

Cameco Australia Pty. Ltd.
Birruduk Outcrop Lithlogy and Physical Properties

Sample Number	Outcrop Description	Formation	Lithology	Grain Size	Maximum Clast Size (mm)	Gamma Total Counts Cps (max)	Friability	Magnetic Susceptibility	Dominant Munsell Colour	Secondary Munsell Colour
BR00B10001	Massive to planar bedded fluvial sandstone	Kombolgie Fm.	Coarse to very coarse sandstone	6. medium sand		35	1	0.01	10R6/6 light red	10R8/3 pink
BR00B10002	Cross bedded fluvial sandstone	Kombolgie Fm.	Cross bedded v.c. to c. grained fluvial sandstone	6. medium sand	55	35	1	0.08	5YR7/6 reddish yellow	5YR8/2 pinkish white
BR00B10003	Planar cross bedded sandstone	Kombolgie Fm.	Medium to fine grained sandstone	6. medium sand		40	1	0	10R5/6 red	10R8/1 white
BR00B10004	Planar bedding with floating pebbles	Kombolgie Fm.	Coarse to very coarse sandstone	6. medium sand		43	2	0.01	10R6/1 reddish grey	10R8/2 pinkish white
BR00B10005	Planar bedded fluvial sandstone with underlying planar cross bedded sandstone	Kombolgie Fm.	Very coarse sandstone to granulestone	5. coarse sand		50	1	0.01	10R7/1 light grey	10YR8/2 very pale brown
BR00B10006	Planar bedded to trough cross bedded sandstone	Kombolgie Fm.	Coarse to very coarse sandstone	6. medium sand		50	2	0.01	5YR7/6 reddish yellow	10YR8/2 very pale brown
BR00B10007	Trough cross bedding	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand	14	37	1	0.01	5YR7/3 pink	5YR8/1 white
BR00B10008	Trough cross bedding above current ripple beds	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		47	1	0.01	5YR7/4 pink	5YR8/1 white
BR00B10009	Ripple to planar bedded sandstone	Kombolgie Fm.	Medium grained sandstone	6. medium sand		50	1	0.01	10R7/2 pale red	10R5/4 weak red
BR00B10010	Planar bedded fluvial sandstone	Kombolgie Fm.	Medium to coarse grained sandstone	7. fine sand		40	1	0.03	10R6/1 reddish grey	10R8/4 pink
BR00B10011	Massive to ripple bedded shallow fluvial sandstone	Kombolgie Fm.	Medium grained sandstone with rare floating pebble	6. medium sand		40	1	0	10R8/2 pinkish white	10R6/6 light red
BR00B10012	Assymmetrical current ripples and trough cross bedding	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		41	1	0.03	10R4/4 weak red	5YR8/4 pink
BR00B10013	Planar bedding with orthogonal ripple marks on proximal layers (shallow water intertidal))	Kombolgie Fm.	Fine to very fine grained sandstone	6. medium sand		38	1	8	5YR6/1 light grey	5YR6/3 light reddish brown
BR00B10014	Planar cross bedded distal fluvial sandstone	Kombolgie Fm.	Fine grained sandstone	7. fine sand		40	1	0.03	5YR8/1 white	10R6/6 light red
BR00B10015	Ripple bedded to planar bedded	Kombolgie Fm.	Fine grained sandstone	6. medium sand		37	1	0.03	10R6/1 reddish grey	10R8/2 pinkish white
BR00B10016	Planar bedded to planar cross bedded sandstone with rare fine symmetrical ripple marks	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		37	2	0.01	10R6/6 light red	10R8/3 pink
BR00B10017	Planar bedded sandstone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		48	1	0.01	5YR8/4 pink	10R6/1 reddish grey
BR00B10018	Finely planar bedded sandstone with ripple beds	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		35	1	0.03	10R5/1 reddish grey	5YR8/4 pink
BR00B10019	Planar bedded to ripple bedded (interference)	Kombolgie Fm.	Fine to medium grained sandstone	7. fine sand		38	1	0	10YR8/4 very pale brown	10R5/6 red
BR00B10020	Massive to trough cross bedded sandstone	Kombolgie Fm.	Very coarse grained sandstone to granulestone	5. coarse sand	105	50	1	0	10R5/6 red	10YR8/3 very pale brown
BR00B10021	Rippled to planar bedded sandstone	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		35	1	0.01	10R5/3 weak red	10YR6/1 grey
BR00B10022	Trough cross bedded sandstone	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		43	1	0.01	7.5YR8/3 pink	10R5/2 weak red
BR00B10023	Trough cross bedded sandstone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		39	1	0.01	10R5/6 red	10R8/2 pinkish white
BR00B10024	Massive to planar bedded sandstone with granule and pebble beds	Kombolgie Fm.	Coarse to very coarse grained sandstone	5. coarse sand	47	40	1	0.01	10R4/4 weak red	10R6/1 reddish grey
BR00B10025	Massive to trough cross bedded and planar bedded sandstone	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		51	1	0.05	10R5/2 weak red	10R6/4 pale red
BR00B10026	Rippled planar beds and planar cross beds	Kombolgie Fm.	Medium grained sandstone	6. medium sand		37	1	0	10R6/6 light red	7.5YR8/2 pinkisk white
BR00B10027	Orthogonal ripple beds, assymmetrical current ripples; distal fluvial sandstone	Kombolgie Fm.	Medium to fine grained sandstone	6. medium sand		30	1	0.06	10R3/1 dark reddish grey	7.5YR7/4 pink
BR00B10028	Rippled to planar bedded sandstone	Kombolgie Fm.	Fine to medium grained sandstone	6. medium sand		33	1	0.06	10R5/8 red	10R8/2 pinkish white
BR00B10029	Rippled to planar bedded sandstone	Kombolgie Fm.	Medium to coarse grained sandstone	7. fine sand		42	1	0.03	7.5YR8/4 pink	5YR7/4 pink
BR00B10030	Rubbly massive to trough cross bedded sandstone	Kombolgie Fm.	Coarse to very coares grained sandstone	6. medium sand		51	2	0.06	5PB5/1 bluish grey	10r7/4
BR00B10031	Planar bedded fluvial sandstone	Kombolgie Fm.	Medium to coarse grained sandstone	7. fine sand		42	1	0.01	2.5Y8/4 pale yellow	10R7/6 light red
BR00B10032	Planar bedded with rare ripples	Kombolgie Fm.	Fine to medium grained sandstone	6. medium sand		32	1	0.01	5YR7/6 reddish yellow	5YR8/1 white
BR00B10033	Trough cross bedded sandstone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		47	2	0.01	5YR8/1 white	2.5YR6/4 light reddish brown
BR00B10034	Assymmetrical and inerference ripple beds	Kombolgie Fm.	Fine to medium grained sandstone	7. fine sand		32	1	0.01	10R5/1 reddish grey	10R7/1 light grey
BR00B10035	Ripple planar and trough cross bedded sandstone	Kombolgie Fm.	Fine to medium grained sandstone	7. fine sand		32	1	0.01	7.5YR8/3 pink	7.5YR7/6 reddish yellow
BR00B10036	Planar to planar cross bedded sandstone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		37	1	0.03	2.5YR3/3 dark reddish brown	7.5YR8/4 pink
BR00B10037	Planar and trough cross beeded sandstone	Kombolgie Fm.	Very coarse sandstone to granulestone	4. very coarse sand		47	2	0.08	2.5YR6/1 reddish grey	2.5YR8/1 white
BR00B10038	Cross bedded sandstone with granulestone and pebbles	Kombolgie Fm.	Coarse to very coarse grained sandstone	4. very coarse sand		49	2	0.01	10R7/1 light grey	10R6/2 pale red
BR00B10039	Planar to ripple bedded sandstone	Kombolgie Fm.	Medium grained sandstone with rare granules	6. medium sand		41	1	0.03	5YR5/4 reddish brown	5YR7/3 pink
BR00B10040	Massive to trough cross bedded sandstone	Kombolgie Fm.	Coarse grained sandstone	6. medium sand		43	1	0	2.5YR8/2 pinkish white	10R8/1 white
BR00B10041	Planar bedding to ripple bedded sandstone	Kombolgie Fm.	Coarse grained sandstone	6. medium sand		34	1	0.03	2.5YR3/2 dusky red	2.5YR7/4 light reddish brown
BR00B10042	Massive to trough cross bedded sandstone with granulestone and pebbles	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		51	1	0.01	10R8/2 pinkish white	10R6/2 pale red
BR00B10043	Massive to planar bedded sandstone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		46	1	0.01	5YR7/2 pinkish grey	5YR6/6 reddish yellow
BR00B10044	Massive to cross bedded sandstone	Kombolgie Fm.	Very coarse grained sandstone to granulestone	4. very coarse sand		45	1	0.03	7.5YR7/3 pink	2.5YR4/6 red
BR00B10045	Planar bedded sandstone	Kombolgie Fm.	Medium to coarse grained sandstone	7. fine sand		30	1	0.01	5YR4/3 reddish brown	2.5YR4/6 red
BR00B10046	Planar bedded sandstone and ripple beds	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		40	1	0.03	10R3/1 dark reddish grey	10YR7/2 light grey
BR00B10047	Massive to trough cross bedded sandstone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		63	1	0	2.5YR6/8 light red	7.5YR7/2 pinkish grey
BR00B10048	Trough cross bedded to massive and planar bedded	Kombolgie Fm.	Medium grained sandstone	6. medium sand		36	2	0.03	10YR7/2 light grey	10YR5/8 yellowish brown
BR00B10049	Massive to weakly bedded sandstone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		35	1	0.03	10R4/8 red	10YR7/2 light grey
BR00B10050	Ripple to planar bedded sandstone with minor planar cross bedding	Kombolgie Fm.	Fine to medium grained sandstone	7. fine sand		40	1	0.05	10R4/1 dark reddish grey	10R8/1 white
BR00B10051	Trough cross bedded sandstone; Max clast = 63 mm	Kombolgie Fm.	Very coarse grained sandstone to granulestone	5. coarse sand	63	55	2	0	7.5YR7/4 pink	2.5YR6/8 light red
BR00B10052	Massive to weakly bedded sandstone with minor trough cross bedding; granulestone and pebbly beds	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		53	1	0.15	7.5YR4/1 dark grey	2.5YR4/8 red
BR00B10053	Planar bedding with assymmetrical and interference current ripples	Kombolgie Fm.	Medium to coarse grained sandstone	7. fine sand		41	1	0	2.5YR7/2 pale red	10R5/1 reddish grey
BR00B10054	Trough cross bedding with massive and planar bedded sandstone, granulestone and pebble beds	Kombolgie Fm.	Medium to coarse grained sandstone	6. medium sand		41	1	0	2.5YR6/6 light red	2.5YR4/8 red
BR00B10055	Trough cross bedded sandstone with granulestone and pebble beds	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		52	1	0.1	2.5YR5/2 weak red	
BR00B10056	Trough cross bedded to massive bedded sandstone with granulestone	Kombolgie Fm.	Coarse to very coarse grained sandstone	7. fine sand		35	2	0.01	10R6/6 light red	10R8/1 white
BR00B10057	Trough cross bedded sandstone and pebbly granulestone with planar ripple bedding overlying sampled material	Kombolgie Fm.	Coarse to very carse sandstone	5. coarse sand		35	2	0.03	7.5YR7/2 pinkish grey	
BR00B10058	Assymmetrical and interference fluvial ripple beds	Kombolgie Fm.	Medium to fine grained sandstone	6. medium sand		32	1	0.03	10R4/1 dark reddish grey	10R5/2 weak red
BR00B10059	Trough cross bedded sandstone and pebbly granulestone	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand	72	105	2	0	7.5YR7/2 pinkish grey	2.5YR5/8 red
BR00B10060	Trough cross bedded sandstone and pebbly granulestone	Kombolgie Fm.	Coarse to very coarse grained sandstone	5. coarse sand	51	42	2	0.03	7.5YR7/2 pinkish grey	2.5YR5/8 red
BR00B10061	Large scale trough cross bedded sandstone	Kombolgie Fm.	Very coarse grained sandstone to granulestone	4. very coarse sand		52	2	0.03	10R5/8 red	10R4/1 dark reddish grey
BR00B10062	Interference and current ripple bedded sandstone	Kombolgie Fm.	Coarse grained sandstone	5. coarse sand		34	2	0.1	10R4/1 dark reddish grey	10R6/6 light red
BR00B10063	Planar bedded and ripple bedded	Kombolgie Fm.	Fine to medium grained sandstone	6. medium sand		38	1	0.01	10R5/8 red	10R3/6 dark red
BR00B10064	Planar bedded and current (interference and orthogonal) ripples	Kombolgie Fm.	Medium to coarse grained sandstone	5. coarse sand		40	3	0.03	2.5YR4/3 reddish brown	2.5YR8/1 white
BR00B10065	Planar bedded and ripple bedded (assymmetrical) sandstone	Kombolgie Fm.	Fine to medium grained sandstone	7. fine sand		48	1	0	10R5/8 red	10YR7/2 light grey
BR00B10066	Massive to planar cross beds	Kombolgie Fm.	Coarse to very coarse sandstone	6. medium sand		37	2	0.01	2.5YR4/6 red	10YR7/2 light grey
BR00B10067	Trough cross bedded and planar cross bedded sandstone and granulestone with pebbles	Kombolgie Fm.	Coarse to very coarse grained sandstone	6. medium sand		51	1	0.01	10R4/6 red	7.5YR7/6 reddish yellow