

## **Cameco Australia Pty. Ltd.**

### **Nabarlek Project EL's 10176, 24371, 24372 - Outcrop Sample Alteration - 2006**

<b>Sample Number</b>	<b>Intensity</b>	<b>Colour</b>	<b>Distribution</b>	<b>Alteration Type</b>	<b>Comments</b>
NA060013	moderate	grey		Bleaching	
NA060014	weak	pink	mineral control	Feldspars	bleached and desilicified pinkification of fx
NA060016	moderate	black	vein hosted diss	Hematite	disseminated in quartz veins
NA060016	moderate	purple	pervasive	Hematite	
NA060017	moderate		pervasive	Quartz dissolution	
NA060018	moderate		pervasive	Quartz dissolution	
NA060019	weak	pink	pervasive	Silicification	
NA060021	weak	purple	pervasive	Silicification	
NA060022	weak	cream	interstitial	Clay	
NA060023	strong	grey	pervasive	Silicification	
NA060024	weak	pink		Drusy quartz	minor drusy quartz in area
NA060027					
NA060028	moderate	pink	pervasive	Silicification	
NA060201	moderate	cream	interstitial	Clay	
NA060201	strong		pervasive	Bleaching	
NA060201	weak	brown	irregular	Limonite	
NA060201	weak	maroon	irregular	Diagenetic hematite	
NA060202	strong	white	pervasive	Silicification	
NA060202	weak	orange	fracture coating	Limonite	
NA060202	weak	red	irregular	Hematite	
NA060202	moderate	colourless	bedding controlled	Mica	
NA060202	moderate	red	fracture coating	Hematite	
NA060203	weak	yellow	fracture coating	Clay	
NA060203	moderate	white	interstitial	Clay	
NA060203	moderate		pervasive	Silicification	
NA060203	moderate	red	breccia filling	Hematite	
NA060601	strong	red	interstitial	Hematite	Ferricrete
NA060602	moderate	colourless	pervasive	Quartz dissolution	
NA060602	strong	colourless	pervasive	Bleaching	
NA060602	weak	pink	fracture coating	Hematite	
NA060602	moderate	white	pervasive	Clay	
NA060603	moderate	white	interstitial	Clay	
NA060603	moderate		pervasive	Quartz dissolution	
NA060604	moderate	white	interstitial	Clay	
NA060604	weak	pink	irregular	Hematite	
NA060604	strong	colourless	pervasive	Bleaching	
NA060606	weak	orange	pervasive	Hematite	
NA060606	weak	grey	disseminated	Specular hematite	
NA060606	moderate	colourless	pervasive	Quartz dissolution	
NA060607	strong	colourless	pervasive	Bleaching	
NA060607	moderate	colourless	pervasive	Quartz dissolution	
NA060609	strong	colourless	pervasive	Bleaching	
NA060611	moderate	purple	replacement	Specular hematite	
NA060611	strong	orange	pervasive	Hematite	
NA060612	strong	colourless	pervasive	Bleaching	

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NA060612	moderate	colourless	pervasive	Quartz dissolution	
NA060613	weak	colourless	matrix	Silicification	More likely the lack of quartz dissolution
NA060613	weak	white	interstitial	Clay	
NA060613	weak	pink	interstitial	Hematite	
NA060613	weak	colourless	patches	Quartz dissolution	localized patchy dissolution
NA060615	strong	colourless	pervasive	Drusy quartz	
NA060615	strong	colourless	pervasive	Bleaching	
NA060616	moderate	colourless	pervasive	Quartz dissolution	
NA060616	moderate	colourless	pervasive	Bleaching	
NA060617	moderate	colourless	pervasive	Bleaching	
NA060617	weak	cream	disseminated	Clay	
NA060617	moderate	colourless	pervasive	Silicification	
NA060618	moderate	red orange	coating	Hematite	irregularly distributed only a minor component of the entire exposure, soem earthy coatings to 1-2 cm
NA060618	weak	cream	disseminated	Mica	irregularly distributed, some areas have none, if basement probably metamorphic not alteration
NA060618	moderate	cream	pervasive	Bleaching	clayey irregular breaks and fractures
NA060618	strong	colourless	pervasive	Silicification	chalcedonic to opaline in places, extremely hard if no clayey fractures
NA060619	weak	colourless	bedding controlled	Mica	
NA060619	moderate	cream	pervasive	Bleaching	
NA060620	weak	cream	clasts	Clay	
NA060620	moderate	cream	clasts	Bleaching	
NA060620	moderate	colourless	clasts	Silicification	clasts are silicified bleached and cy altered
NA060620	weak	colourless	matrix	Silicification	locally silicified within matrix
NA060620	moderate	red brown (rust)	matrix	Hematite	
NA060621	weak	red brown (rust)	discrete spots	Hematite	desilicification spots 1mm patches interstitial he, pitted appearance in outcrop
NA060621	weak	white	coating	Silicification	slickolites on most bedding planes
NA060621	strong	colourless	pervasive	Quartz dissolution	very friable crumbly, deilicification spots
NA060622	weak	colourless	fracture coating	Silicification	irregular silicified ribs
NA060622	strong	colourless	pervasive	Quartz dissolution	
NA060622	strong	red brown (rust)	pervasive	Iron Oxides	
NA060623	weak	colourless	fracture coating	Drusy quartz	irregular DQZ clots and along ferruginous fracture
NA060623	moderate	red brown (rust)	fracture coating	Hematite	irregular small earthy clots or fractureand around DQZ
NA060623	strong	colourless	pervasive	Quartz dissolution	Host sdst strongly desilicified
NA060625	strong	colourless	pervasive	Bleaching	not associated with clay, very rare

Sample Number	Intensity	Colour	Distribution	Alteration Type	Comments
NA060625	weak	purple	discrete spots	Hematite	1-2 mm irreg spots with red interstitial he, very minor, imparts weak pink colour to rock
NA060625	strong	colourless	pervasive	Silicification	
NA060626	strong	colourless	pervasive	Bleaching	rare clay
NA060626	weak	red	fracture coating	Hematite	on some fractures bright red veneers of he, become more common west of this over ~200 m
NA060626	strong	colourless	pervasive	Silicification	
NA060627	strong	colourless	pervasive	Quartz dissolution	
NA060627	weak	tan	irregular spots blotches	Limonite	possibly weathering
NA060627	weak	white	interstitial	Clay	very minor interstitial
NA060800	weak	cream	replacement	Clay	Feldspars weather to clay
NA060801	weak	orange	interstitial	Limonite	Interstitial sub-mm specs coating grains.
NA060801	weak	cream	interstitial	Clay	Minor interstitial clay
NA060802	weak	orange	fracture coating	Limonite	Limonite on joints
NA060802	weak	colourless	fracture coating	Drusy quartz	~1 mm drusy quartz on joint surface
NA060802	weak	orange	discrete spots	Limonite	Irregularly distributed limonite spots
NA060802	weak	colourless	pervasive	Silicification	Very weakly silicified, particularly in weathering rind.
NA060803	weak	colourless	pervasive	Quartz dissolution	Sample is friable due to desilicification? Or just weathering?
NA060803	weak	purple	discrete spots	Hematite	1-2 mm spots of purple hematite
NA060803	weak	red	interstitial	Hematite	Brick red hematite specs (sub mm) on sand grain surface
NA060813	weak	red orange	replacement	Hematite	Hematite due to weathering?
NA060813	weak	white	replacement	Clay	Clay as weathering product?
NA060814	moderate	cream	interstitial	Clay	Moderate interstitial clay
NA060814	weak	red orange	interstitial	Diagenetic hematite	Hematite mixed with clay gives a pale orange colour
NA060815	weak	cream	interstitial	Clay	Interstitial cream clay
NA060815	weak	orange	interstitial	Diagenetic hematite	Hematite mixed with clay gives pale orange colour. Sand grains also appear orange. Hem caught in overgrowths?
NA060816	weak	purple	pervasive	Hematite	Minor hematite alteration
NA060816	weak	cream	replacement	Clay	Clay after feldspar?
NA060817	weak	white	fracture coating	Clay	White clay on fracture surfaces
NA060817	weak	cream	replacement	Clay	Clay after felspar, either weathering or palaeoweathering
NA060817	weak	yellow	patches	Sericite	
NA060817	moderate	maroon	pervasive	Hematite	