Appendix 1A. Site information for reconnaissance regolith samples from the Ngururrpa area

Site	GSWA	Sampling date	Sampling method	Zone	Easting	Northing	Sample	Sample weight (g)	Notes	Magnetic fraction?
YY1	**218962**	04/10/2014	4WD	52	365101	7671370	**YY1-sfc**	**3155**	Flat sandplain with scattered angular or tabular sedimen+J4:J37tary rock fragments up to 2.5 cm. For sampling, top 0.5 cm removed. Stony, sandy regolith throughout, with difficulty penetrating with auger below 70 cm. Sand looks moderately well-sorted quartz sand with about 10% clay. Fe coating on sand. Area has heavy concentration of lag, but not at this site. Scacttered pisolites and polished Fe granules up to 3 mm - rounded to subrounded. Some magnetic material. Fe granules 0.5 mm+	Some
	218963						**YY1-45**	**3245**		?
	218964						**YY1-70**	**3715**	Notable angular rock fragments. Little Fe material. Lots of clay. Almost no magnetic material.	No
YY2	**218965**	04/10/2014	4WD	52	388908	7620415	**YY2-Lag**	**1755**	At drum site. Consolidated, clay-rich sand with angular ferruginous granules and less common granules up to 5 mm. Difficult to auger - very consolidated. Abundant surface lag - polished granules and nodules. Significant magnetic fraction. Some looks like ferruginized rock fragments.	Significant
	218966						**YY2-Sfc**	**2920**	Some Fe granules (about 0.5 mm). Magnetic material.	Some
	218967						**YY2-25**	**3200**	Some Fe granules. Little magnetic material.	Little
	217367						**YY2-45**	**3690**	Some Fe granules and lithic fragments. Little magnetic material.	Little
YY3	**217368**	04/10/2014	4WD	52	386502	7629750	**YY3-Lag**	**2005**	Sandplain. Lot of ferruginous granules and cemented patches of ferricrete. Hole could not be augered at surface and lag site due to cementation. Cemented and stony at depth. Surface grains and nodules are a mixture of ferruginized lithics (subangular and 1.5 cm) and Fe-nodules and granules up to 1 cm. Suspect regolith is a large part residual and thin. Less ferruginous material - lag is more variable. Ferruginized lithics. Notably less magnetic fraction.	Little
	217369						**YY3-Sfc**	**2135**	Fe granules up to 3 mm and some very fine Fe material. Magnetic fraction.	Some
	217370						**YY3-20**	**3135**	Some ferruginized rock fragments. Some magnetic fraction.	Some
	217371						**YY3-35**	**3950**	Lot of subangular rock fragments. Few Fe fragments. Almost no magnetic fraction.	No
YY4	**217372**	04/10/2014	4WD	52	381829	7638414	**YY4-sfc**	**3030**	Broad sandplain. Little lag and no ferricrete. Well-sorted, orange-brown quartz sand. Surface sample and one at 25 cm, then a stony layer prevents augering. Looks like silicic nodules with some iron. Some clay and sand. Some rock fragments and Fe granules. Little magnetic material.	Little
	217373						**YY4-25**	**3500**	Fine-grained Fe granules ≤0.5 mm. Magnetic material. Very few lithics.	Some
YY5	**217374**	04/10/2014	4WD	52	377190	7647074	**YY5-sfc**	**3560**	Sandplain with very weak lag. Some very thin clay veneer cover (curls) on surface. Moderately well-sorted clayey sand - Fe stained quartz, with scattered lithics and some Fe granules. Ferruginized sandstone? About 400 m south – fine-grained Fe granules up to 2 mm. More magnetic material.	Some
	217375						**YY5-40**	**2915**	Occasional ferruginized rock fragments up to 4 mm. Some magnetic material.	Some
	217376						**YY5-20-25**	**2695**	Weakly ferruginized rock fragments. Some magnetic material. Very few Fe granules.	Some
YY6	**217377**	04/10/2014	4WD	52	372559	7655683	**YY6-sfc**	**3560**	Homogeneous sandplain. Well-sorted, medium to coarse-grained quartz sand - Fe stained. At about 60 cm depth is more stony - Fe granules. Very fine scattered lag on surface - Fe granules <2 mm. Fine to very fine Fe granules. Magnetic.	Some
	217378						**YY6-30/35**	**3570**	Some Fe granules and fine-grained lag material.	?
	217379						**YY6-70/75**	**4450**	Abundant ferruginized lithics and granules. Magnetic in all fractions.	Significant

Site	GSWA	Sampling date	Sampling method	Zone	Easting	Northing	Sample	Sample weight (g)	Notes	Magnetic fraction?
YY7	**217380**	04/10/2014	4WD	52	367968	7664083	**YY7-sfc**	**3250**	Approximately flat sandplain. Little lag. Homogeneous orange sand, medium to coarse grained. Occasional stones and granules at depth (below 50 cm). Relatively easy augering. Some magnetic material. Fine-grained Fe granules >0.5 mm.	Some
	217381						**YY7-25/30**	**3390**	A few very fine-grained Fe granules. Some magnetic material. No lithics.	Some
	217382						**YY7-75/80**	**3305**	Some fine-grained, subrounded lithics and very fine-grained Fe granules. Fine-grained magnetic material.	Some
YY8	**217383**	04/10/2014	4WD	52	366306	7672018	**YY8-sfc**	**3100**	Sandplain. Scattered fine-grained lag and occasional, fresh, angular sedimentary rock clasts (fine-grained quartz sandstone) up to 4 cm - occasionally weakly ferruginized. Auger grips at 25 cm - very stony (ferruginized sedimentary clasts and some nodules). Very fine-grained Fe granules. Significant magnetic fraction.	Significant
	217384						**YY8-20/25**	**4650**	Rock fragments up to 4 mm. Some Fe granules. Magnetic material.	Some
YYA	**217385**	04/10/2014	4WD	52	379463	7642819	**YYA**		Rock sample. On side of road. Bedded quartz sandstone.	
M581	**217386**	06/10/2014	Helicopter	52	439883	7635041	**M581-sfc**	**2435**	Scattered fragments of calcrete. No lag. Well-sorted clayey sand between two dunes. Spinifex. Dunes about 200 m apart. No Fe granules. No magnetic material. More brown than orange.	no
	217387						**M581-35**	**2885**	Very few Fe granules. Some fragments up to 2 mm.	?
M604	**217388**	06/10/2014	Helicopter	52	429987	7629999	**M604-sfc**	**2875**	Well-sorted sand between dunes (about 75 m away). Conspicuous calcrete at surface (photo 84 is calcrete). Spinifex and bushes. No ferruginized rock fragments. Possible small calcrete fragments.	?
	217389						**M604-25/30**	**2995**	?Calcrete fragments and some altered rock fragments? No Fe-rich material.	no
M653	**217390**	06/10/2014	Helicopter	52	425179	7620056	**M653-sfc**	**4015**	Well-sorted, Fe-stained quartz sand, looks in part eolian. No calcrete or lag. No nodules. No Fe-rich material and no granules or lithics. No magnetic material.	no
	217391						**M653-75/80**	**4115**	Very little magnetic material and very little coarse material.	no
M677	**217392**	06/10/2014	Helicopter	52	414690	7615008	**M677-sfc**	**3385**	Well-sorted quartz sand - Fe stained. Easy to auger. Medium to coarse grained. No lag. Spinifex. No Fe granules and no magnetic material and no lithics. More brown and less orange.	no
	217393						**M677-75/80**	**4545**	Almost no Fe granules or magentic material	no
M648	**217394**	06/10/2014	Helicopter	52	400029	7620050	**M648-sfc**	**3785**	Well-sorted quartz sand - Fe stained. Scattered low amount of fine-grained lag (ferruginous granules) at surface, with higher concentration downhole. Some nodules up to 1 cm. Higher proportion of nodules and granules downhole (compare the two samples). Some fine-grained granules up to 3 mm, and rock fragments.	?
	217395						**M648-60/65**	**5115**	Significant rock fragments, some of which are ferruginized - up to 1 cm.	?
M644	**217397**	06/10/2014	Helicopter	52	380006	7620003	**M644-sfc**	**2685**	Conspicuous lag of fine-grained Fe-granules at surface and downhole. Downhole are also nodules up to 5 mm. Well-sorted quartz-sand matrix. Spinifex and rare shrubs. Fine-grained Fe granules. Magnetic material.	Some
	217398						**M644-lag**	**2005**	Polished, subrounded granules up to 4 mm. Significant magnetic fraction.	Significant
	217399						**M644-50/55**	**4145**	Fine-grained Fe granules and angular rock fragments up to 4 mm. Fine-grained magnetic material.	Some
M617	**217400**	06/10/2014	Helicopter	52	370072	7624962	**M617-sfc**	**3755**	Well-sorted quartz sand. Conspicuous lag on surface. Granules downhole. Orange sand and clay. Spinifex. Fe nodules and granules - possibly pisolites. Some magnetic material.	Some

Site	GSWA	Sampling date	Sampling method	Zone	Easting	Northing	Sample	Sample weight (g)	Notes	Magnetic fraction?
	218901						**M617-70/75**	**4225**	Some Fe granules (rare). Little magnetic material.	Little
	218902						**M617-lag**	**2245**	More poorly sorted (1–5 mm). Significant magnetic fraction.	Significant
M614	**218903**	06/10/2014	Helicopter	52	355136	7624878	**M614-sfc**	**3110**	Sand, with more clay - compacted and relatively hard to auger. Rare granules throughout (up to 2 mm) - Fe rich. Spinifex and shrubs with rare trees. Very few Fe granules.	?
	218904						**M614-50/55**	**4200**	Some ferruginized rock fragments up to 3 mm.	?
M587	**218905**	06/10/2014	Heliocpter	52	344990	7630074	**M587-sfc**	**4210**	Scattered ferruginous lithics on surface and hole is only 15 cm deep. Lots of rock fragments and little lag. Rest is quartz sand - Fe stained. Some Fe nodules. Very few Fe granules.	?
	218906						**M587-10/15**	**4450**	Very few Fe granules. Occasional rock fragments up to 1 cm. Almost no magnetic fraction.	no
M584	**218907**	06/10/2014	Helicopter	52	330027	7630246	**M584-sfc**	**3495**	Well-sorted quartz sand - clay rich but unconsolidated as is usual. Very rare Fe-rich granules. Spinifex and shrubs. Sand dune about 50 m to north. Fine-grained lithics - subrounded. Few Fe granules and almost no magnetic fraction.	no
	218908						**M584-80/85**	**4505**	Very few Fe granules. Some fine-grained lithics. Almost no magnetic fraction.	no