

# B3-06 Stope void backfilling

Conceptual Mitigation Plan  
Revision 1 – February 7, 2014



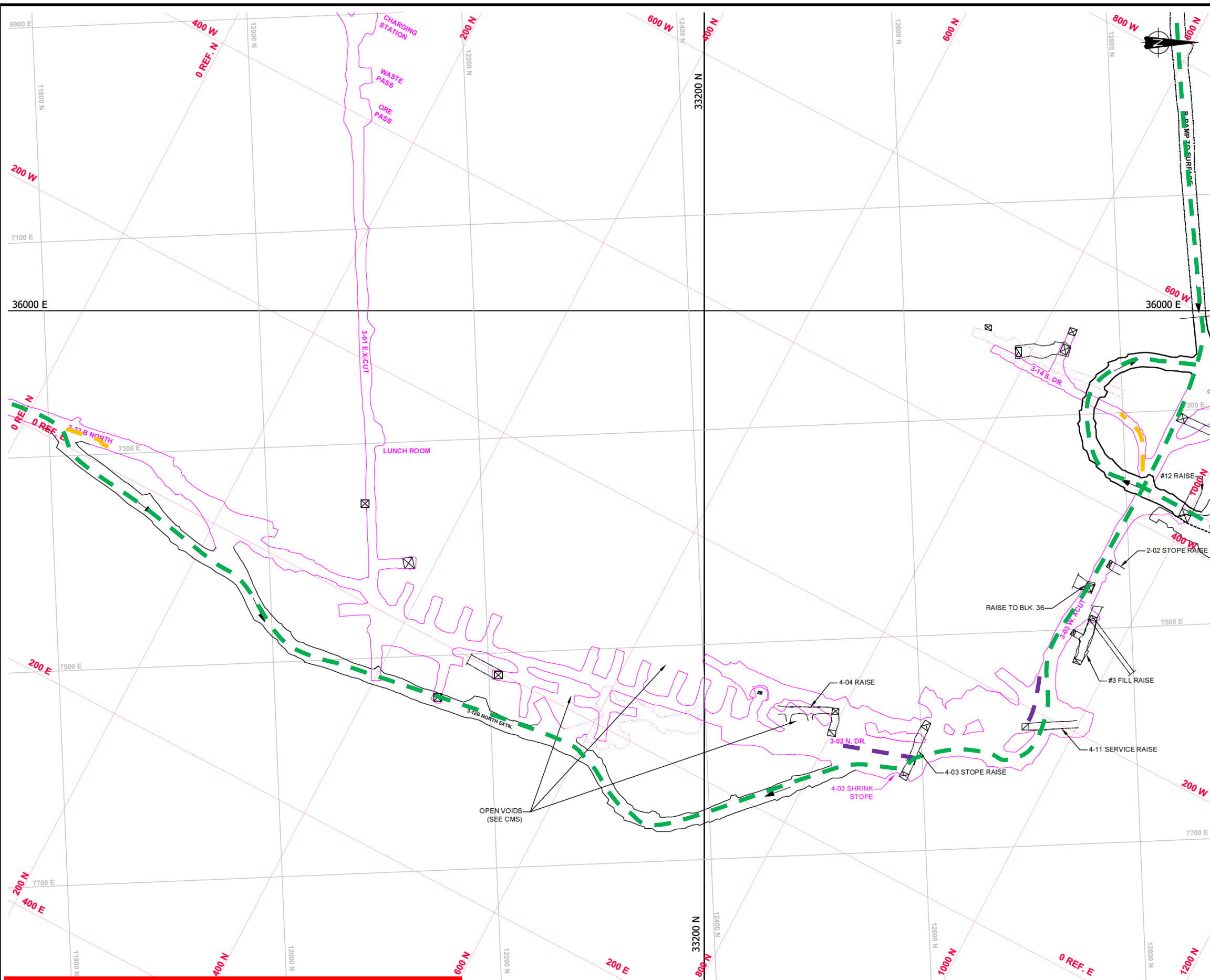
Note: Level plans shown are for illustrative purposes only, Use full size level plans and 3D digital model for planning purposes.

**NOT FOR CONSTRUCTION**

PROJECT		PWGSC GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT			
TITLE		B3-06 Stope Conceptual Mitigation Plan			
PROJECT No.		13-1426-0010	PHASE No.		5000
DESIGN	FM	05JAN14	SCALE	N.T.S.	REV. 1
CADD	ALP	23JAN14			
CHECK	DTK	24JAN14			
REVIEW	DTK	24JAN14			







## Underground Development Access - Legend

- - - DCNJV main travel way / work areas
- - - Not regularly travelled by DCNJV. Discuss entry procedures with DCNJV
- - - Hazard(s) present. Discuss entry procedures with DCNJV
- - - Major hazard(s) present. Discuss entry procedures with DCNJV

### Notes:

- 1) Underground development access notes are for planning purposes only, Care and Maintenance Contractor Determines Safety of Access to Giant Mine Underground.
- 2) Areas not marked are inaccessible or have not been assessed

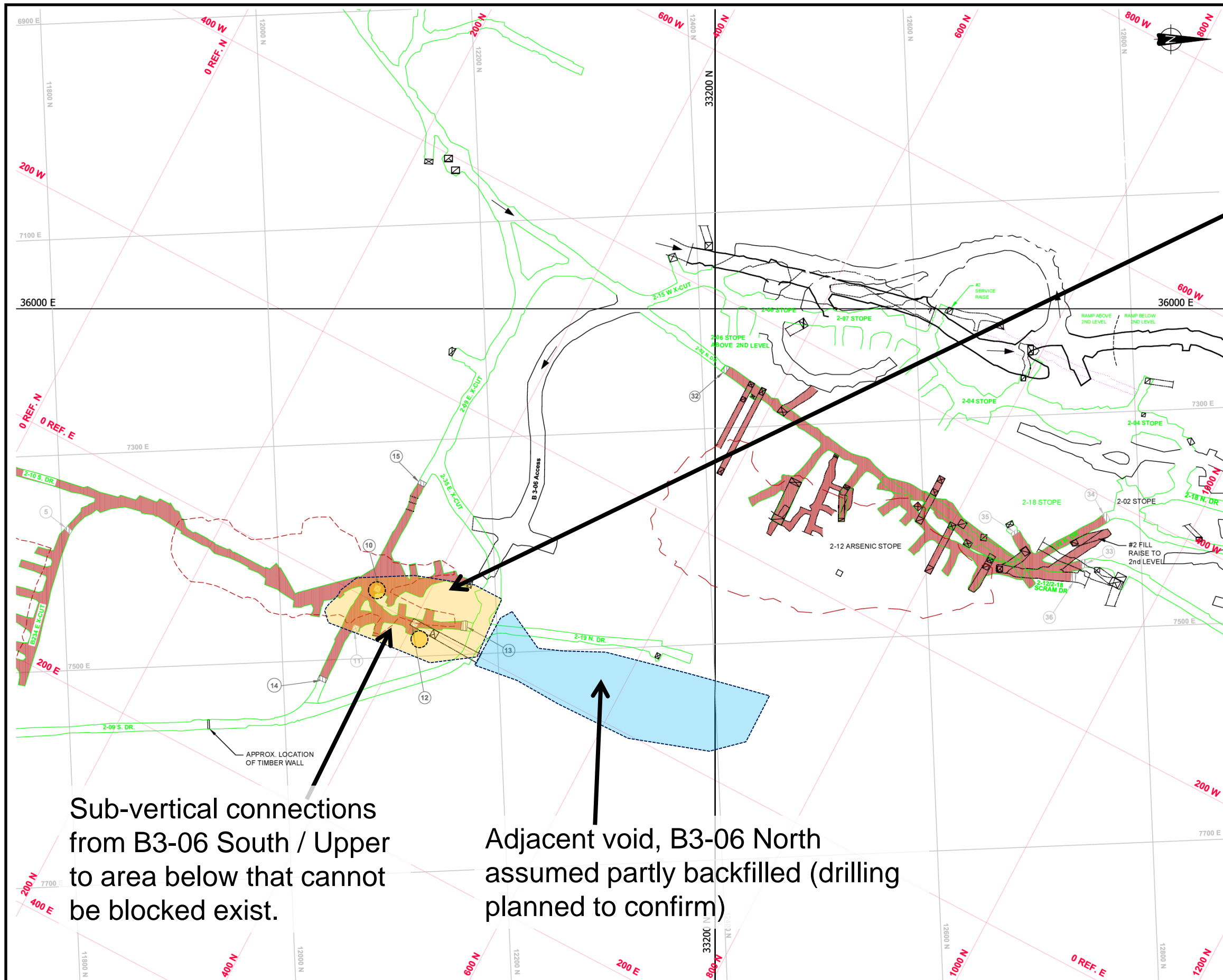
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PROJECT		<b>PWGSC GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT</b>		
TITLE		<b>B3-06 Stope Underground Access – 3<sup>rd</sup> Level</b>		
PROJECT No. 13-1426-0010		PHASE No. 5000		
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**Target Area to be Backfilled – B3-06 South / Upper**

Consists of several inter-connected partially backfilled voids.

Void volume is not tightly constrained

Connections to 3<sup>rd</sup> level assumed to exist through in stope sub-vertical raises which could allow paste backfill to escape.

Position of possible exit voids ●

Sub-vertical connections from B3-06 South / Upper to area below that cannot be blocked exist.

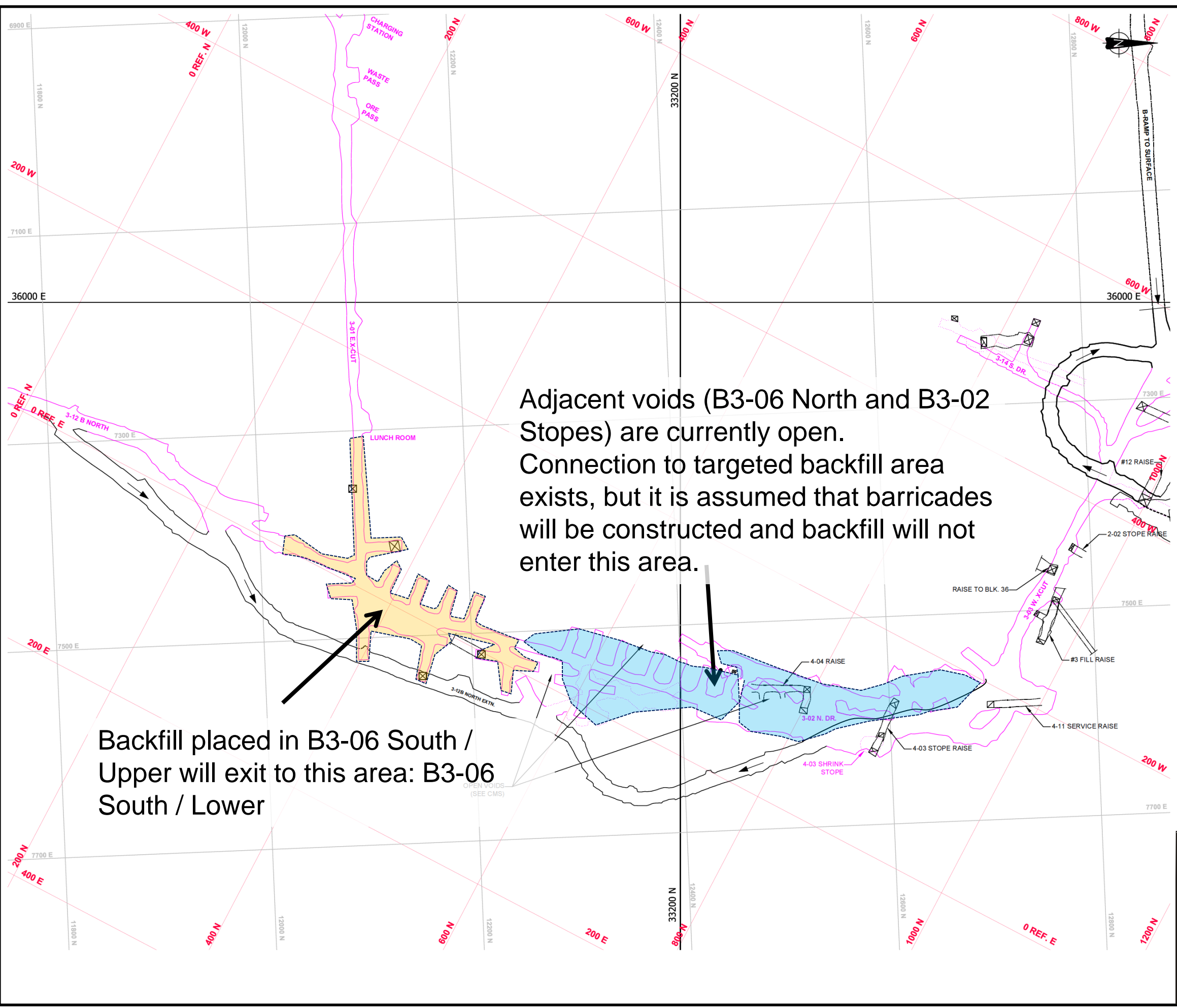
Adjacent void, B3-06 North assumed partly backfilled (drilling planned to confirm)

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PROJECT		PWGSC		
GIANT MINE INTERIM U/G STABILIZATION PROJECT		YELLOWKNIFE, NWT		
TITLE		B3-06 Stope		
Void Volumes and Exit Points – 2 <sup>nd</sup> Level				
PROJECT No.	13-1426-0010	PHASE No.	5000	
DESIGN	FM	05JAN14	SCALE	N.T.S.
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Adjacent voids (B3-06 North and B3-02 Stopes) are currently open. Connection to targeted backfill area exists, but it is assumed that barricades will be constructed and backfill will not enter this area.

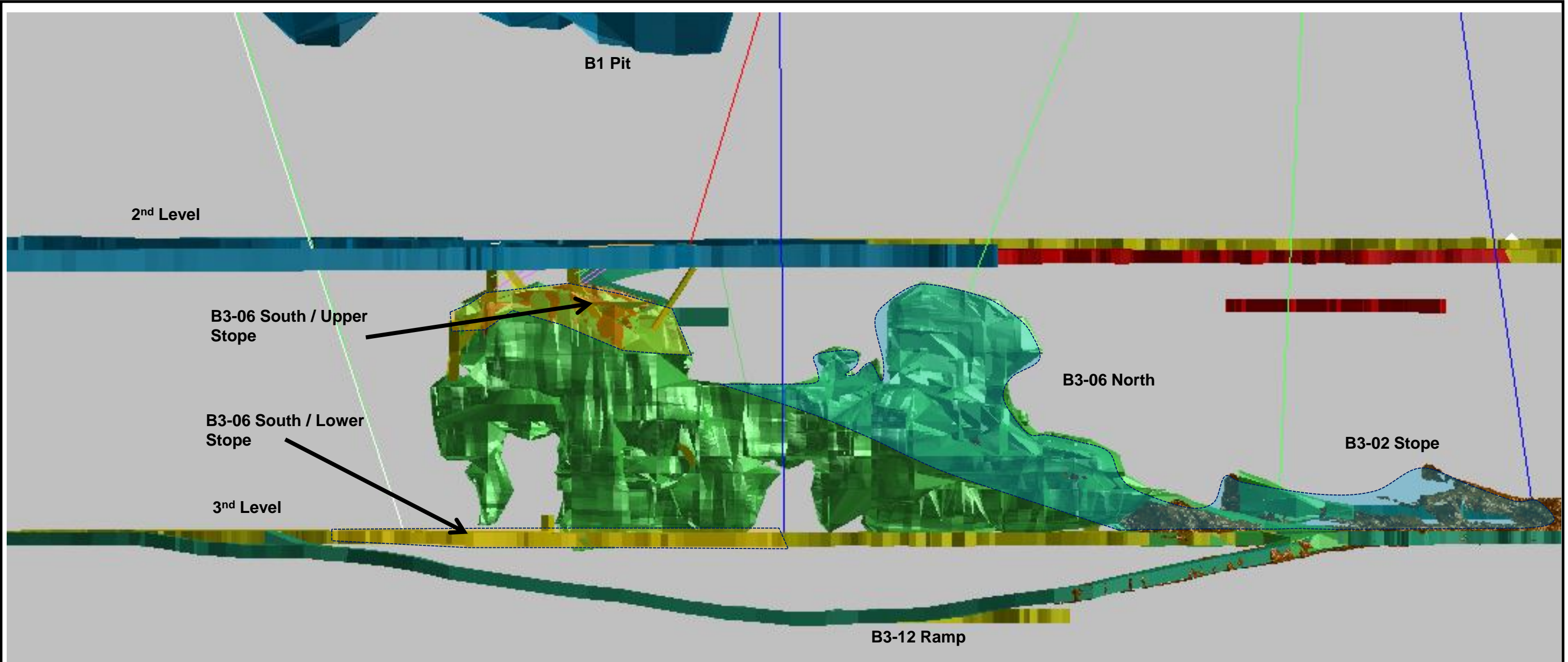
Backfill placed in B3-06 South / Upper will exit to this area: B3-06 South / Lower

PROJECT		PWGSC GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT		
TITLE		B3-06 Stope Void Volumes and Exit Points – 3 <sup>rd</sup> Level		
PROJECT No.		13-1426-0010	PHASE No. 5000	
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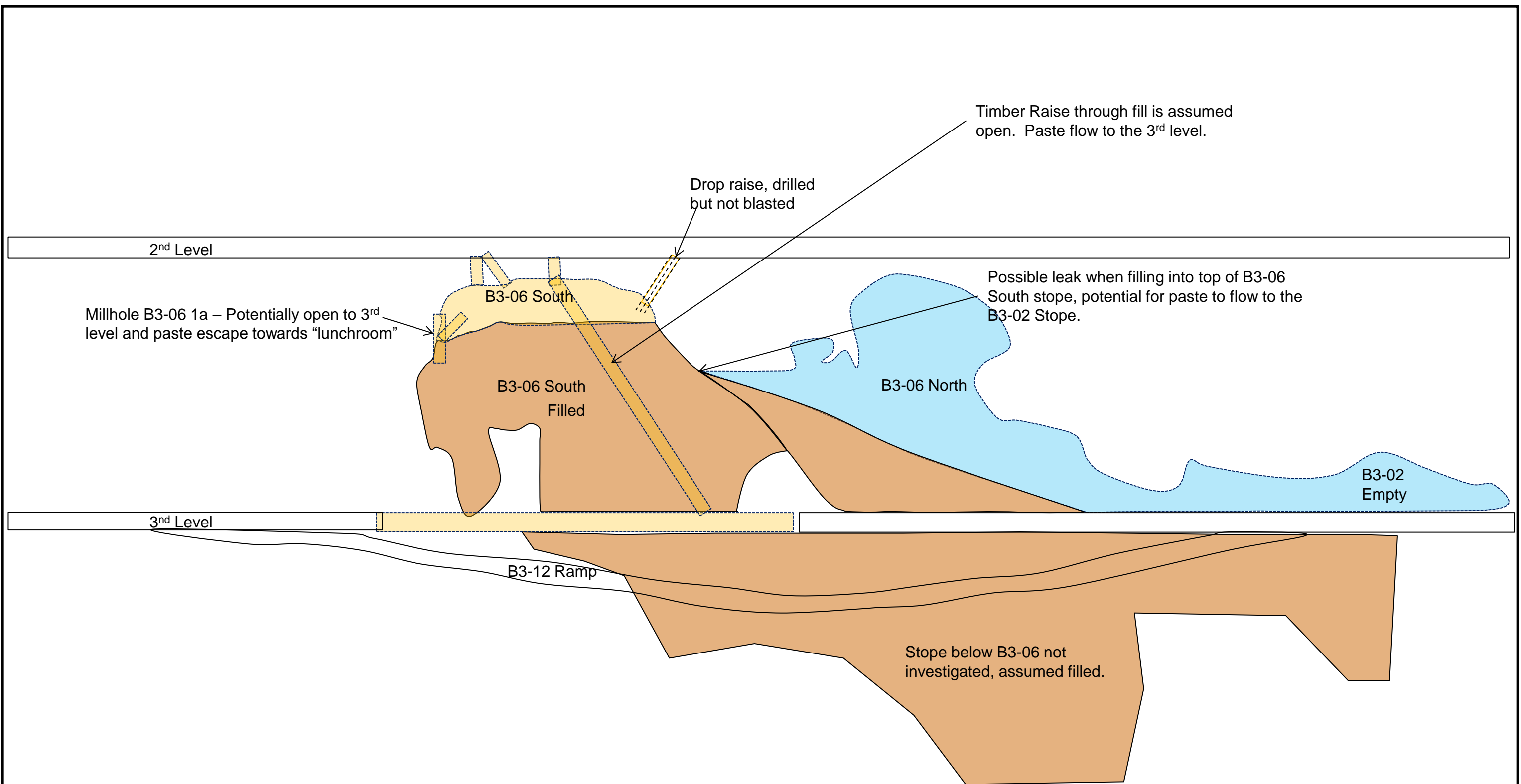
View to West

**Isometric view of 3D Model – Looking West**

- B3-06 South /Upper void volume: 1,500m<sup>3</sup>**
- B3-06 South / Lower Void volume on 3<sup>rd</sup> level: 2,800m<sup>3</sup>**
- B3-06 North / B3-02 Stope void volume: 12,500m<sup>3</sup>**

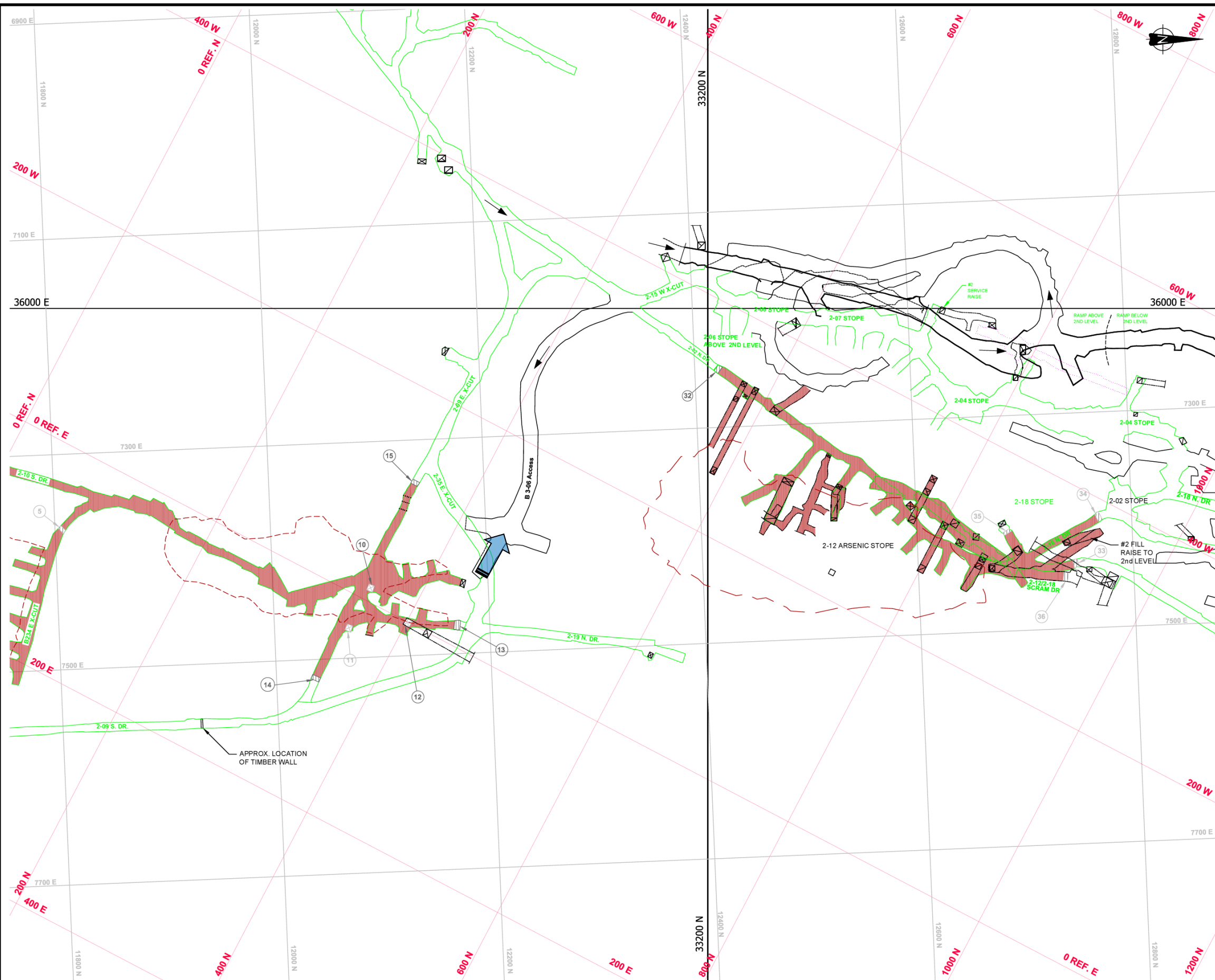
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PROJECT		PWGSC		
		GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT		
TITLE		B3-06 Stope Void Volume		
		PROJECT No. 13-1426-0010	PHASE No. 5000	
DESIGN	FM	05JAN14	SCALE	N.T.S.
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TITLE		B3-06 Stope Void Volumes		
PROJECT No.		13-1426-0010	PHASE No. 5000	
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### Mandatory Blockages and Fill Volume Containment Points - Legend

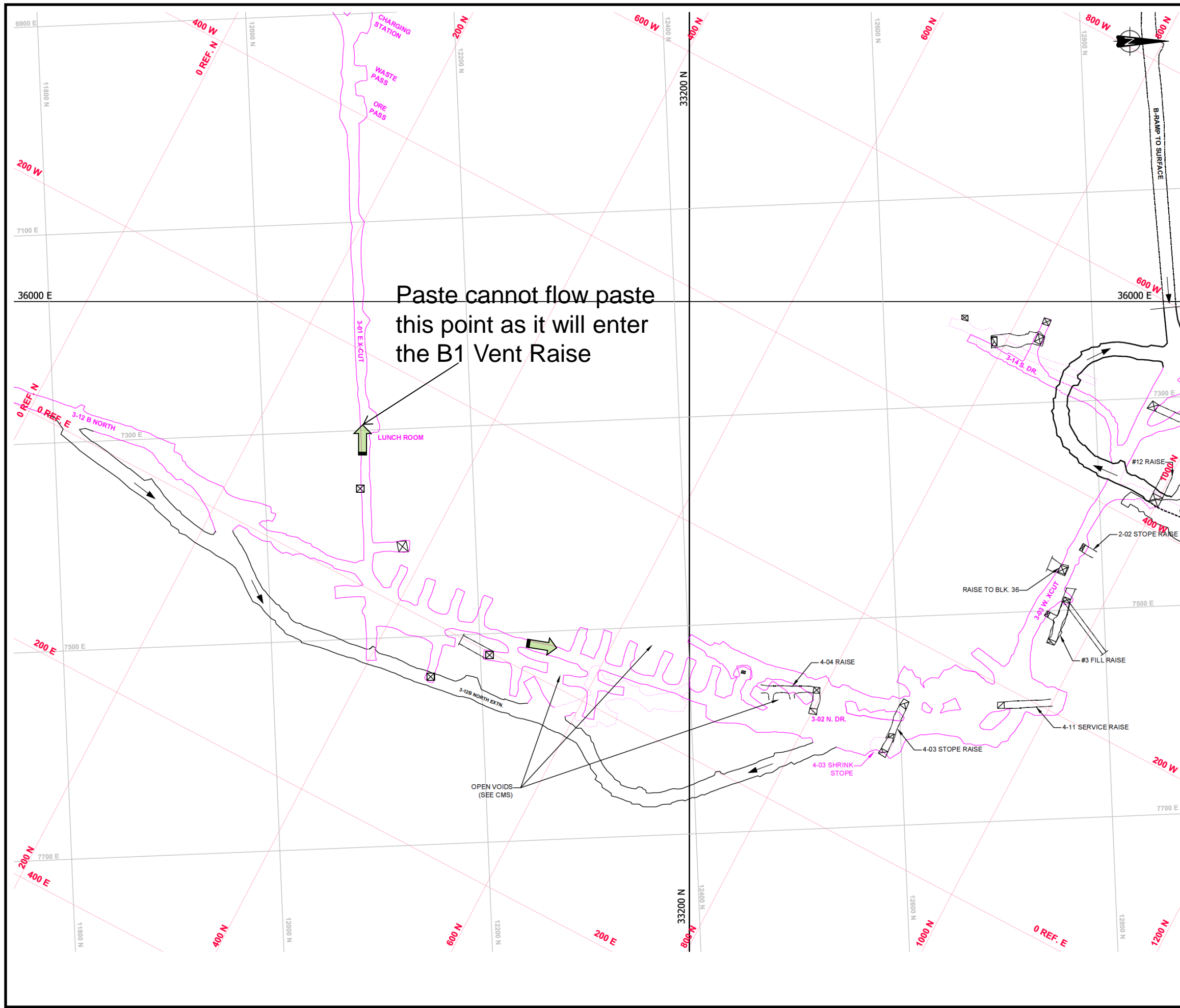
-  Mandatory paste blockage point
-  Volume constraint point – man-entry
-  Volume constraint point – no entry

Note: mandatory paste blockage points are required where known and obvious exit points from the target void to be backfilled are connected to critical mine development openings (e.g. access ramp or a ventilation shaft, etc.).


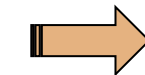

PROJECT		PWGSC GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT		
TITLE		B3-06 Stope Mandatory Blockages and Fill Volume Containment Points - 2 <sup>ND</sup> Level		
PROJECT No. 13-1426-0010		PHASE No. 5000		
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### Mandatory Blockages and Fill Volume Containment Points - Legend

-  Mandatory paste blockage point
-  Volume constraint point – man-entry
-  Volume constraint point – no entry

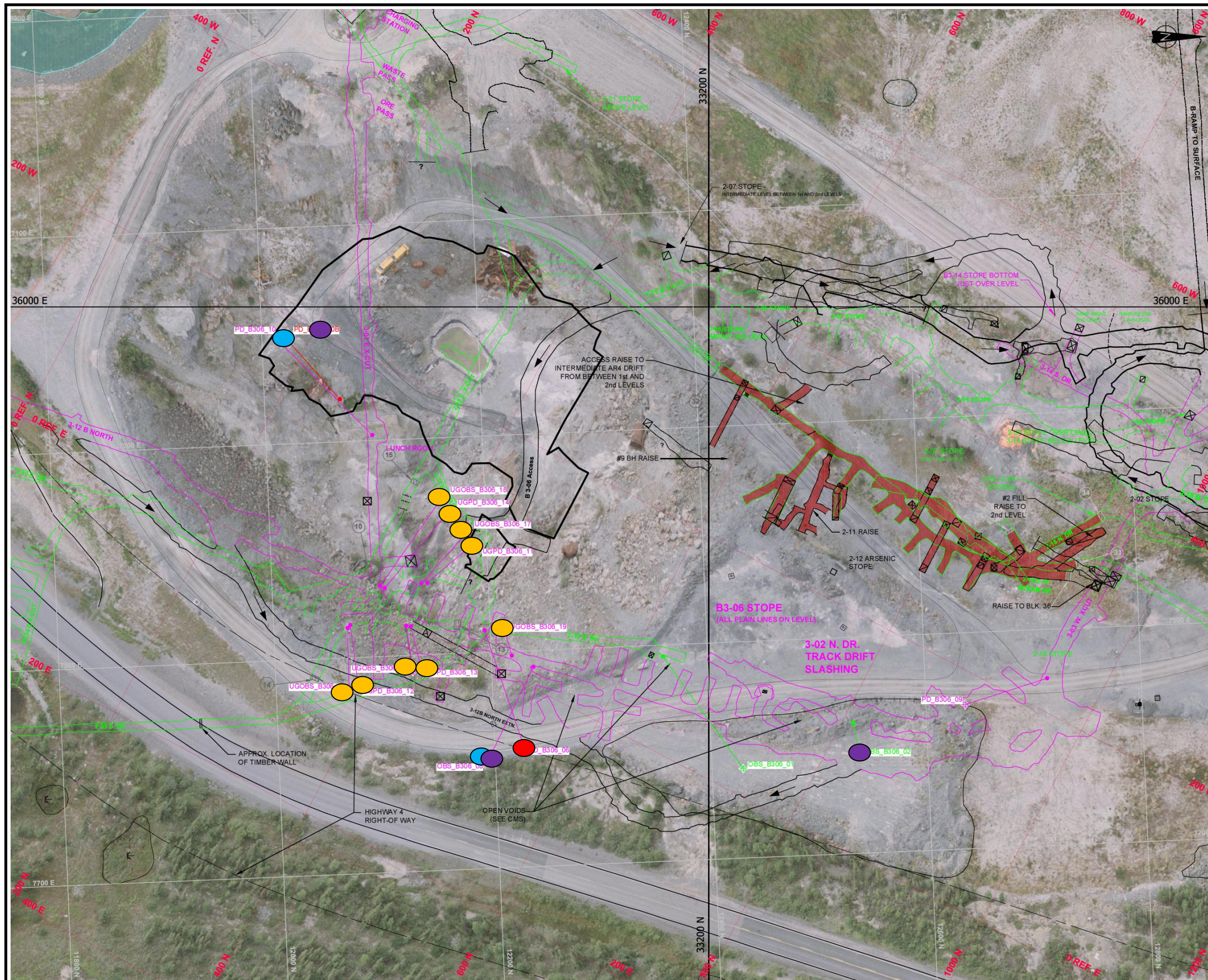
Note: mandatory paste blockage points are required where known and obvious exit points from the target void to be backfilled are connected to critical mine development openings (e.g. access ramp or a ventilation shaft, etc.).

PROJECT		PWGSC GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT		
TITLE		B3-06 Stope Mandatory Blockages and Fill Volume Containment Points – 3 <sup>rd</sup> Level		
PROJECT No.		13-1426-0010	PHASE No. 5000	
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## Surface and Underground Borehole Collar - Legend

- Sub-vertical high slump bulk fill delivery borehole
- Sub-vertical low slump fill or foam delivery borehole
- Observation / breather / contingency high slump bulk fill delivery borehole
- Borehole drilled from underground

\* Replace Drill plan – arsenic stopes should be shaded

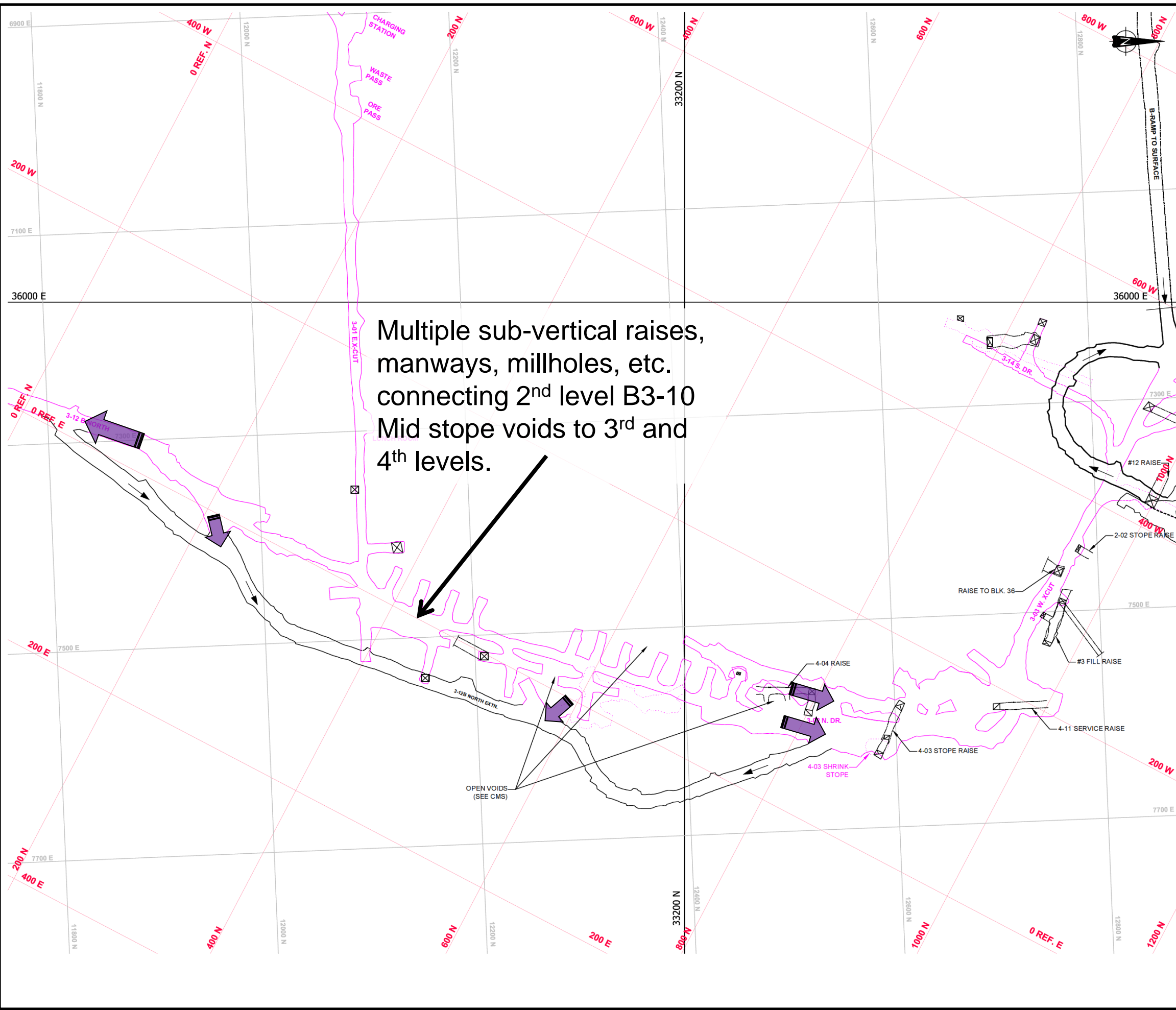
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PROJECT	PWGSC		
	<b>GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT</b>		

TITLE	<b>B3-06 Stope Surface Borehole Collars</b>		
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Multiple sub-vertical raises, manways, millholes, etc. connecting 2<sup>nd</sup> level B3-10 Mid stope voids to 3<sup>rd</sup> and 4<sup>th</sup> levels.

### Possible Paste Backfill Leakage Points To Be Monitored - Legend

-  Possible paste exit point to be monitored – man-entry
-  Possible paste exit point to be monitored – no entry

Note: These points show areas where paste may flow from the targeted void to be backfilled. These exit points must be monitored. Barricades or a change in paste delivery approach in the targeted void would be required to stop the leak.

PROJECT		PWGSC GIANT MINE INTERIM U/G STABILIZATION PROJECT YELLOWKNIFE, NWT		
TITLE		B3-06 Stope Possible Paste Exit Points To Be Monitored – 3 <sup>rd</sup> Level		
PROJECT No.		13-1426-0010	PHASE No. 5000	
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