FALLS MID SHIFT. IN CLEAT DIRECTION BAR DOWN AS
NO FALLS E-O-S. REQUIRED.

Tell-tale information

Location	Time	Total	Lower

Goafing / Caving Estimates:

estimation standing ALL.
 estimation coal left behind MIN
 estimation dilution MIN.

Offgoing Team Leader Signature: J. Bell Date: 17-4-13

Oncoming Team Leader Signature: Date: Area Leader Signature: [Signature] Date: 17.4.13

Appendix B: Panel 21 Authority to Mine (ATM) Plan Examples

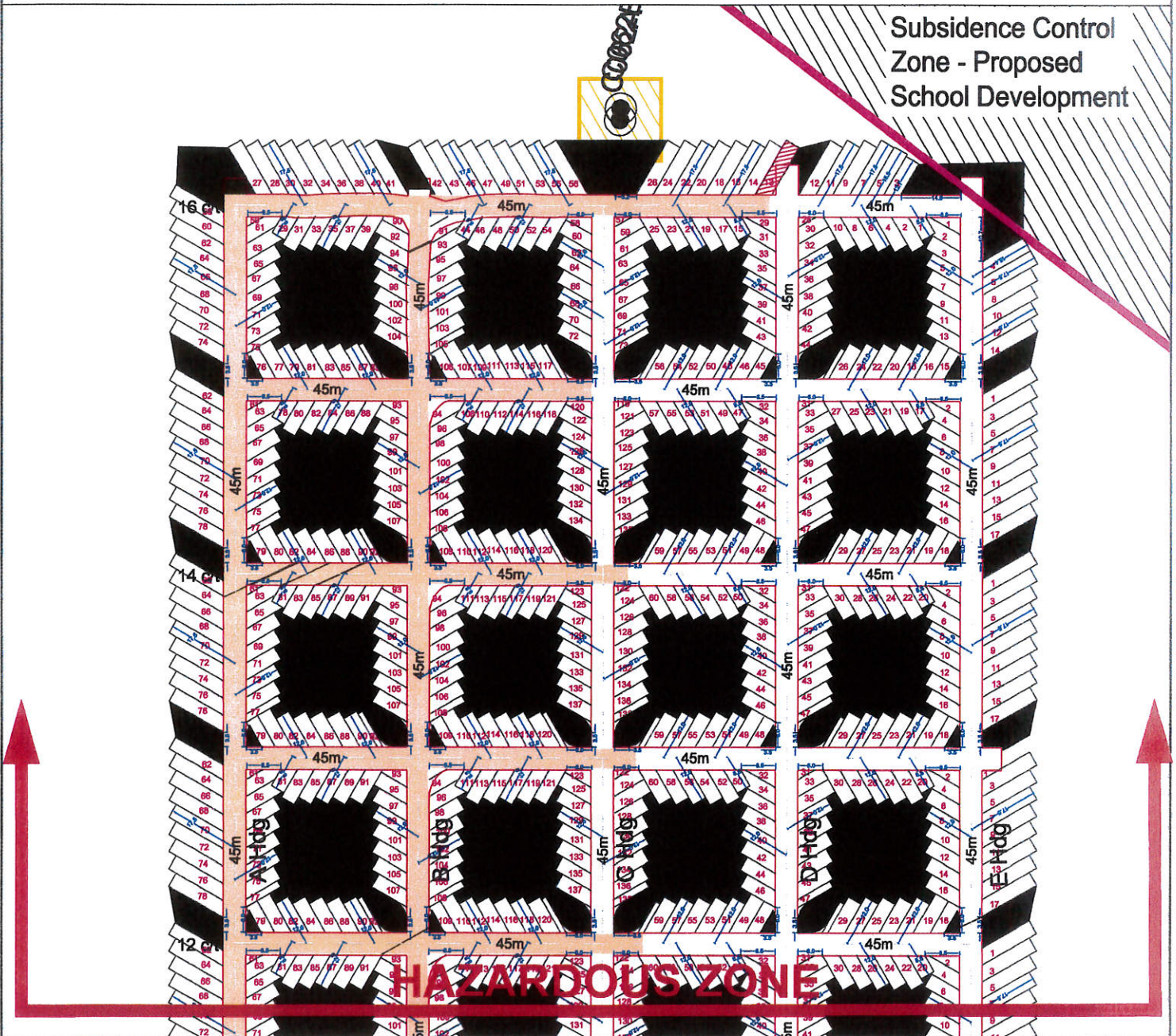
Authority to Mine Plan - Panel 21 (16c/t to 12c/t)



- This Authority to Mine should be read in conjunction with the following plans:
- Panel 21 - Lifting Sequence and Support Rules - a6b2013.dwg (plan 2 of 10).
- Panel 21 - Pillar Extraction Supporting Disturbed Roof - a6b2013.dwg (plan 5 of 10).

- "If it is considered that the method or sequence of extraction of a particular pillar as laid down by the Manager of Mining Engineering is inappropriate, an Area Leader may authorise a variation to the Manager's procedures. This can only be undertaken after the particular Area Leader personally inspects the site for the specific purpose and issues a written directive fully detailing the variations to the Manager's procedures. A Team Leader cannot vary the Manager's procedures. The Area Leader issuing the variation shall as soon as practical inform and provide the Manager with a written copy of such variation".

- The Team Leader has the authority to stop an operation or withdraw machinery if, based on his judgement, continued mining would create an unsafe condition. If such a decision leads to the need for a variation to the approved plan then production should not recommence until a more senior mining supervisor has inspected the site.



KEY:

- Coal lift (width 3.6m - CM101 or 4.0m - CM05) depth of lift is as per Approved Plan - a6b2013.dwg (plan 2 of 10)
- Stooks to be left
- Coal to be left for the purpose of providing additional ground support to geological anomalies
- Coal web to be left for the purpose of providing ground support and to stop goaf flushing into current lifting area (no greater than 1.0m width)

- Additional caution required in area
 - Additional 4m Tendons to be installed
 - Condition ORANGE support installed
 - Condition RED support installed
- NOTE:** Where no support is shown on plan it is deemed to be Condition GREEN support
- a key for these symbols can be found on the geological condition plan

Panel 21 - 16c/t to 12c/t

SCALE : 1:1000 @ A3	DWG No. : ATM_P21.dwg
DRAWN : M. Wright	REVISION : 1
CHECKED :	DATE : 7th November 2012
APPROVED : D. Wrightson	

Authority to Mine Plan - Panel 21 (6c/t to 2c/t)

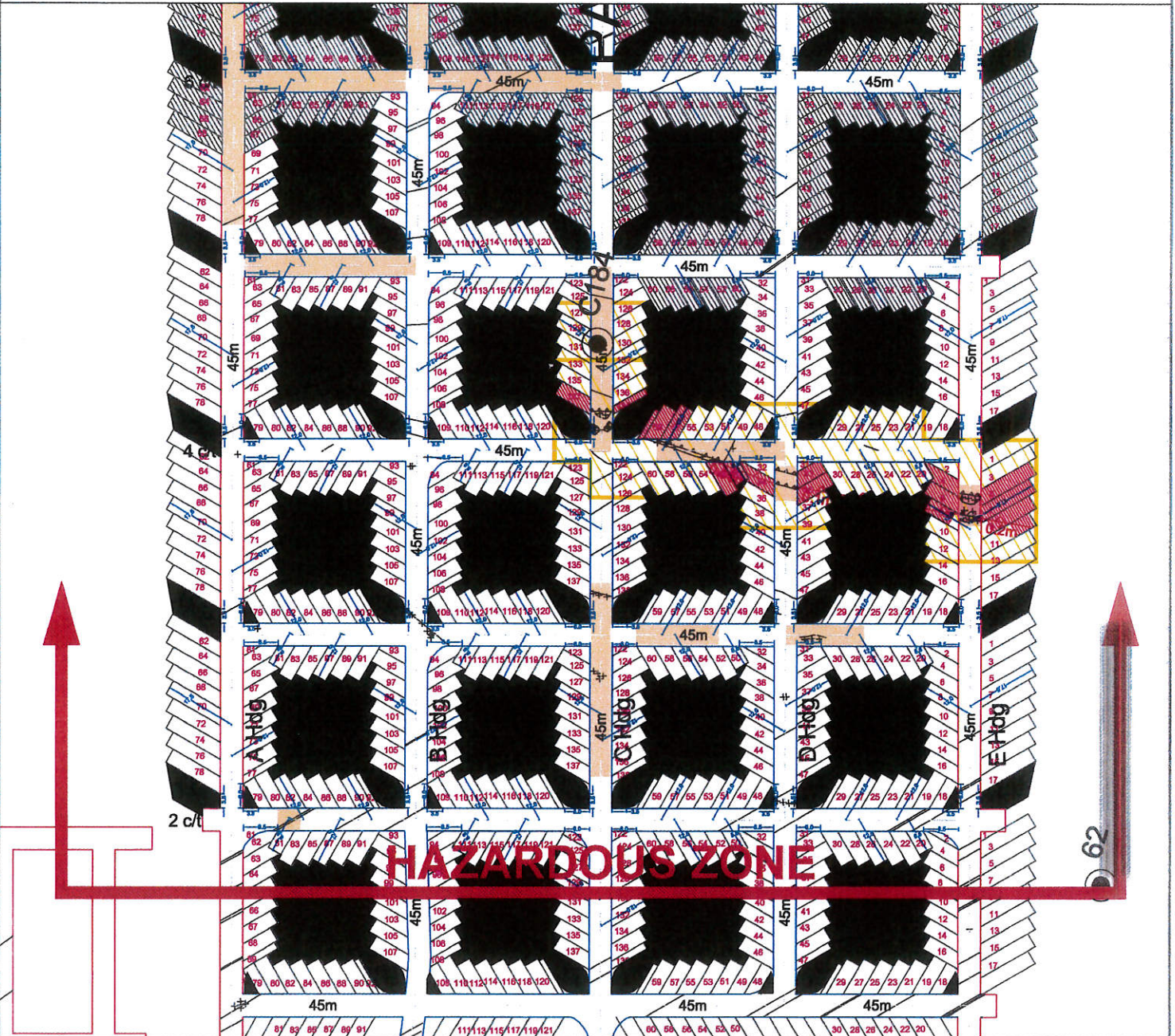
- This **Authority to Mine** should be read in conjunction with the following plans:










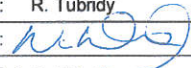
- Panel 21 - Lifting Sequence and Support Rules - a6b2013.dwg (plan 2 of 10).

- Panel 21 - Pillar Extraction Supporting Disturbed Roof - a6b2013.dwg (plan 5 of 10).

- "If it is considered that the method or sequence of extraction of a particular pillar as laid down by the Manager of Mining Engineering is inappropriate, an Area Leader may authorise a variation to the Manager's procedures. This can only be undertaken after the particular Area Leader personally inspects the site for the specific purpose and issues a written directive fully detailing the variations to the Manager's procedures. A Team Leader cannot vary the Manager's procedures. The Area Leader issuing the variation shall as soon as practical inform and provide the Manager with a written copy of such variation".

- The Team Leader has the authority to stop an operation or withdraw machinery if, based on his judgement, continued mining would create an unsafe condition. If such a decision leads to the need for a variation to the approved plan then production should not recommence until a more senior mining supervisor has inspected the site.



KEY:		Panel 21 - 6c/t to 2c/t	
	Coal lift (width 3.6m - CM101 or 4.0m - CM05) depth of lift is as per Approved Plan - a6b2013.dwg (plan 2 of 10)		Additional caution required in area
	Stocks to be left		Additional 4m Tendons to be installed
	Coal to be left for the purpose of providing additional ground support to geological anomalies		Condition ORANGE support installed
	Coal web to be left for the purpose of providing ground support and to stop goaf flushing into current lifting area (no greater than 1.0m width)		Condition RED support installed
		NOTE: Where no support is shown on plan it is deemed to be Condition GREEN support	
		 a key for these symbols can be found on the geological condition plan	
		SCALE : 1:1000	DWG No. : ATM_P21.dwg
		DRAWN : R. Tubridy	REVISION : 10
		CHECKED : 	DATE : 8th March 2013
		APPROVED : D. Wrightson	

Appendix C: Panel 21 Weekly Pillar Extraction Audit Examples

Name of personnel conducting audit: Area Leader Cammy Day
Geotechnician John Kirk

Team Leader Steve Storie Crew member Cameron Vale (Chairing)
Date 3/4/13 Panel 21 Shift N/A

The following checks are for the current operations

Have the extents of supported roof in the roadways been delineated with reflective droppers?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the ribs being scaled down to remove any loose material?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is there a need to adjust the rib support TARP?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Where there are geological anomalies, are the ribs adequately supported?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the goaf readily caving?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is ventilation in the panel adequate?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS units positioned correctly?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS units in contact with roof?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS Canopies horizontal with less than +/- 15° Tilt?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS Legs near vertical?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the stocks of the right size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the approved cutting sequence being adhered to?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are current sequence plans available at the Team Leader's station?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the continuous miner being used to clean up the ribs as required during fitting from one place to the next?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are all face personnel and visitors (if present) complying with the safe standing zones?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the housekeeping standards of a high level?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
During repair/maintenance is the CM being parked outbye and where appropriate away from the rib where men are working?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A

Complete the following considering the face conditions and the roadways for the next two weeks production, specifically roof, rib and floor conditions, to identify the hazards and implement controls to reduce any risk.

Are there any known geological anomalies in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there evidence of roof support taking weight in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that require additional support in the roof or ribs prior to pillar extraction commencing from that roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that need cleaning to allow passage of BLS's?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any off centre roadways that need survey lines installed to mark the design centre of the roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any areas of the next pillar extraction roadway that is too high for the BLS units?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there any need for a change to the Approved Manner & Sequence in the next row of pillars?	Yes	<input checked="" type="checkbox"/> No	N/A
Do any stoppings need repairing?	Yes	<input checked="" type="checkbox"/> No	N/A
Are all wheeling corners suitable?	Yes	<input checked="" type="checkbox"/> No	N/A
If not - Do they require trimming?	Yes	<input checked="" type="checkbox"/> No	N/A

Requirements for the next Belt Retraction & Flit:

2nd Chdg. Intersection requires extra bolts on NE corner.

Suggested Changes to Manner & Sequence

links n webs crib built at E2

Comments/Recommendations

0 cilt B+C Hobs are overcabs. coal will need to be left in W/M ending. Please intersection
- only 2 cables present in AE intersection. It has been overdriven so needs 4.
- one log pressure gauge broken on BLS ps.

Signature of Area Leader: [Signature] Date: 3/4/13
Production Manager: [Signature] Date: 3/4/13



Pillar Extraction – Weekly Audit

1462

Name of personnel conducting audit : Area Leader Brad Merchant Team Leader Col Dwyer Crew member
 Geotechnician John Krick, Liam Kelly, James Smith, Bonlavaro Date 26/2/13 Panel 21 Shift N/D A

The following checks are for the current operations

Have the extents of supported roof in the roadways been delineated with reflective droppers?	Yes	No	N/A
Are the ribs being scaled down to remove any loose material?	<input checked="" type="checkbox"/>	No	N/A
Is there a need to adjust the rib support TARP?	Yes	<input checked="" type="checkbox"/>	N/A
Where there are geological anomalies, are the ribs adequately supported?	<input checked="" type="checkbox"/>	No	N/A
Is the goaf readily caving?	Yes	No	N/A
Is ventilation in the panel adequate?	<input checked="" type="checkbox"/>	No	N/A
Are the BLS units positioned correctly?	Yes	No	N/A
Are the BLS units in contact with roof?	Yes	No	N/A
Are the BLS Canopies horizontal with less than +/- 15° Tilt?	Yes	No	N/A
Are the BLS Legs near vertical?	Yes	No	N/A
Are the stocks of the right size?	<input checked="" type="checkbox"/>	No	N/A
Is the approved cutting sequence being adhered to?	<input checked="" type="checkbox"/>	No	N/A
Are current sequence plans available at the Team Leader's station?	<input checked="" type="checkbox"/>	No	N/A
Is the continuous miner being used to clean up the ribs as required during fitting from one place to the next?	<input checked="" type="checkbox"/>	No	N/A
Are all face personnel and visitors (if present) complying with the safe standing zones?	<input checked="" type="checkbox"/>	No	N/A
Are the housekeeping standards of a high level?	<input checked="" type="checkbox"/>	No	N/A
During repair/maintenance is the CM being parked outbye and where appropriate away from the rib where men are working?	<input checked="" type="checkbox"/>	No	N/A

Complete the following considering the face conditions and the roadways for the next two weeks production, specifically roof, rib and floor conditions, to identify the hazards and implement controls to reduce any risk.

Are there any known geological anomalies in the upcoming production area?	Yes	<input checked="" type="checkbox"/>	N/A
Is there evidence of roof support taking weight in the upcoming production area?	Yes	<input checked="" type="checkbox"/>	N/A
Are there any roadways that require additional support in the roof or ribs prior to pillar extraction commencing from that roadway?	Yes	<input checked="" type="checkbox"/>	N/A
Are there any roadways that need cleaning to allow passage of BLS's?	Yes	<input checked="" type="checkbox"/>	N/A
Are there any off centre roadways that need survey lines installed to mark the design centre of the roadway?	Yes	<input checked="" type="checkbox"/>	N/A
Are there any areas of the next pillar extraction roadway that is too high for the BLS units?	Yes	<input checked="" type="checkbox"/>	N/A
Is there any need for a change to the Approved Manner & Sequence in the next row of pillars?	Yes	<input checked="" type="checkbox"/>	N/A
Do any stoppings need repairing?	Yes	<input checked="" type="checkbox"/>	N/A
Are all wheeling corners suitable?	<input checked="" type="checkbox"/>	No	N/A
If not - Do they require trimming?	Yes	<input checked="" type="checkbox"/>	N/A

Requirements for the next Belt Retraction & Filt:

Suggested Changes to Manner & Sequence

Comments/Recommendations

Panel on Maintenance
 Areas in A Hdg → 7 cft → 6 cft A-B
 Hdg are outside seam plane →
 (concrete shaft) → 1750mm apart

Signature of Area Leader: B. Merchant Date: 26/2/13
 Production Manager: NA Date: 26/2/13

Tony Kestell

Name of personnel conducting audit : Area Leader *Tony Kestell*

Team Leader *Nick Jefferys*

Crew member

Geotechnician *Liam Kirk*

Date *6/2/13*

Panel *21*

Shift *NDA*

The following checks are for the current operations

Have the extents of supported roof in the roadways been delineated with reflective droppers?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the ribs being scaled down to remove any loose material?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is there a need to adjust the rib support TARP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	N/A
Where there are geological anomalies, are the ribs adequately supported?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the goaf readily caving?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is ventilation in the panel adequate?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS units positioned correctly?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS units in contact with roof?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS Canopies horizontal with less than +/- 15° tilt?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS Legs near vertical?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the stocks of the right size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the approved cutting sequence being adhered to?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are current sequence plans available at the Team Leader's station?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the continuous miner being used to clean up the ribs as required during fitting from one place to the next?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are all face personnel and visitors (if present) complying with the safe standing zones?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the housekeeping standards of a high level?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
During repair/maintenance is the CM being parked outbye and where appropriate away from the rib where men are working?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A

Complete the following considering the face conditions and the roadways for the next two weeks production, specifically roof, rib and floor conditions, to identify the hazards and implement controls to reduce any risk.

Are there any known geological anomalies in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there evidence of roof support taking weight in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that require additional support in the roof or ribs prior to pillar extraction commencing from that roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that need cleaning to allow passage of BLS's?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any off centre roadways that need survey lines installed to mark the design centre of the roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any areas of the next pillar extraction roadway that is too high for the BLS units?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there any need for a change to the Approved Manner & Sequence in the next row of pillars?	Yes	<input checked="" type="checkbox"/> No	N/A
Do any stoppings need repairing?	Yes	<input checked="" type="checkbox"/> No	N/A
Are all wheeling corners suitable?	<input checked="" type="checkbox"/> Yes	No	N/A
If not - Do they require trimming?	Yes	<input checked="" type="checkbox"/> No	N/A

Requirements for the next Belt Retraction & Flit:

Suggested Changes to Manner & Sequence

Comments/Recommendations

*Goaf fall in 10' High 9ct - fall to approx. 2m height
Minimal Roof Stone taken in 10ths.*

Signature of Area Leader: *[Signature]*

Date: *6/2/13*

Production Manager: *[Signature]*

Date: *6/2/13*

Name of personnel conducting audit : Area Leader Clayton Barrett Team Leader Mick Jeffries Crew member
 Geotechnician Liam Kirk Date 29/1/13 Panel 21 Shift NDA

The following checks are for the current operations

Have the extents of supported roof in the roadways been delineated with reflective droppers?	<input checked="" type="checkbox"/> Yes	No	N/A
Are the ribs being scaled down to remove any loose material?	<input checked="" type="checkbox"/> Yes	No	N/A
Is there a need to adjust the rib support TARP?	Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No	N/A
Where there are geological anomalies, are the ribs adequately supported?	<input checked="" type="checkbox"/> Yes	No	N/A
Is the goaf readily caving?	Yes <input checked="" type="checkbox"/> No	No	N/A
Is ventilation in the panel adequate?	<input checked="" type="checkbox"/> Yes	No	N/A
Are the BLS units positioned correctly?	<input checked="" type="checkbox"/> Yes	No	N/A
Are the BLS units in contact with roof?	<input checked="" type="checkbox"/> Yes	No	N/A
Are the BLS Canopies horizontal with less than +/- 15° Tilt?	<input checked="" type="checkbox"/> Yes	No	N/A
Are the BLS Legs near vertical?	<input checked="" type="checkbox"/> Yes	No	N/A
Are the stocks of the right size?	<input checked="" type="checkbox"/> Yes	No	N/A
Is the approved cutting sequence being adhered to?	<input checked="" type="checkbox"/> Yes	No	N/A
Are current sequence plans available at the Team Leader's station?	<input checked="" type="checkbox"/> Yes	No	N/A
Is the continuous miner being used to clean up the ribs as required during fitting from one place to the next?	<input checked="" type="checkbox"/> Yes	No	N/A
Are all face personnel and visitors (if present) complying with the safe standing zones?	<input checked="" type="checkbox"/> Yes	No	N/A
Are the housekeeping standards of a high level?	<input checked="" type="checkbox"/> Yes	No	N/A
During repair/maintenance is the CM being parked outbye and where appropriate away from the rib where men are working?	Yes	No	<input checked="" type="checkbox"/> N/A

Comments/Recommendations

Minimal roof dilatation - no roof slabbing.

Complete the following considering the face conditions and the roadways for the next two weeks production, specifically roof, rib and floor conditions, to identify the hazards and implement controls to reduce any risk.

Are there any known geological anomalies in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there evidence of roof support taking weight in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that require additional support in the roof or ribs prior to pillar extraction commencing from that roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that need cleaning to allow passage of BLS's?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any off centre roadways that need survey lines installed to mark the design centre of the roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any areas of the next pillar extraction roadway that is too high for the BLS units?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there any need for a change to the Approved Manner & Sequence in the next row of pillars?	Yes	<input checked="" type="checkbox"/> No	N/A
Do any stoppings need repairing?	Yes	<input checked="" type="checkbox"/> No	N/A
Are all wheeling corners suitable? - <u>rubber in place</u>	<input checked="" type="checkbox"/> Yes	No	N/A
If not - Do they require trimming?	Yes	<input checked="" type="checkbox"/> No	N/A

Requirements for the next Belt Retraction & Flit:

Suggested Changes to Manner & Sequence

Signature of Area Leader: [Signature] Date: 29/1/13
 Production Manager: [Signature] Date: 6/2/13

Name of personnel conducting audit : Area Leader Gary Day
 Geotechnician: Shirley Krich

Team Leader: Sean Crackford Crew member
 Date: 6/11/13 Panel: 21 Shift: N/A

The following checks are for the current operations

Have the extents of supported roof in the roadways been delineated with reflective droppers?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the ribs being scaled down to remove any loose material?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is there a need to adjust the rib support TARP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	N/A
Where there are geological anomalies, are the ribs adequately supported?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the goaf readily caving? <u>Goaf Spanning - Duncan method</u>	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	N/A
Is ventilation in the panel adequate?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS units positioned correctly?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS units in contact with roof?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS Canopies horizontal with less than +/- 15° Tilt?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the BLS Legs near vertical?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the stocks of the right size?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the approved cutting sequence being adhered to?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are current sequence plans available at the Team Leader's station?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Is the continuous miner being used to clean up the ribs as required during fitting from one place to the next?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Are all face personnel and visitors (if present) complying with the safe standing zones?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
Are the housekeeping standards of a high level?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
During repair/maintenance is the CM being parked outbye and where appropriate away from the rib where men are working?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A

Comments/Recommendations

- Goaf is spanning -> Duncan method w/ long term stable remnants.
- Some Cr.b spall adjacent to goaf edge.

Complete the following considering the face conditions and the roadways for the next two weeks production, specifically roof, rib and floor conditions, to identify the hazards and implement controls to reduce any risk.

Are there any known geological anomalies in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there evidence of roof support taking weight in the upcoming production area?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that require additional support in the roof or ribs prior to pillar extraction commencing from that roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any roadways that need cleaning to allow passage of BLS's?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any off centre roadways that need survey lines installed to mark the design centre of the roadway?	Yes	<input checked="" type="checkbox"/> No	N/A
Are there any areas of the next pillar extraction roadway that is too high for the BLS units?	Yes	<input checked="" type="checkbox"/> No	N/A
Is there any need for a change to the Approved Manner & Sequence in the next row of pillars?	Yes	<input checked="" type="checkbox"/> No	N/A
Do any stoppings need repairing?	Yes	<input checked="" type="checkbox"/> No	N/A
Are all wheeling corners suitable?	Yes	<input checked="" type="checkbox"/> No	N/A
If not - Do they require trimming?	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> N/A

Requirements for the next Belt Retraction & Flit:

Suggested Changes to Manner & Sequence

Signature of Area Leader: [Signature] Date: 6/12/13
 Production Manager: [Signature] Date: 6/12/13

Appendix D: P21 Goaf Survey Example

Appendix E: Pillar Extraction Training Records



Part of Gloucester Coal

ABEL MINE – TRAINING ATTENDANCE REGISTER			
Course Name: <i>Pitlim Extraction Management Plan - P21 Update</i>			
Course Date: <i>5/11/12</i>			
Facilitator(s): <i>JOHN KRICK, CRAIG BAIRD, JEAN WRIGHTSON</i>			
Name	Company	Position	Signature
<i>Sam Wooden</i>	<i>Donaldson</i>	<i>Fed</i>	<i>[Signature]</i>
<i>Wayne Andrews</i>	<i>" "</i>	<i>FITTER</i>	<i>[Signature]</i>
<i>V. Bent Harding</i>	<i>Donaldson</i>	<i>Electrician</i>	<i>[Signature]</i>
<i>MATT GRAY</i>	<i>" "</i>	<i>FED</i>	<i>[Signature]</i>
<i>ADAM JONES</i>	<i>" "</i>	<i>FED</i>	<i>[Signature]</i>
<i>MICK JEFFERY</i>	<i>DONALDSON</i>	<i>Deputy</i>	<i>[Signature]</i>

Prepared by	Safety Manager	Document No	FRM 1.4.1	Name	Training Attendance Register
Approved by	M Blackham	Version No	1		
Issue date	31/07/08	Revision date	31/07/10	Page 1 of 1	
Controlled Documents of the Abel Mine Safety Management System have blue text in this cell					