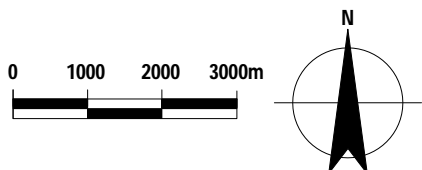


**LEGEND**

- SURFACE WATER FEATURES
- MAJOR RIVERS
- PROPOSED MINE FEATURES
- SURFACE WATER BODY
- FAULTS

**SURFICIAL GEOLOGIC UNITS**

- |                                    |  |
|------------------------------------|--|
| CARROLL'S CORNER FORMATION         | MACDONALD ROAD FORMATION                     |
| COLDSTREAM FORMATION               | MEAGHERS GRANT FORMATION                     |
| ELDERBANK FORMATION                | UNDIVIDED GAYS RIVER AND MACUMBER FORMATIONS |
| GAYS RIVER FORMATION               | WATERING BROOK FORMATION                     |
| GREEN OAKS FORMATION               | AREA NOT MAPPED                              |
| HALIFAX AND GOLDENVILLE FORMATIONS |  |

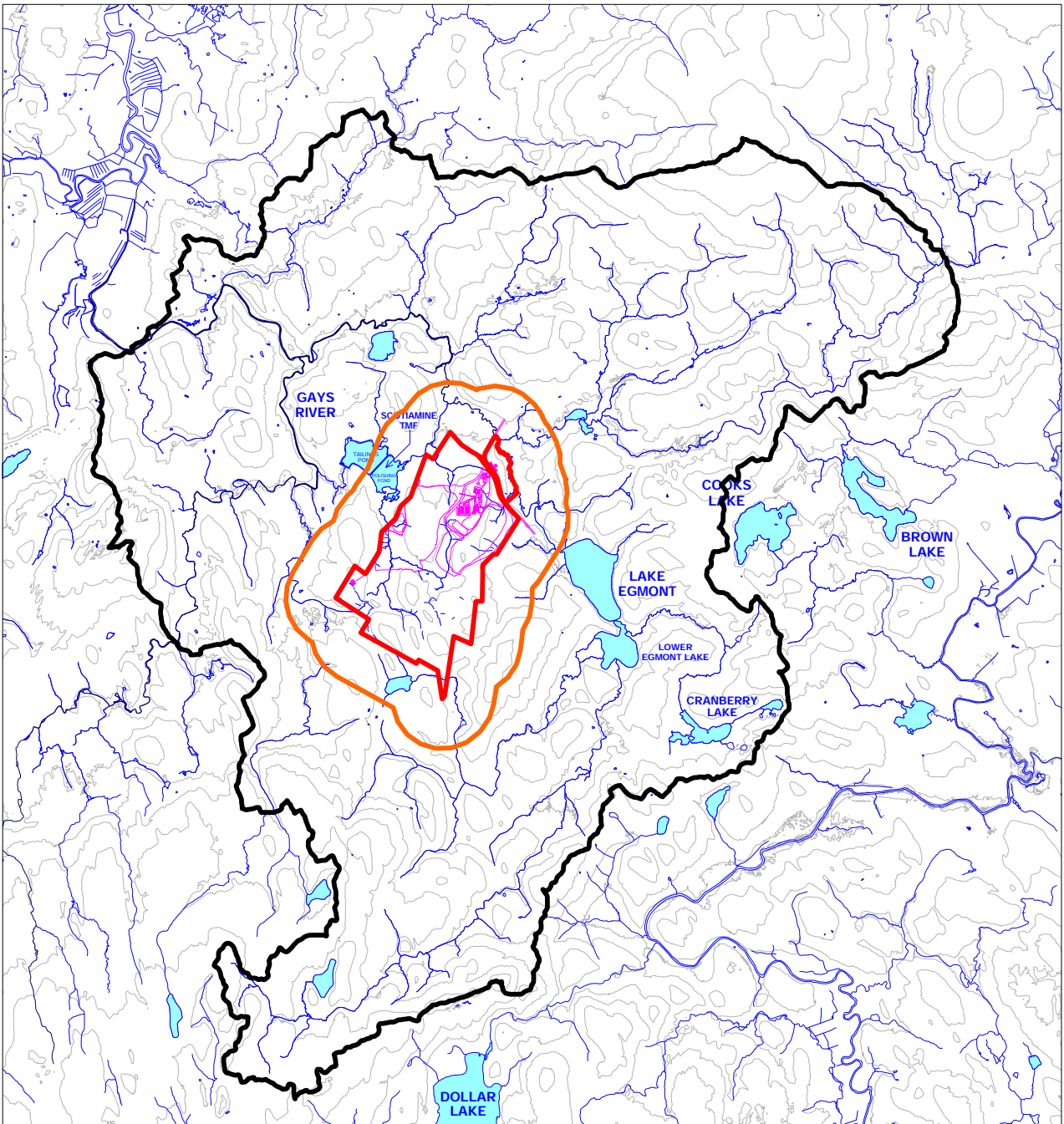


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Project No. 12601021  
 Date July 2024

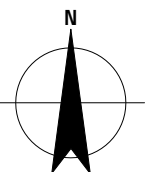
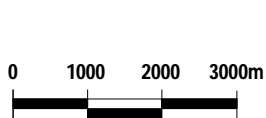
REGIONAL BEDROCK GEOLOGY

**FIGURE 2.7**



**LEGEND**

- SURFACE WATER FEATURES
- MAJOR RIVERS
- PROPOSED MINE FEATURES
- GROUND SURFACE ELEVATION CONTOURS
- SURFACE WATER BODY
- ACTIVE MODEL DOMAIN
- LOCAL ASSESSMENT AREA (LAA)
- PROJECT AREA (PA)

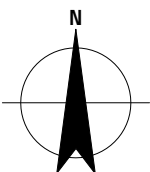
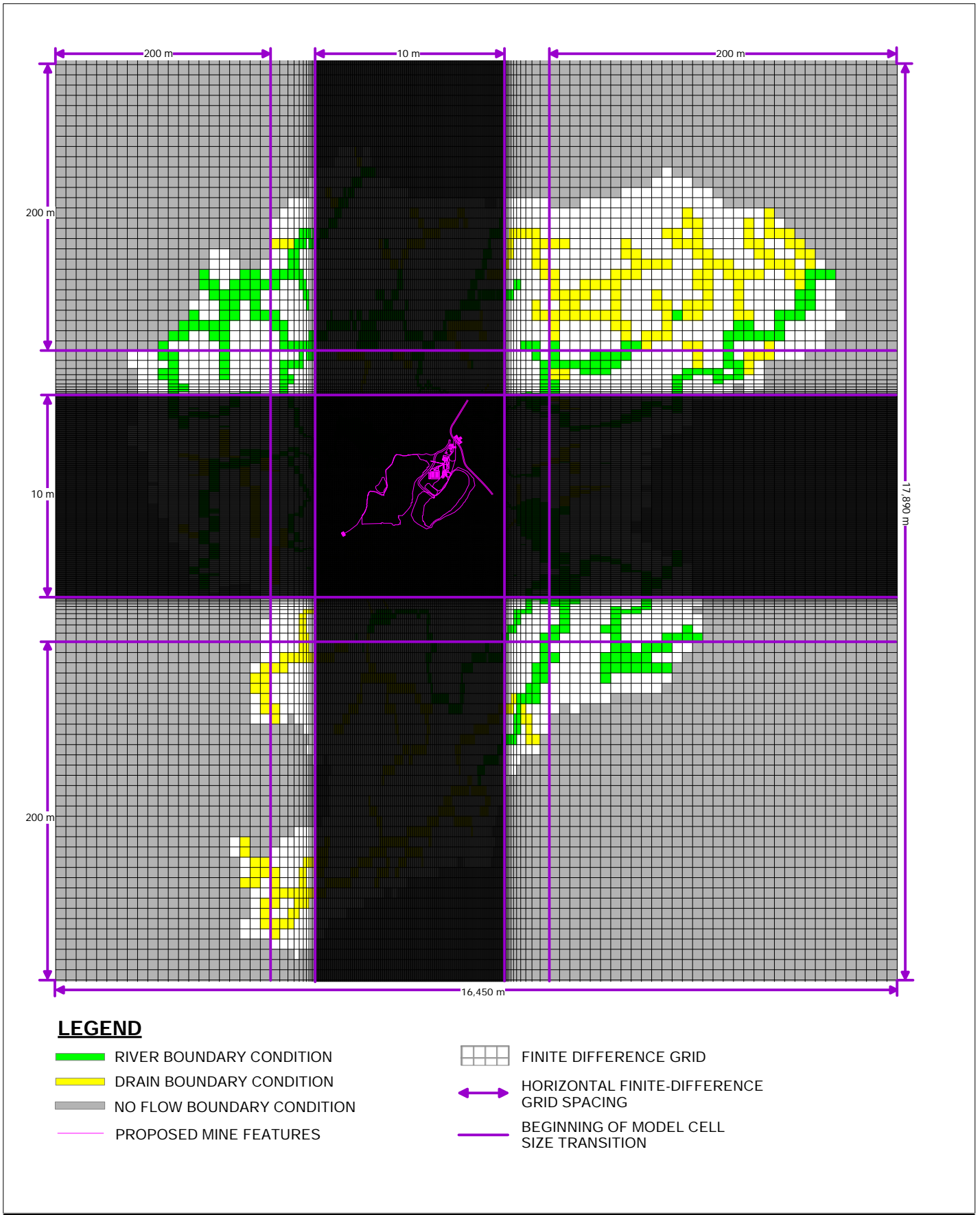


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 Date July 2024

GROUNDWATER FLOW MODEL DOMAIN

**FIGURE 5.1**

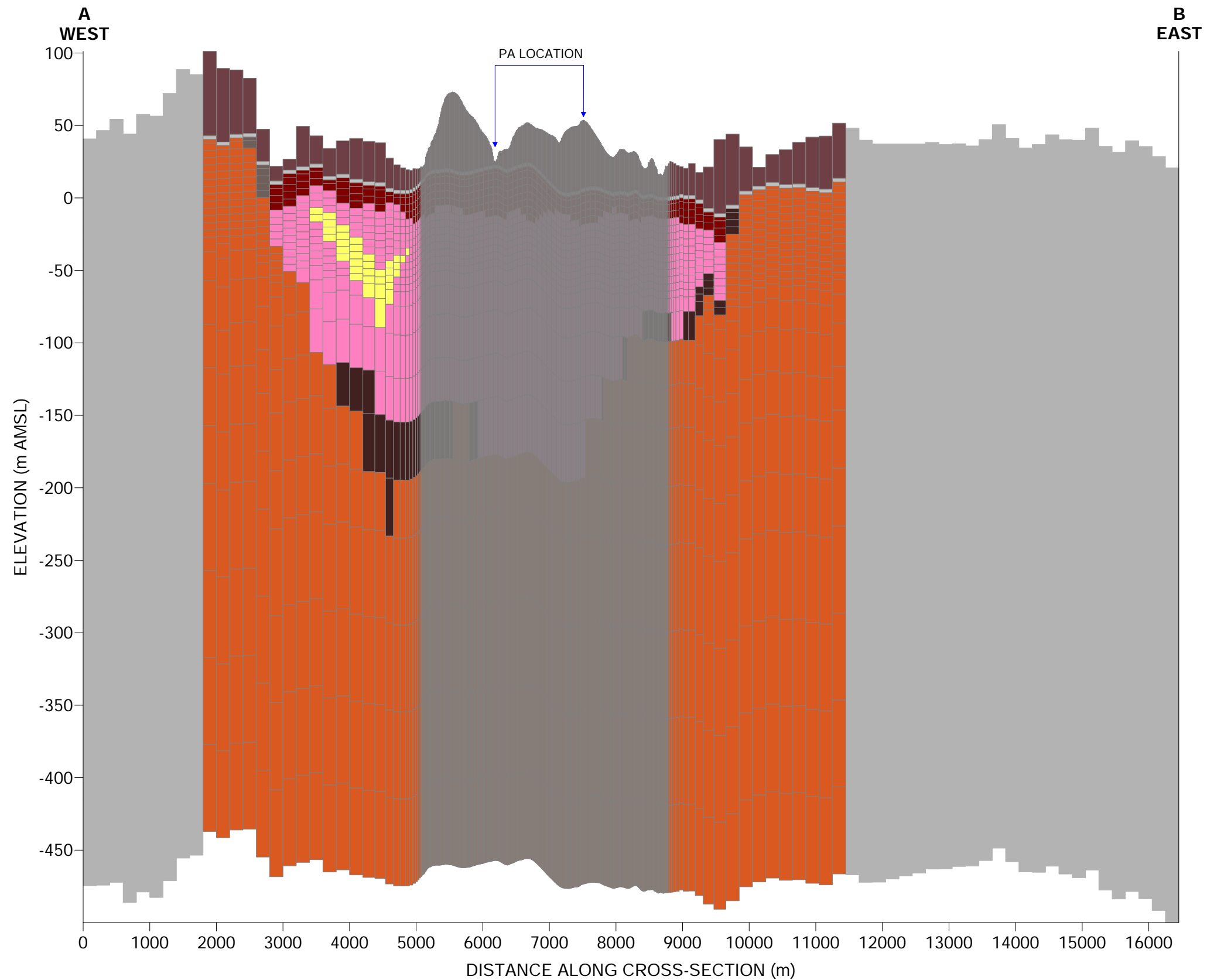


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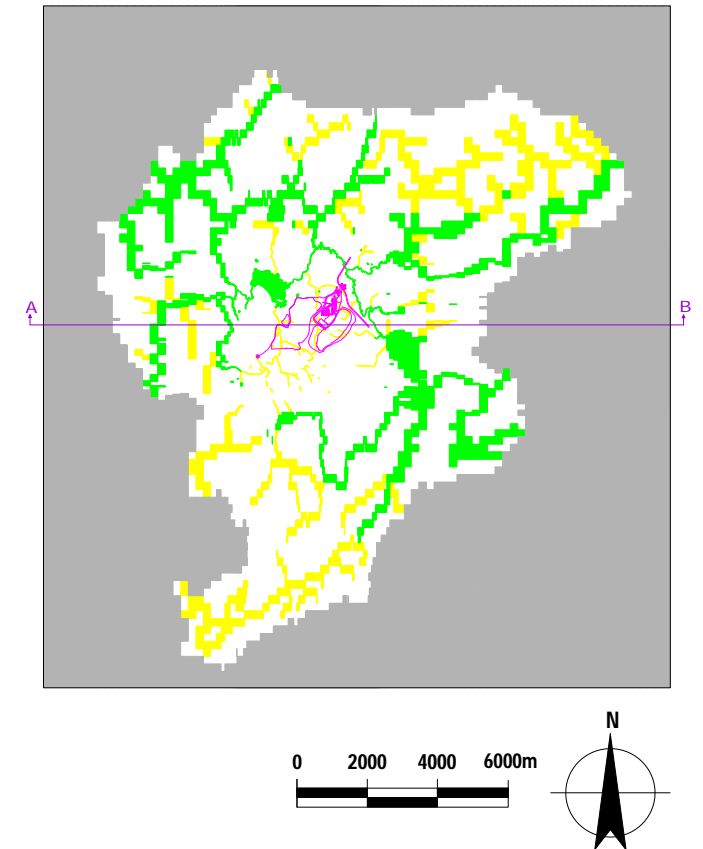
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FINITE DIFFERENCE GRID

**FIGURE 5.2**



**CROSS-SECTION LOCATION**



**LEGEND**

- FINITE DIFFERENCE GRID
- CROSS-SECTION LOCATION
- RIVER BOUNDARY CONDITION
- DRAIN BOUNDARY CONDITION
- NO-FLOW BOUNDARY CONDITION
- PROPOSED MINE FEATURES

**HYDRAULIC CONDUCTIVITY ZONES**

- ZONE 1 - OVERBURDEN
- ZONE 2 - CARROLL'S CORNER FORMATION
- ZONE 3 - CARROLL'S CORNER FORMATION (DOLOMITE/ANHYDRITE)
- ZONE 4 - CARROLL'S CORNER FORMATION (ANHYDRITE)
- ZONE 5 - CARROLL'S CORNER FORMATION (GYPSUM)
- ZONE 6 - GAYS RIVER FORMATION
- ZONE 7 - MEGUMA GROUP (BEDROCK)
- ZONE 9 - FRACTURED BEDROCK



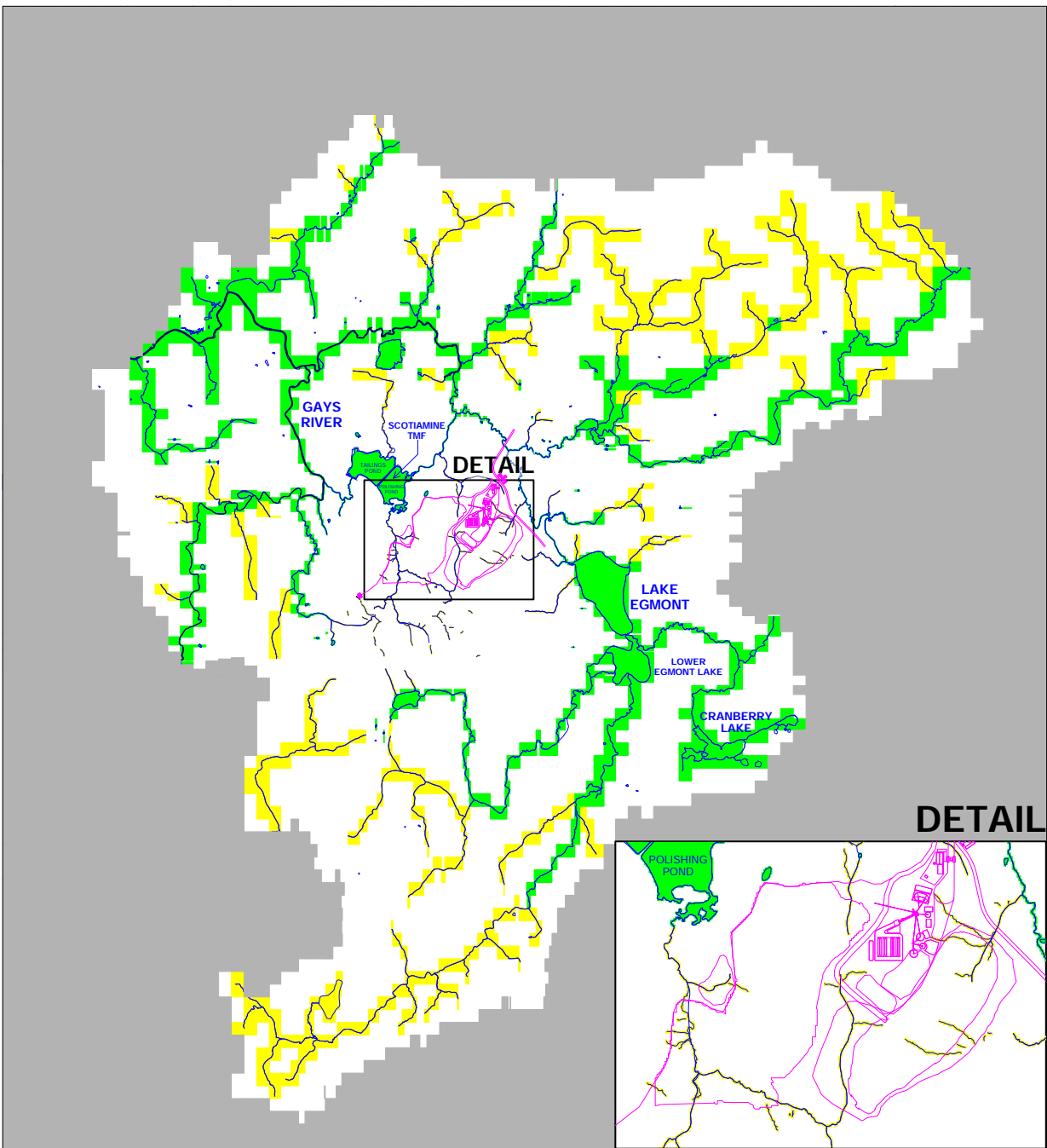
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VERTICAL FINITE DIFFERENCE GRID

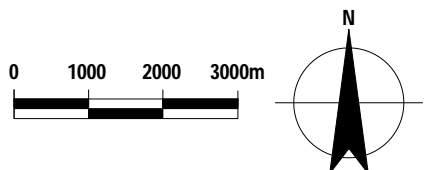
**FIGURE 5.3**





**LEGEND**

- SURFACE WATER FEATURES
- MAJOR RIVERS
- PROPOSED MINE FEATURES
- RIVER BOUNDARY CONDITION
- DRAIN BOUNDARY CONDITION
- NO-FLOW BOUNDARY CONDITION

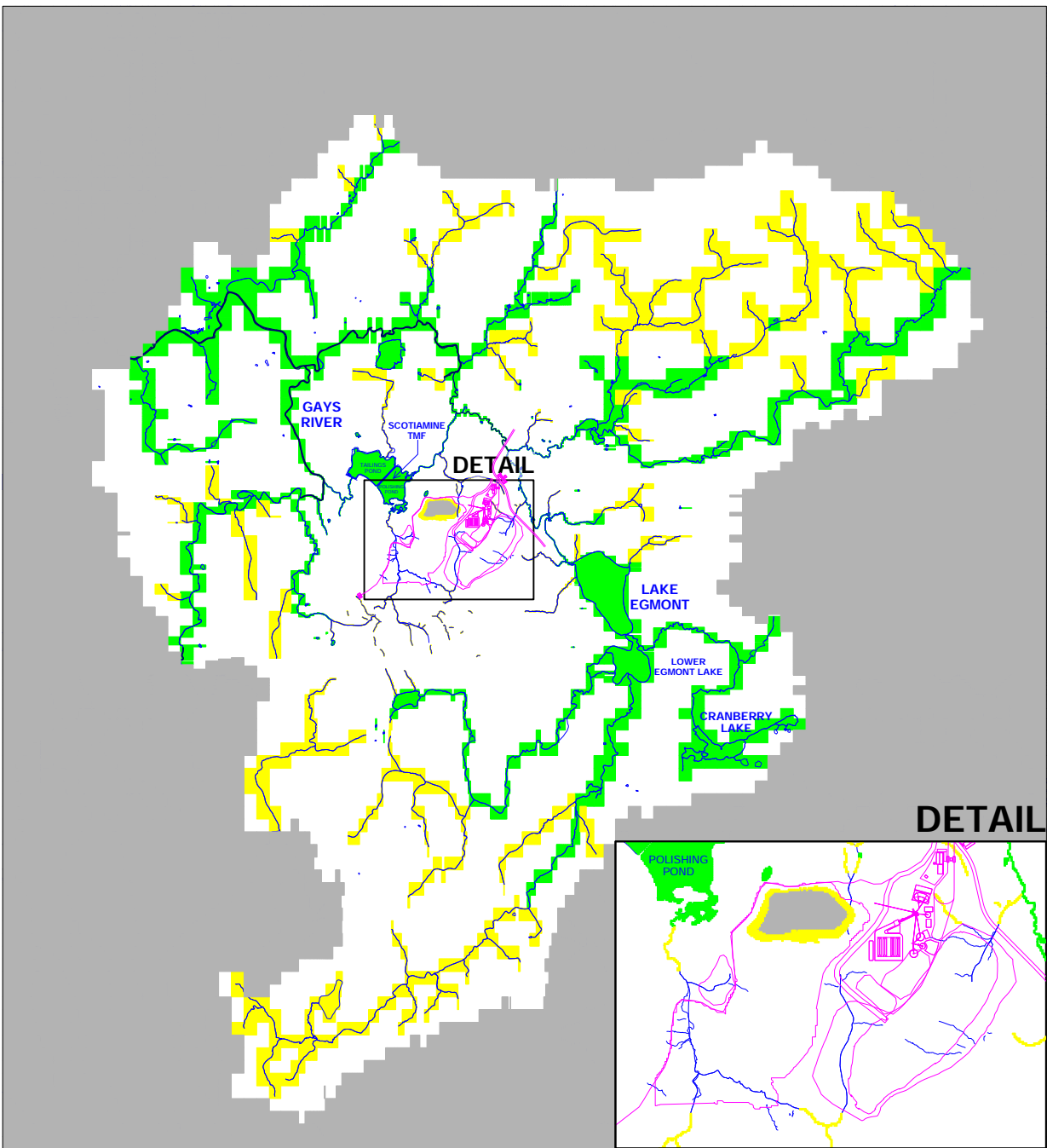


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Project No. 12601021  
 Date July 2024

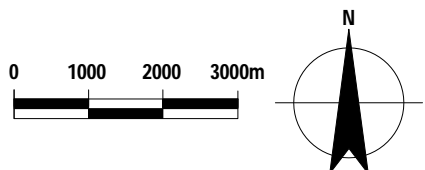
GROUNDWATER FLOW MODEL BOUNDARY  
 CONDITIONS - BASELINE CONDITIONS

**FIGURE 5.4**



**LEGEND**

- SURFACE WATER FEATURES
- MAJOR RIVERS
- PROPOSED MINE FEATURES
- RIVER BOUNDARY CONDITION
- DRAIN BOUNDARY CONDITION
- NO-FLOW BOUNDARY CONDITION



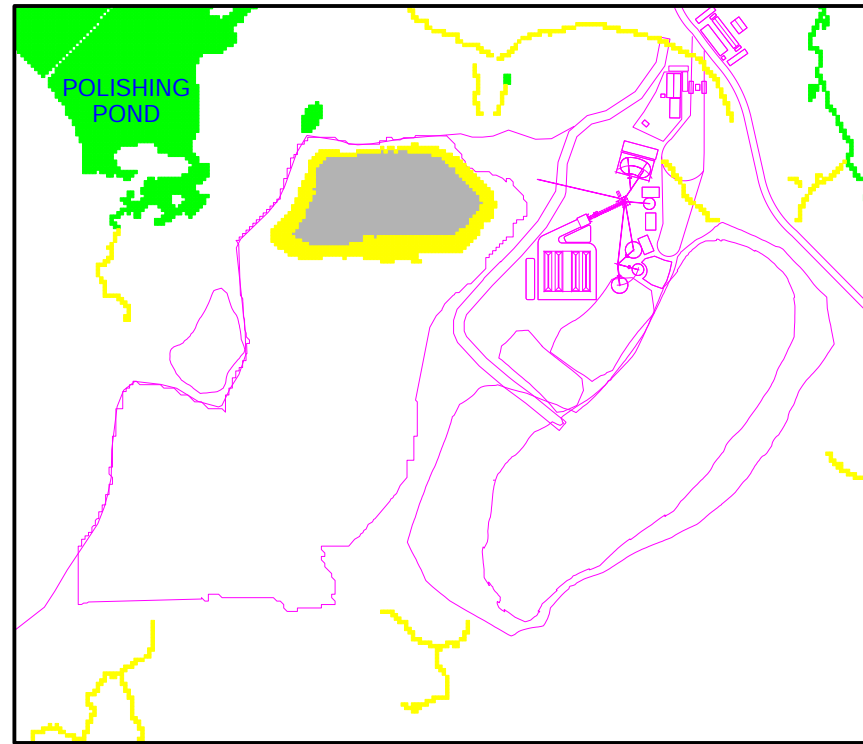
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 Date July 2024

GROUNDWATER FLOW MODEL BOUNDARY  
 CONDITIONS - PHASE 1b

**FIGURE 5.5**

**LAYER 1**



**LAYER 2**



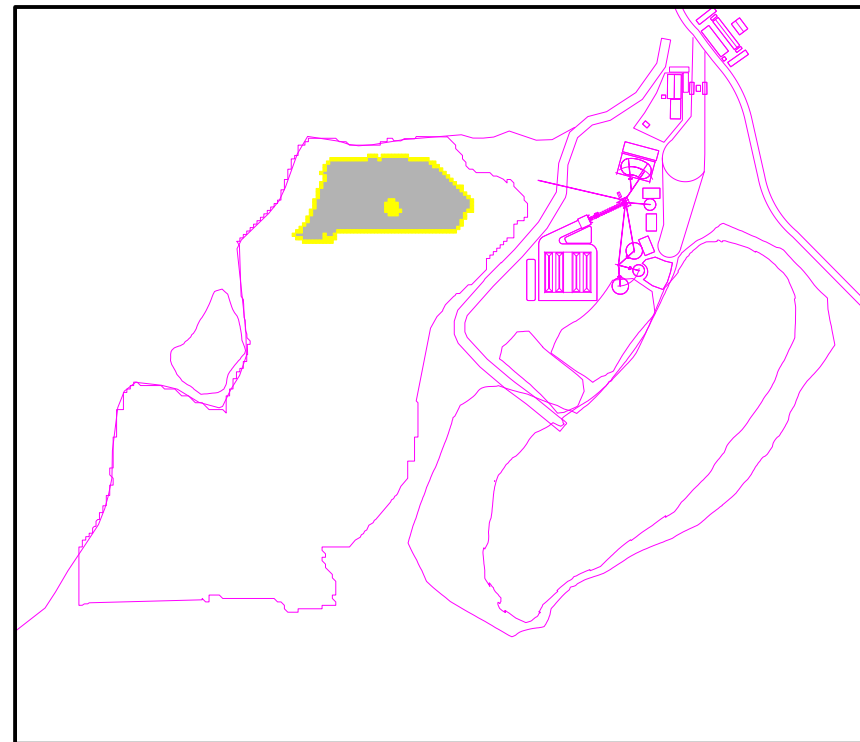
**LAYER 3**



**LAYER 4**



**LAYER 5**

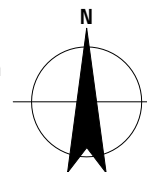
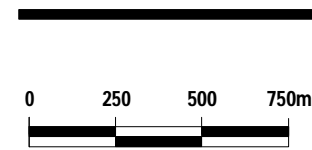


**LAYER 6**



**LEGEND**

-  SURFACE WATER FEATURES
-  PROPOSED MINE FEATURES
-  RIVER BOUNDARY CONDITION
-  DRAIN BOUNDARY CONDITION
-  NO-FLOW BOUNDARY CONDITION



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Project No. 12601021  
Date July 2024

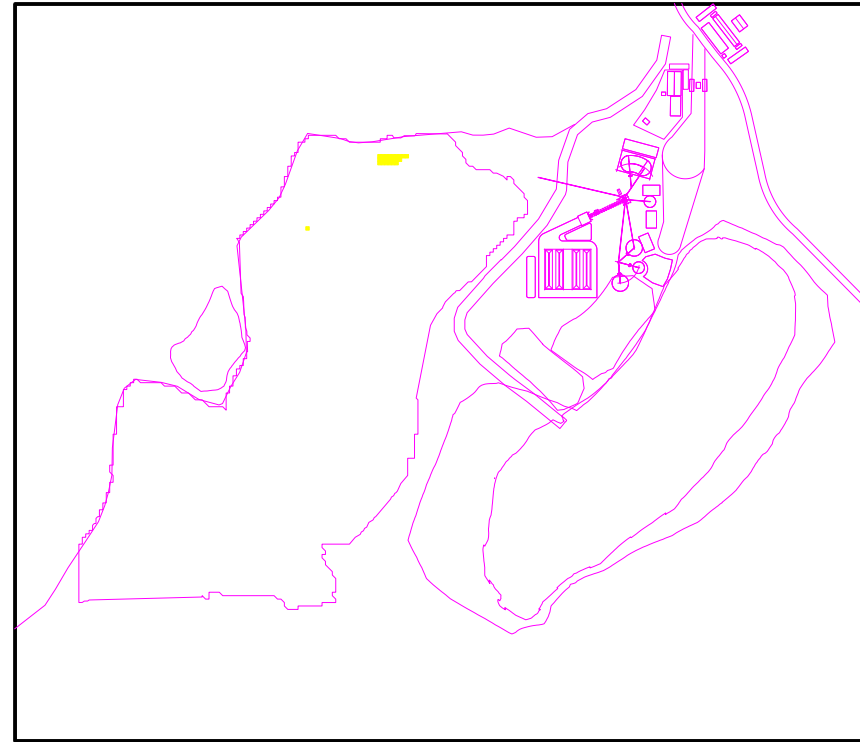
BOUNDARY CONDITIONS BY LAYER  
PHASE 1b: LAYERS 1 - 6

**FIGURE 5.6**

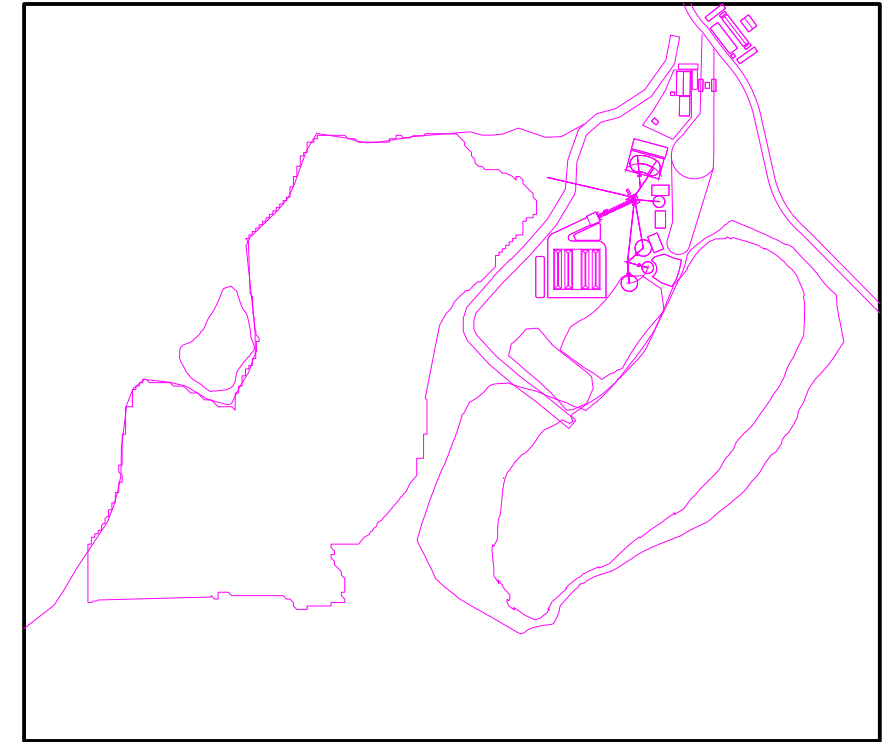
**LAYER 7**



**LAYER 8**

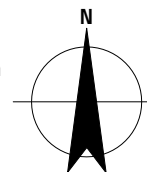
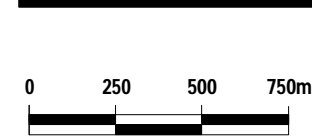


**LAYER 9**



**LEGEND**

- SURFACE WATER FEATURES
- PROPOSED MINE FEATURES
- DRAIN BOUNDARY CONDITION
- NO FLOW BOUNDARY CONDITION

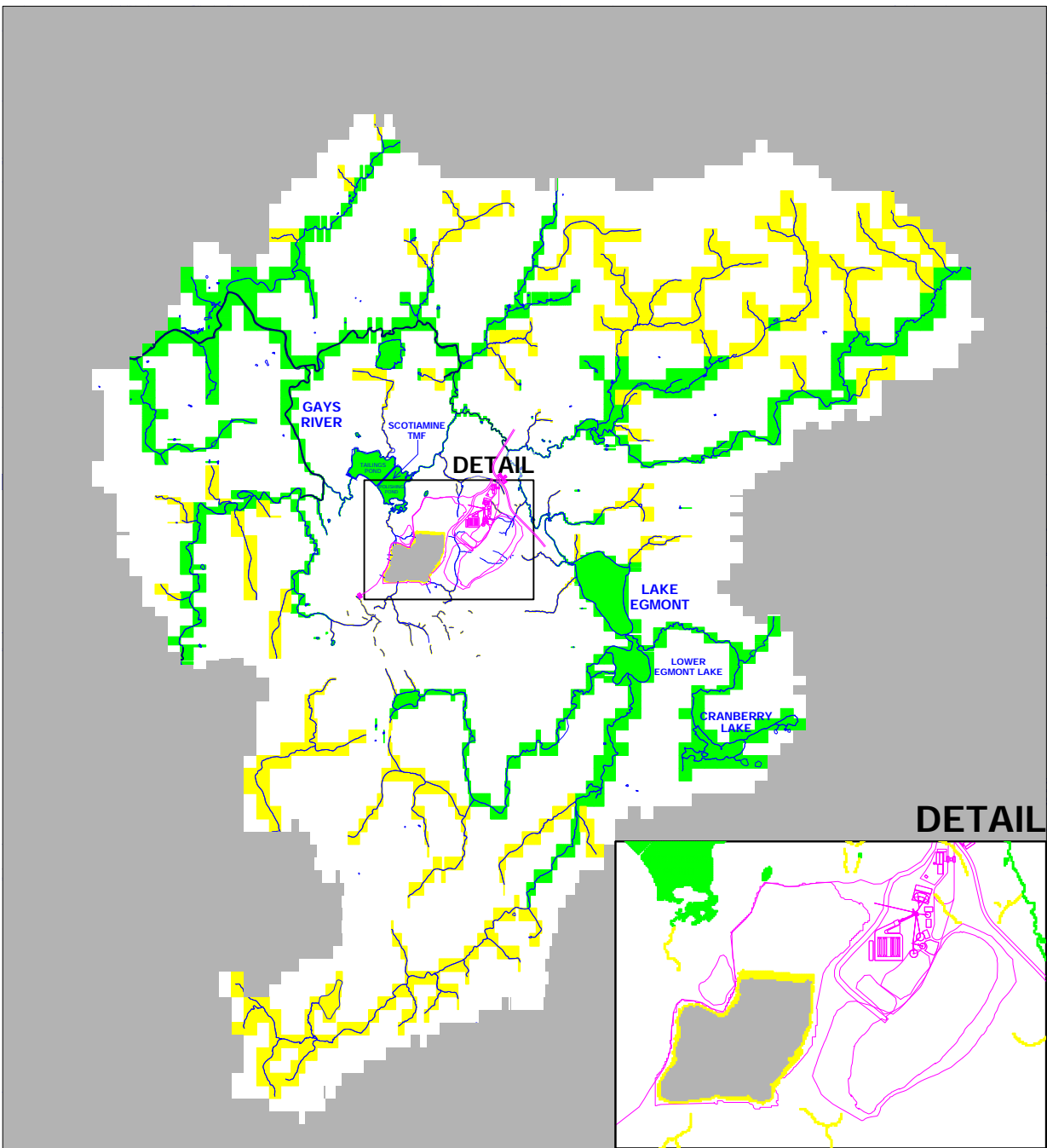


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Date July 2024

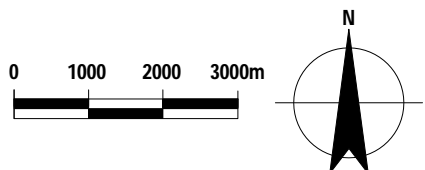
BOUNDARY CONDITIONS BY LAYER  
PHASE 1B: LAYERS 7 - 9

**FIGURE 5.7**



**LEGEND**

- SURFACE WATER FEATURES
- MAJOR RIVERS
- PROPOSED MINE FEATURES
- RIVER BOUNDARY CONDITION
- DRAIN BOUNDARY CONDITION
- NO-FLOW BOUNDARY CONDITION



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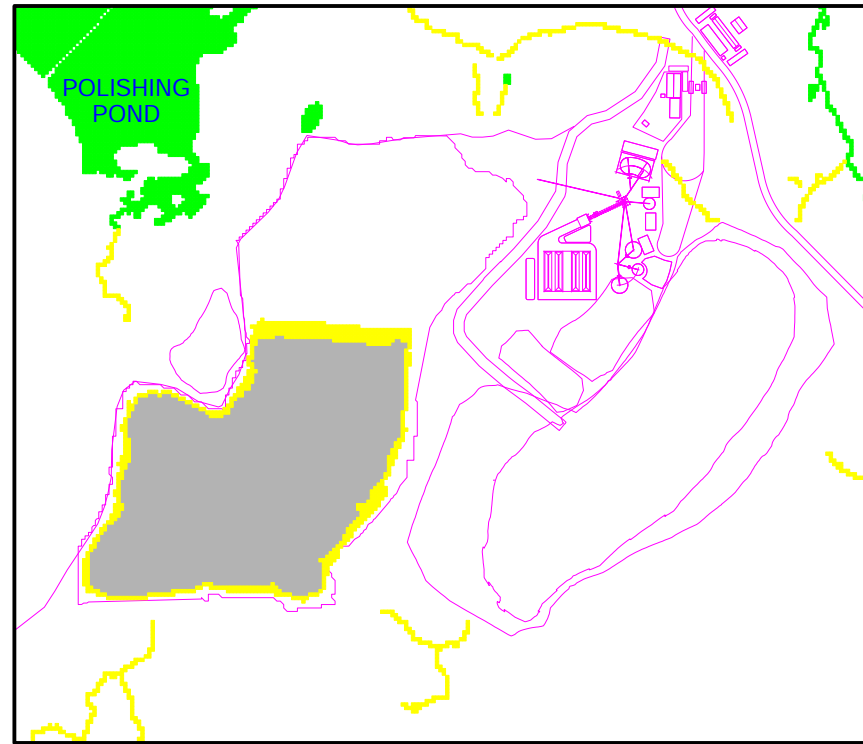
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GROUNDWATER FLOW MODEL BOUNDARY  
 CONDITIONS - PHASE 2 END-OF-MINE

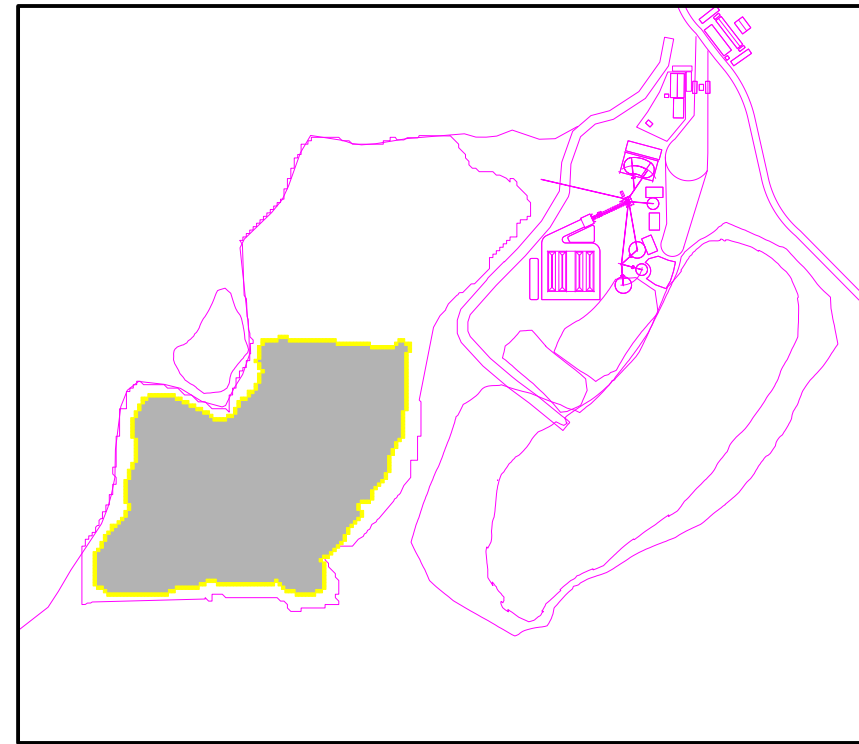
**FIGURE 5.8**



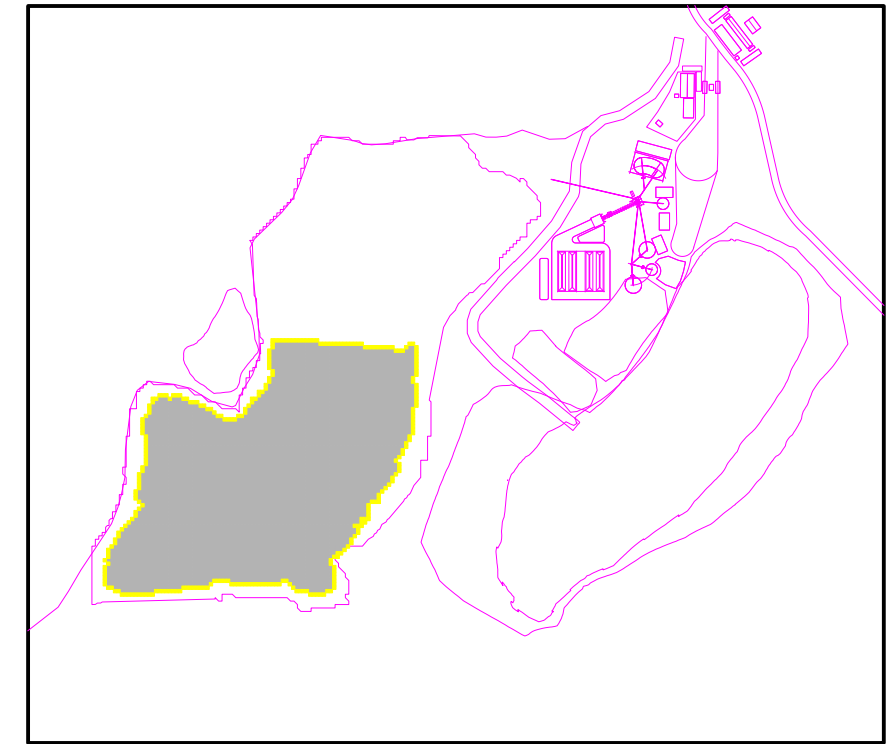
**LAYER 1**



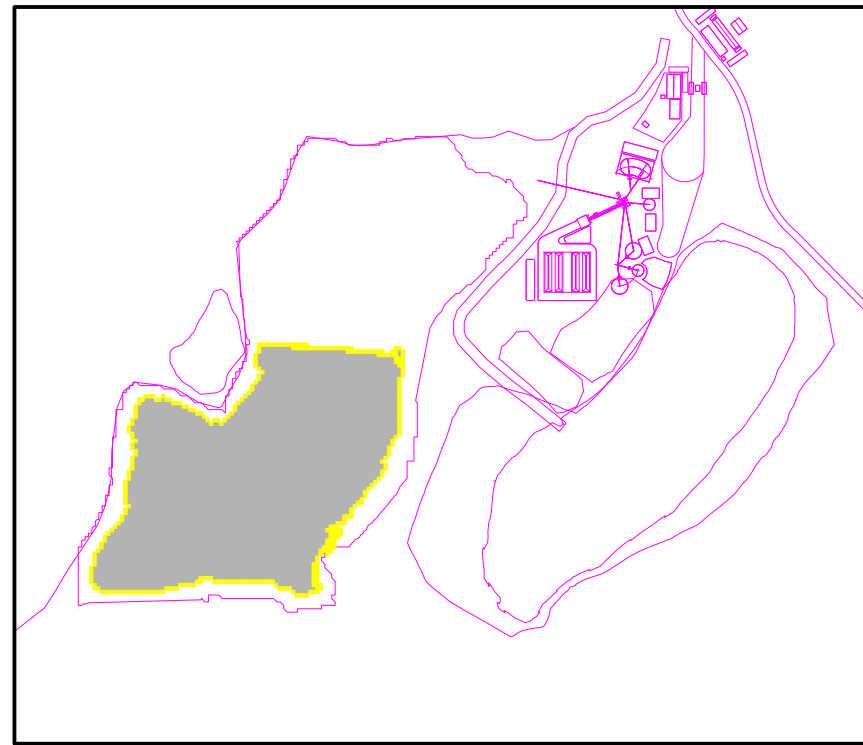
**LAYER 2**



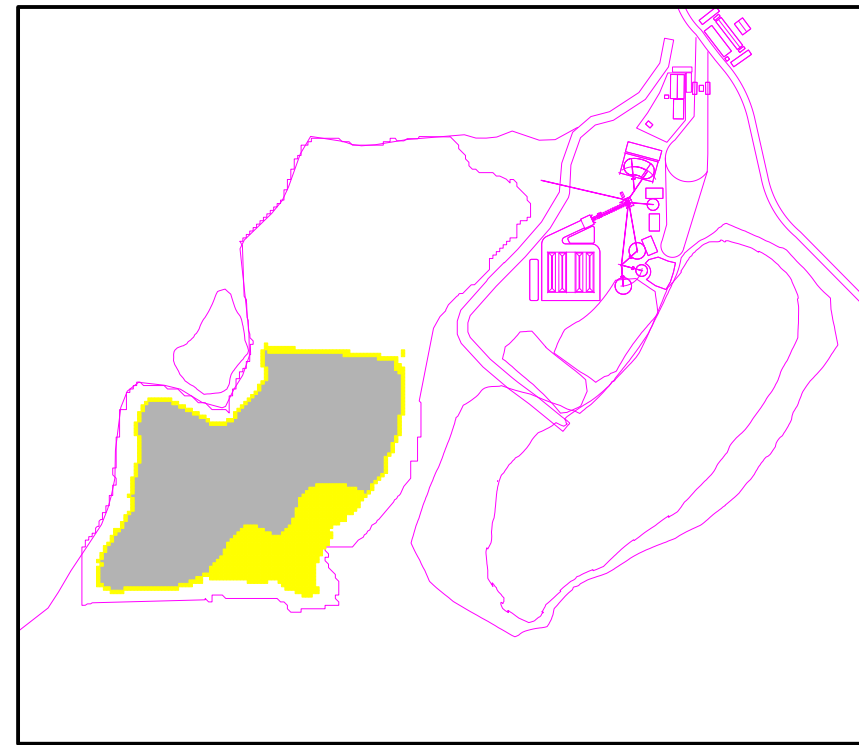
**LAYER 3**



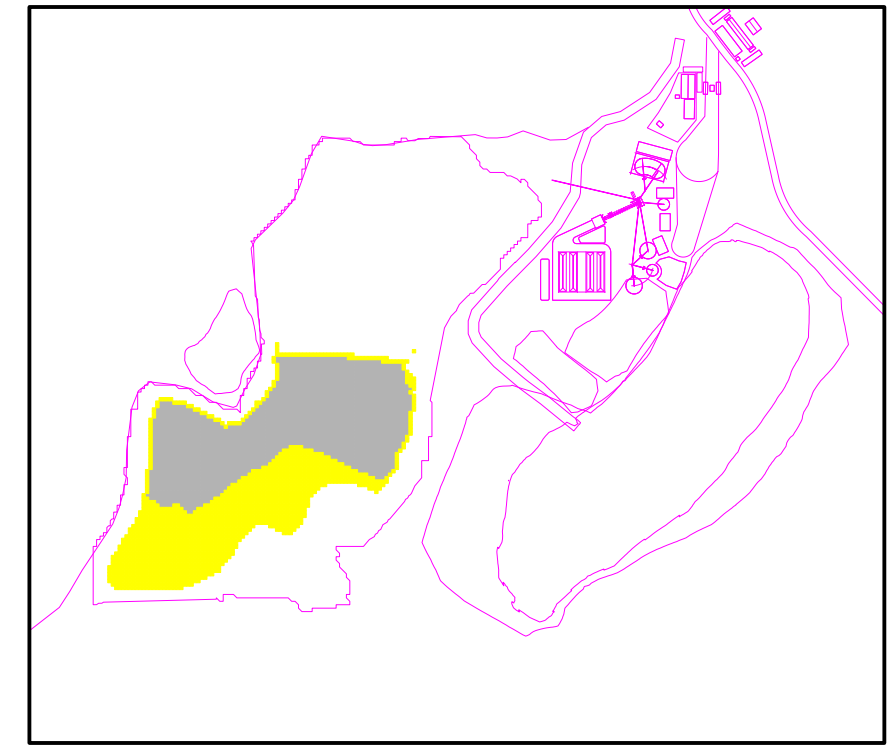
**LAYER 4**



**LAYER 5**

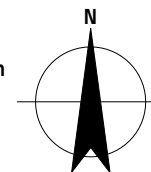
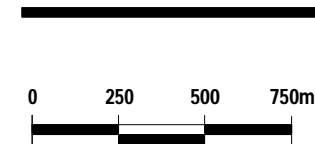


**LAYER 6**



**LEGEND**

- SURFACE WATER FEATURES
- PROPOSED MINE FEATURES
- █ RIVER BOUNDARY CONDITION
- █ DRAIN BOUNDARY CONDITION
- █ NO-FLOW BOUNDARY CONDITION



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BOUNDARY CONDITIONS BY LAYER  
END-OF-MINE: LAYERS 1 - 6

**FIGURE 5.9**