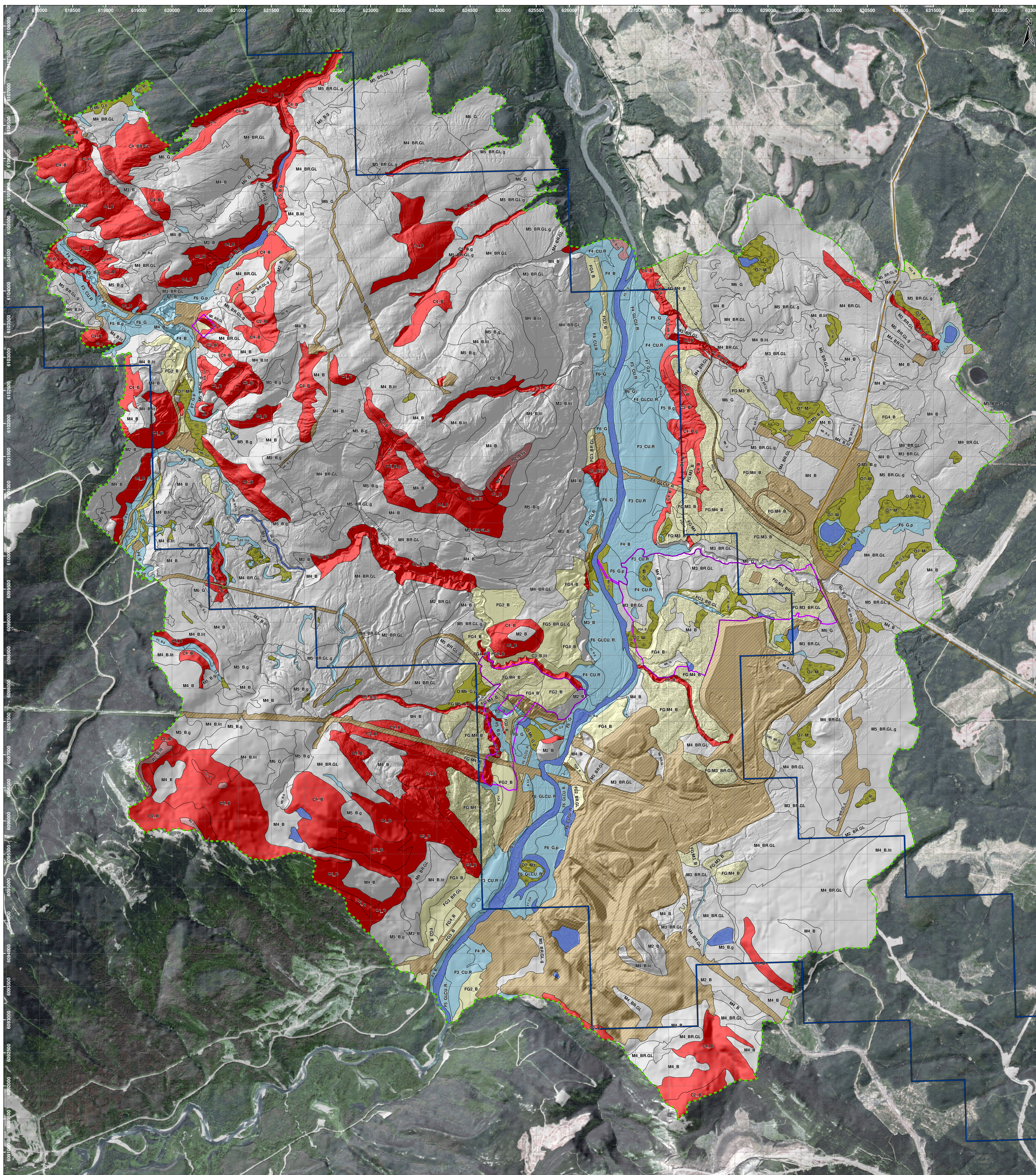


## ***Appendix 10-D***

*Murray River Coal Project: Surficial Material and Soil Map of the  
Local Study Area*

MURRAY RIVER COAL PROJECT

**Application for an Environmental Assessment Certificate / Environmental Impact Statement**



**Local Study Area**  
**Mine Site Assessment Footprint**  
**Licence Area**  
 Highway  
 Railway

**Surfacial Material**

- A** Anthropogenic - areas disturbed by human activity
- C** Colluvium - variable coarse fragment content, angular particles, fine/medium textures, erodible  
Fluvial - on floodplain and very gently sloping alluvial fans. Gravelly to cobbly, sandy materials sometimes overlain by non-gravelly sandy silts
- F** Glaciofluvial - gravelly to cobbly sands often in stratified, terraces above active floodplains.
- FG** FGIM Glaciofluvial Veneer above till
- M** Morainal - variable coarse fragment content, mixed particles, sandy to silty texture, commonly compact subsurface
- O** Organic - dark, poorly to moderately decomposed organic material, often less than 1 m thick
- OM** Organic Veneer over till
- OW** Open Water
- R** Bedrock - rock outcrops and bedrock covered by a thin mantle of mineral or organic materials. Weathered bedrock (D) may be included in these units.

Soil Moisture Regime  
 Primary Surfacial Material **M5\_P.g** Soil Qualifier  
 Soil Order

Describes a polygon with dominant morainal soil of subhygric soil moisture regime and podzolic qualities with gleyed characteristics. Description of label codes are below.  
 Complete polygon attributes are contained in the report appendices

**Soil Classification (Order)**

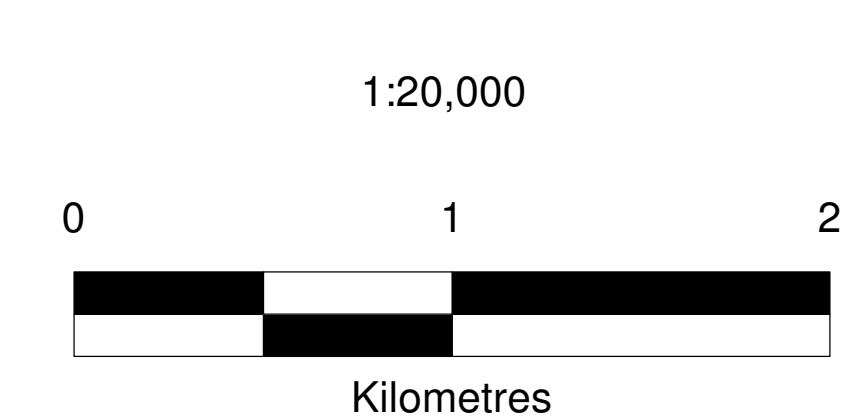
- B - Brunisol
- G - Gleysol
- L - Luvisol
- P - Podzol
- R - Regosol
- M - Mesisol
- n - Non-Soil

**Soil Moisture Regime**

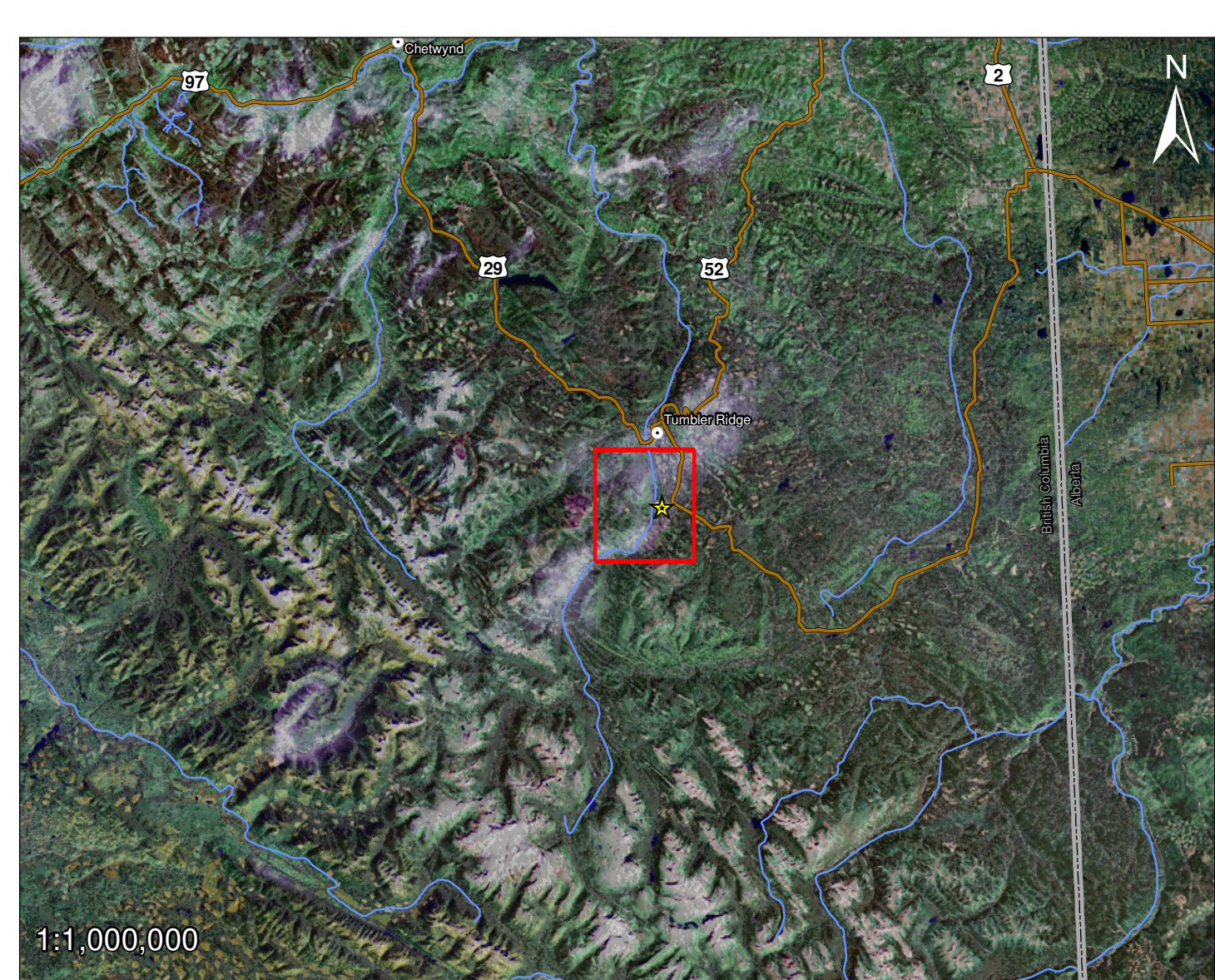
- 0 - Very xeric
- 1 - Xeric
- 2 - Subxeric
- 3 - Submesic
- 4 - Mesic
- 5 - Subhygric
- 6 - Hygric
- 7 - Subhygric
- n - Not Rated

**Soil Qualifier**

- g - gleyed (evidence of temporal soil saturation)
- lt - lithic (bedrock contact within 1 m)
- n - not classified
- p - peaty (organic capping < 0.4 m thick)
- t - terric or mineral soil contact within 1.2 m



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 Projection: NAD 1983 UTM Zone 10N



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Project: Murray River Site: British Columbia

Figure:	Appendix 10-D		Surfacial Material and Soil Map of the Local Study Area	
Scale:	1:20,000	Client:	HD MINING INTERNATIONAL LTD - Murray River Coal Project	
Revision:	00	Date:	July 11, 2014	
Size:	36x40in	Layout:	T0.13	Checked by: AP
		Checked by:	JR	File: MUR-17-048