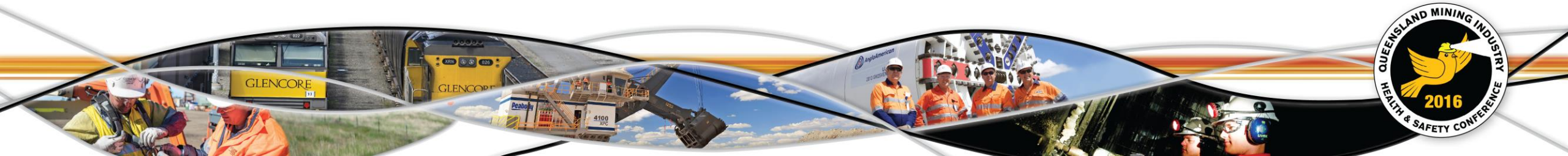


Our People: Strata Defects: Detailed Planning

Larnie Mackay
Operations Scheduler





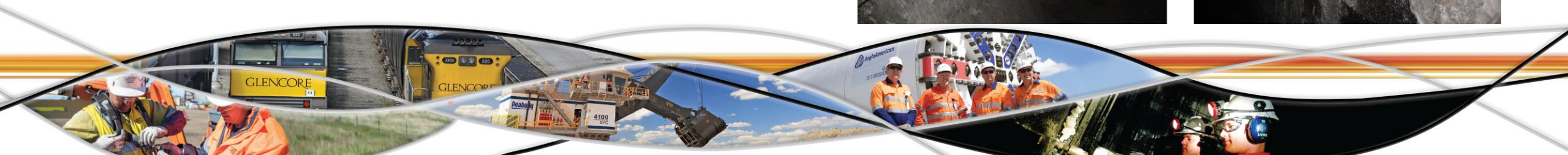
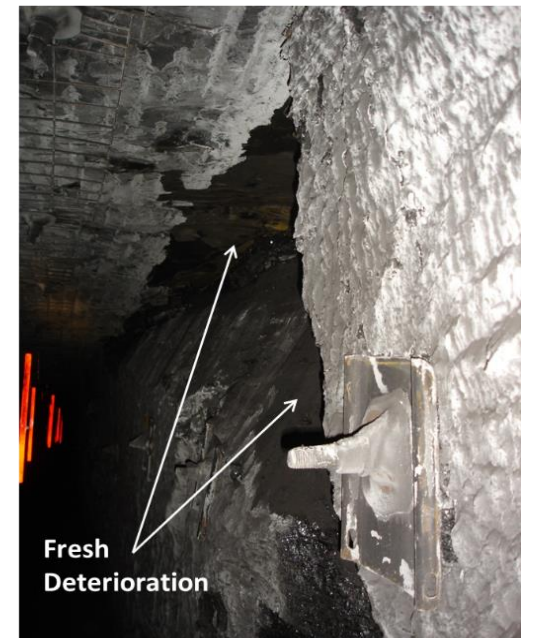
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WHAT IS A STRATA DEFECT?

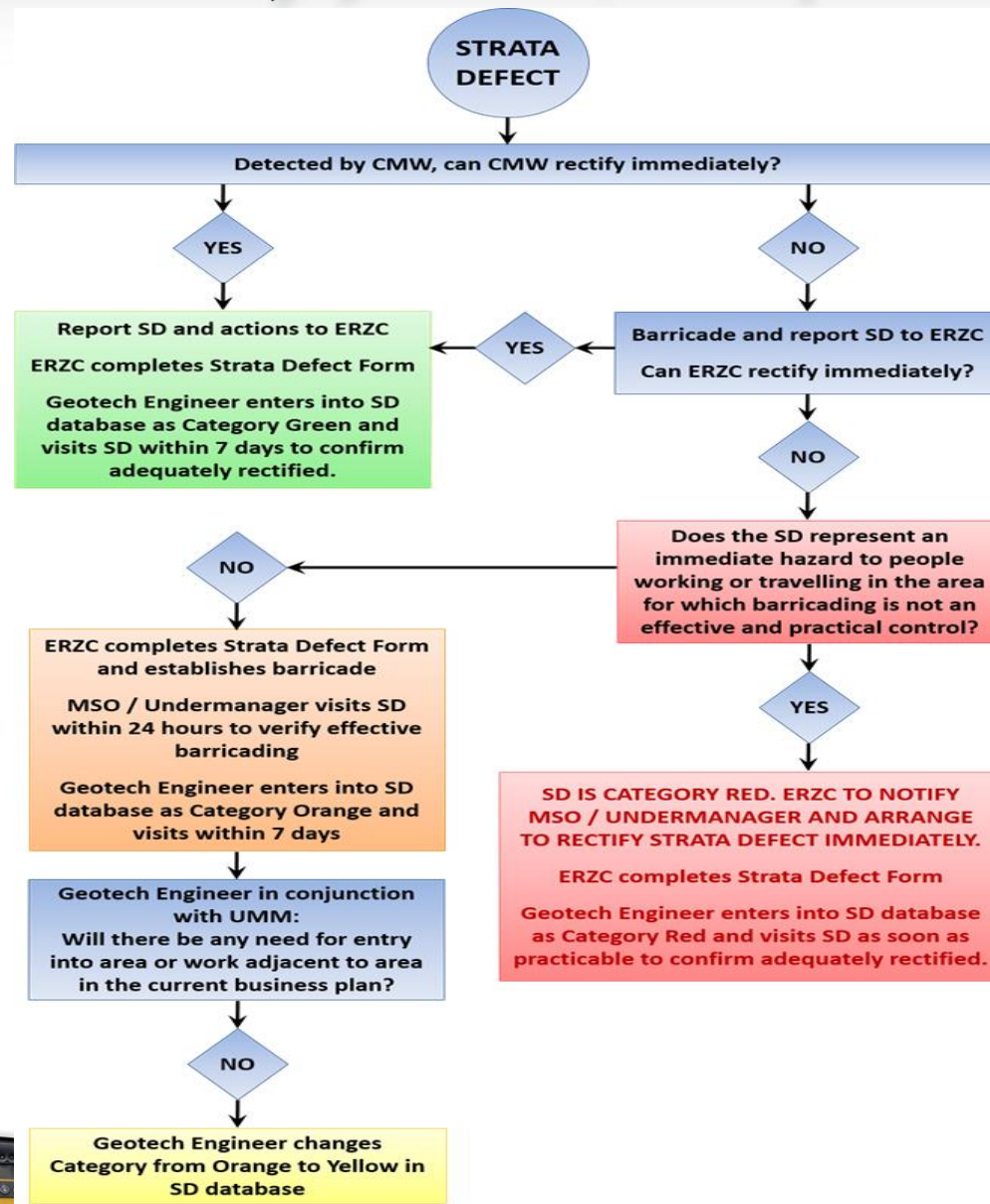
In the underground coal environment, a strata defect is defined as failed Roof or Rib, or damaged support (ie. wall) due to:-

- Strata weathering (ie. coal beginning to crumble, etc),
- Corroded support (ie. mesh and/or bolts)
- Missing Bolt from the Support Pattern; or
- Machine damage.

It is imperative that Strata Defects are Identified, Barricaded and Reported as soon as possible.



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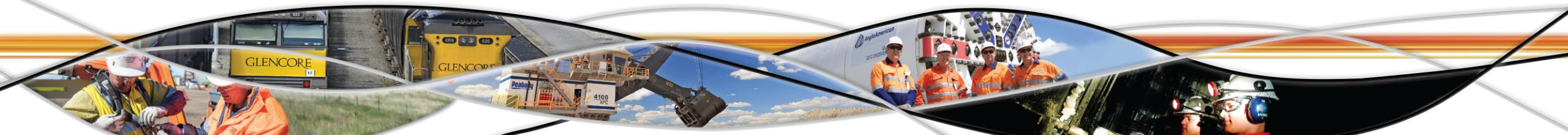
TRAINING IDENTIFICATION, BARRICADING & REPORTING

CMW RESPONSIBILITIES

- Every CMW must assess the roof, rib and support conditions in their SLAMs and/or JSAs
- Rectify Strata Defect if this can be done safely (e.g. barring rib with pinch bar)
- Otherwise effectively barricade Strata Defect immediately
- Report Strata Defect to workgroup supervisor and/or ERZC

SLAM Trigger Questions	
1.	Is the task covered by a Golden Rule? and if so am I in compliance with these requirements?
2.	Does the task require a permit to be completed?
3.	Does the task require isolation of an energy source?
4.	Does the task involve interaction with roof / rib or other strata?
5.	Are the hazards associated with ventilation known?
6.	Does the task involve interaction with mobile plant or rotating and moving parts?
7.	Has the area of work been inspected? When was it last inspected?
8.	Do you know what to do in an emergency when conducting this task?
9.	Is Manual handling required?
10.	Can I injure myself or others?
11.	Is Barricading required (High Risk or Low Risk)?
12.	Has communication of the task been undertaken?
13.	Have I reviewed my Hazards and Controls with others?
14.	Has my work environment changed? If so, how am I controlling it?

U/G Ops SLAM (Stop, Look, Assess & Manage)	
Name:	Date:
Location:	Time:
STOP - PLAN THE WORK	
What task am I about to do?	Initial if safe to continue
What could hurt or kill me?	Supervisor
Have I considered all of the SLAM trigger questions in the prompt page?	Supervisor
What do I need to do to make sure they do not go wrong?	Supervisor
Do I think it is safe to do the task? <input type="checkbox"/> YES <input type="checkbox"/> NO Signature: _____ Important: If you are unable to do the task safely then you need to stop and discuss the issue with your Supervisor.	





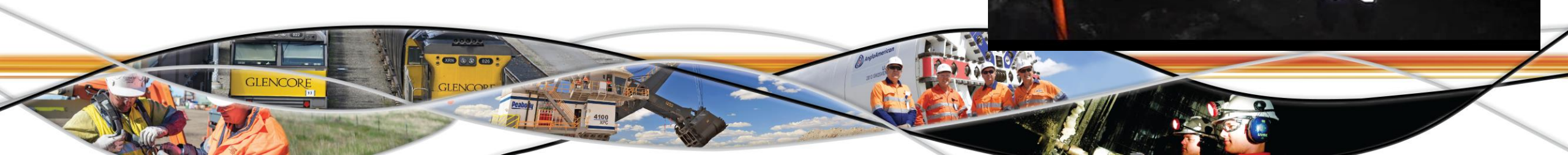
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TRAINING

IDENTIFICATION, BARRICADING & REPORTING

ERZC RESPONSIBILITIES

- Erect a suitable and effective barricade around any Strata Defect that cannot be rectified immediately
- Complete a Strata Defect Form for every Strata Defect and place top copy in MSO / Undermanager's Office
- If a Strata Defect is category **RED** then notify MSO / Undermanager and arrange to rectify Strata Defect immediately

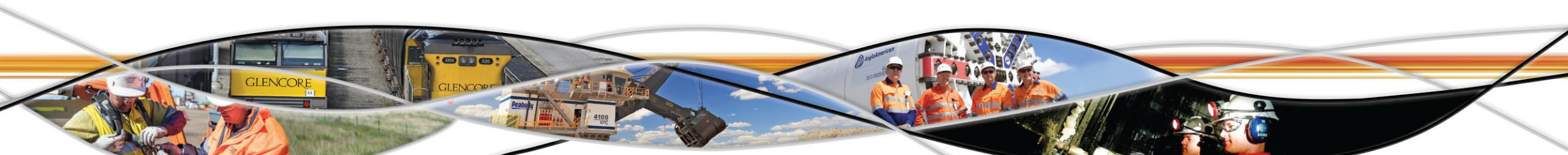




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WHY DESIGN AND IMPLEMENT THIS SYSTEM?

- Continuous Communication and Strata Defect Hazard Awareness to all Coal Mine Workers
- Stringent reporting, Strata Defect verification, Risk Ranking, Prioritisation for Remediation, Non-Conformance Escalation and Strata Defect Close Out.
- All Underground Operations to align with one System and Documentation Definitions; and
- Integration into Fewzion Planning System per MOS Task Close Out Requirements and Protocols





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STRATA DEFECT FLOW – START TO FINISH!





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STRATA DEFECT DATABASE – SORD!



Site: MORANBAH

Reported since: 1/1/2005



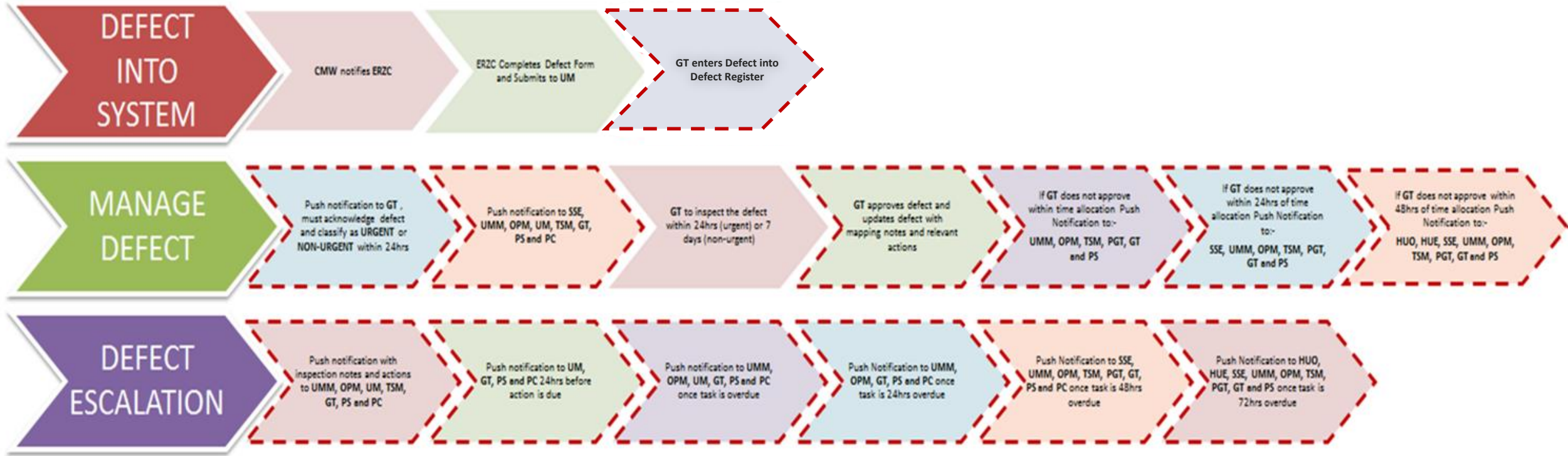
Defect Register																Validation		Deputy / Supervisor Close Out		Set KPIs & Resources						
Add New Record (Ctrl+Q) Clear Filters Admin approve selected Physical approve selected Close selected Export to AutoCAD Export to Excel																										
ID	Found by	Entered by	Report Number	Department	District	Heading From	Heading To	Cut Through From	Cut Through To	Linear Meters	Easting	Northing	Reported description	Inspected by	Inspected date	Remediation done	Remediation required	Reported	Entered	Barricaded	Barricaded comments	Works required	Comments	Category	State	Archived
1141	Green, Paul William (9188) - MORANBAH	ANGLO/RBli...	43279	Outbye	Outbye 2	B hdg 47ct	B hdg 47ct	0	0	4	602431.4	7579116.8	at 47ct from chock movement	Blines, Rebecca Anne (6095029) - MORANBAH	10/06/2016	Incident report	Replace bolts									
1142	Pike, Rodney Graham (6120488) - MORANBAH	ANGLO/RBli...	3902	Outbye	Outbye 1	Mains B hdg 23ct	Mains B hdg 23ct	0	0	9	601337	7579366.9	Both corners 23ct intersection C hdg side; roof delamination between roof bolts. A hdg side across mouth requires re-support.	Blines, Rebecca Anne (6095029) - MORANBAH	17/06/2016	Taped off with pogo's and information tag	Re-sup: standard									
1143	Ford, Denis John (6840) - MORANBAH	ANGLO/RBli...	3015	Development	MG112	MG112 B hdg 5m inbye 22ct block side	MG112 B hdg 5m inbye 22ct block side	0	0	3	604920.018	7577564.498	Rib spall beneath mesh to 0.3m depth from 1m from roof to floor. 2	Blines, Rebecca Anne (6095029) - MORANBAH	20/06/2016	No roaded. Info tag	Re-sup: 25082 or shotcrete to DRG 25190.									
1144	Harragon, Paul David (9405) - MORANBAH	ANGLO/RBli...	3402	Outbye	Outbye 4	B	C	9	9	12	601337	7579366.9	Incident report	Replaced damaged roof bolts	08/06/2016	08/06/2016										
1145	Kowalczyk, Tony Alexander (6028184) - MORANBAH	ANGLO/RBli...	4053	Outbye	Outbye 3	B	A	75	75	15	601337	7579366.9	aped off with pogo's and information tag	Re-support and mesh to standard.	10/06/2016	13/06/2016										
1146	Pike, Rodney Graham (6120488) - MORANBAH	ANGLO/RBli...	3016	Development	MG112	A	A	20	20	5	601337	7579366.9	aped off with pogo's and information tag	Re-support to DRG 25082 or shotcrete to DRG 25190.	21/06/2016	21/06/2016										
													Re-support to DRG 25082 or shotcrete to DRG 25190.	26/06/2016	01/07/2016											
													Re-support to DRG 25082 or shotcrete to DRG 25190.	29/06/2016	01/07/2016											
													Re-support to DRG 25082 or shotcrete to DRG 25190.	30/06/2016	01/07/2016											





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STRATA DEFECT NOTIFICATIONS

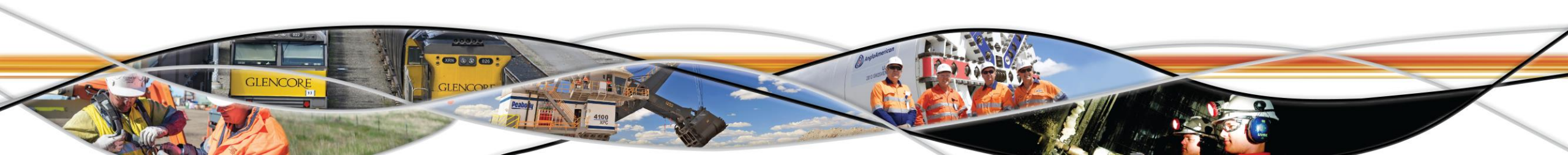
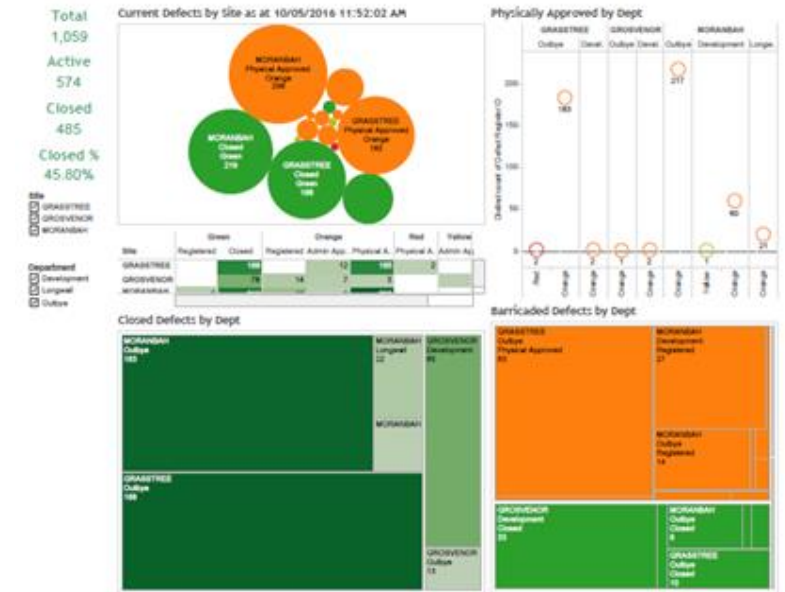




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MINE MANAGER'S STRATA DEFECT MEETING

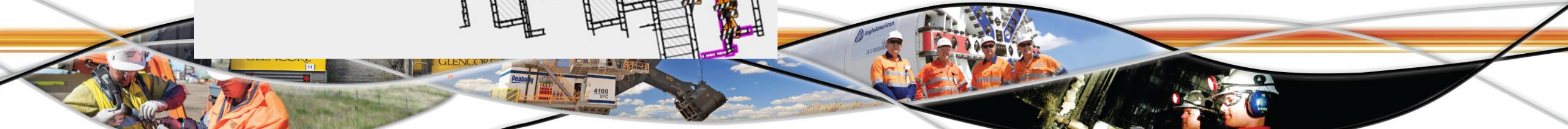
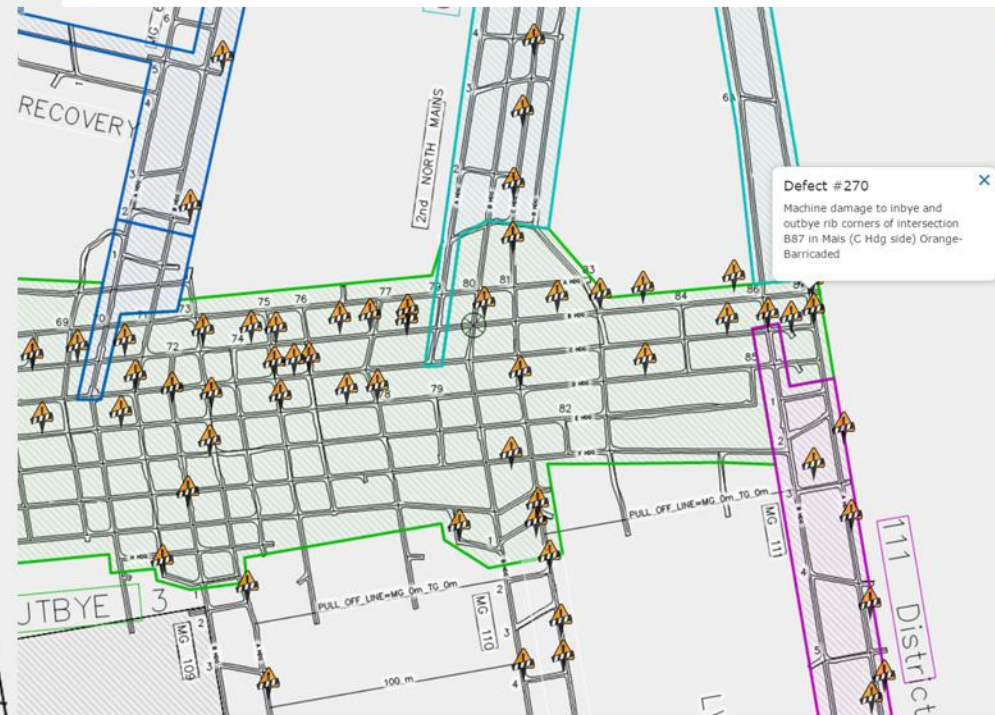
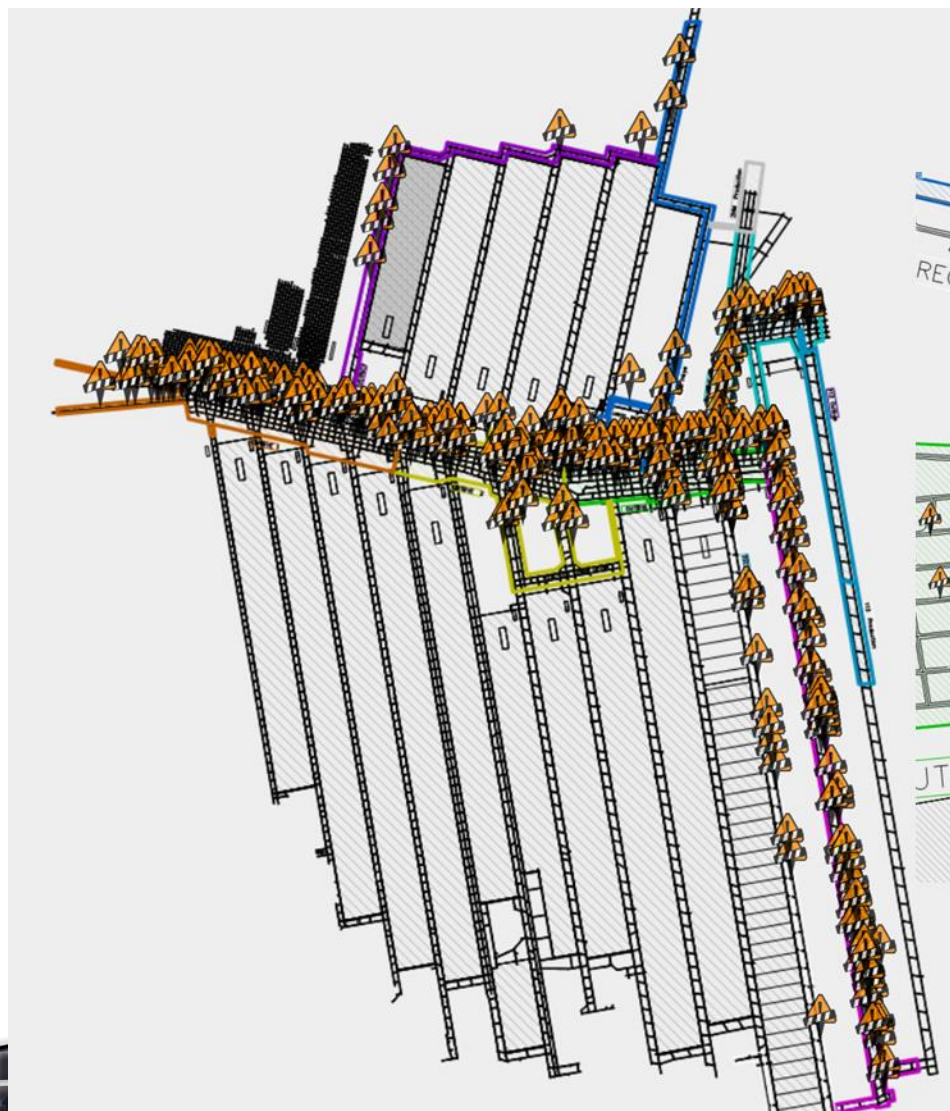
- Review of New, Open and Closed Planned Strata Defects
- Progress on Remediation – Plan to Variance
- Upcoming Planned Remediation to Site Requirements
- Resourcing Options (both labour and materials)
- Live Reporting via Tableau





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WHAT DOES STS LOOK LIKE?





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DETAILED PLANNING!



Checklist

Resources

Task Compliance

Is this Task covered under a Permit to Mine?

☐ Yes

☒ No

Are the Persons completing this Task excluded under the Permit to Work System?

☐ Yes

☒ No

Is the strata going to be interfered with (roof and/or rib)?

☒ Yes

☐ No

Is there sufficient ventilation in the area?

☒ Yes

☐ No

Are there ground water issues in the work area?

☒ Yes

☐ No

Are there any known strata defects in the work area?

☒ Yes

☐ No

Is there potential interaction with a high traffic area?

☒ Yes

☐ No

Compliance Breaches

Name	Description
PTW Required	This Task requires a Permit to Work (PTW) to be compliant, so please search for the PTW by th

Important:

☐

Inspection Required:

☐

Inspection Completed:

☐

Add Attachments

File

Safety Documents

Search:

PTW

Results

☐ MNM_008_PTW_TOLK - Roadworks and concreting in MG11...

☐ MNM_013_PTW_TOLK - Roadworks and concreting in MG11...

☐ MNM_017_PTW_TOLK - Diesel Workshop Servicing and Rep...

☐ MNM_109_PTW_TOLK - Monorail workshop works to 2015.1...

☐ MNM_151_PTW_MMyne - MG602 Commissioning hitlist to 2...

☐ MNM_079_PTW_TOLK - Roadworks and concreting 50ct Mai...

☐ MNM_159_PTW_MVale - Deliver stonedust to LW dropholes...

☐ MNM_160_PTW_MVale - Cleaning GO line and MIA to 2015...

☐ MNM_161_PTW_MMyne - Sec Support MG111 Belt rd 33-40...

☐ MNM_162_PTW_MMyne - Sec Support MG110 2-16ct travel ...

Tags:

Select

Process Plan

Secondary Support

Previous Week

Next Week

Shift

Sunday 7th Aug 2016

Monday 8th A

Window

Pers	L	M	Pers	
Rqd	2	3	Rqd	
Avail	2	3	Avail	
Absent	0	0	Absent	

Equip	MT	L-7T	DR	Equip
Rqd	1	1	1	Rqd
Avail	1	1	1	Avail

1A	MM MG111 belt rd 18ct outbye install / tension hi tens PTW 1224 MNM110	20B	100	1A	MT
1A	MM MG111 travel rd 25 - 27 ct install roof / rib support with QDS PTW1179 MNM110	40B	80		ct

Day

Equip	MT	L-7T	Equip
Rqd	0	0	Rqd
Avail	1	1	Avail

Night

Pers	L	M	Pers	
Rqd	3	5	Rqd	
Avail	3	5	Avail	
Absent	0	0	Absent	

Equip	MT	L-7T	DR	Equip
Rqd	2	2	2	Rqd
Avail	3	2	2	Avail

1A	MM 6 ct east mains A - C install / tension megabolts PTW 1268 MNOB4	40B	100	1A	Me
1A	MM MG111 belt rd 18ct outbye install / tension hi	25B	80		mn





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STRATA DEFECT FLOW – GEOTECHNICAL SIGN OFF





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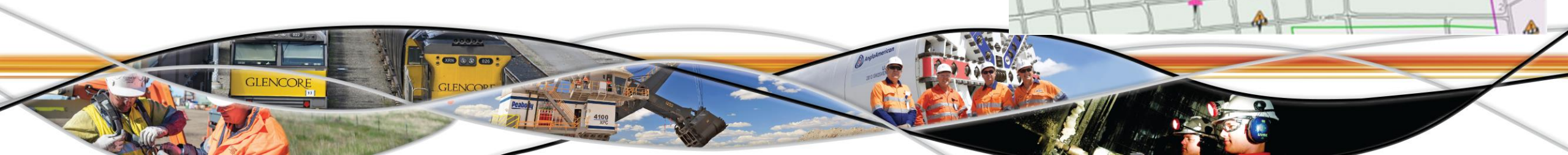
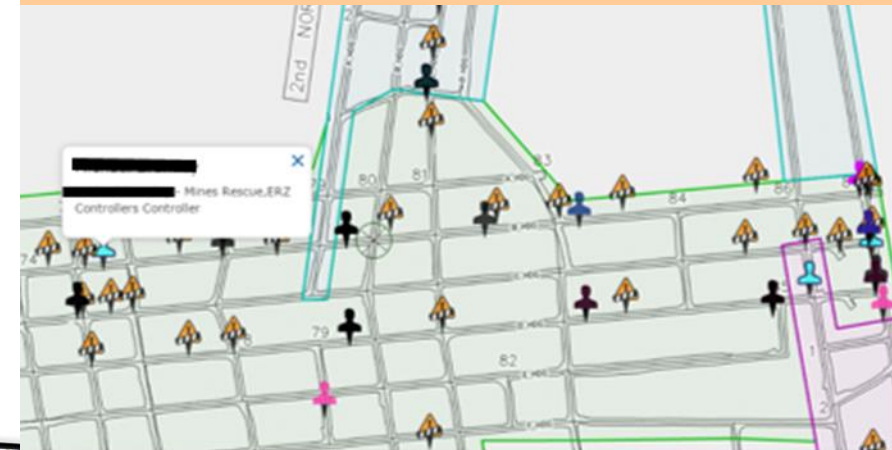
FUTURE ENHANCEMENTS...

- Other Hazards Identified (ie. ventilation quantities, gas makes, telltale movement, etc)
- Short Interval Control, Modified Shift Plans, Live Reporting, etc via IS Certified Tablet
- Geospatial Planning with Proximity Detection
- Emergency Response – People & Equipment Locations
(currently being trialled at Moranbah North Mine)

Electrician Fault Finding Debrief
Using Schematic



Person Icon Colour Denotes Job Type – Aqua Identifies Mines Rescue





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THANK YOU!

