Appendix III

SUMMARY OF MAIN PHOTOGEOLOGICAL FEATURES

O.F. 77 NORTHERN TERRITORY

TO ACCOMPANY APPENDIX III

PR63/014

		FORMATION	TONE	TOPOGRAPHY	EROSION	DRAINAGE PATTERN	VEGETATION	BEDDING OR RELICT BEDDING LINEAMENTS	CLEAVAGE OR SCHISTOSITY	JOINTS	FAULTS	GENERAL REMARKS
QUATERNARY	Qa	Alluvium, swamps etc.	Light - Medium	Flat	Deeply incised creeks, gutters.	Meandering and deeply incised creeks	Variable - usually light	-	-	-	-	
	Qs	Sandplain.	Light - Dark	Flat to gently undulating.	Occasional aeolian exposure of claypans.	Deeply incised creeks rapidly "flood-out".	Mainly light-toned spinifex. Some mulga and mallee scrubs	-	-	-	-	Irregular northwest trending burn marks from old fires.
	Qrd	Sand-dunes.	Light - Medium	Gentle slopes west side. Steep slopes east side.	Loose sandy crests.	Major creeks follow interdune corridors. Flood-out rapidly	Light-toned spinifex Dark mulga patches in corridors.	-	-	-	-	Regular northwest trend of dunes.
	Qrt	Scree, gibbers, Talus etc.	Light	Gently undulating to flat.	Deeply incised gullies around margins of mesas.	Drainage pattern radial around mesas. Sometimes dendritic.	Light scrubs.	-	-	-	-	-
TERTIARY	Tc	Chalcedony cappings.	Light	Flat, mesa-type.	Steeply incised escarpments. Thin soil cover	Dendritic drainage pattern from mesas.	Mainly light-toned spinifex.	-	-	-	-	Structureless mantle-rock.
	Ta	Austral Downs Limestone.	Light	Medium to gentle slopes of mesas.	Medium soil and scree cover. Gentle gullies.	Dendritic drainage pattern from mesas.	Vegetation mainly confined to creek-valleys.	-	-	-	-	Structureless mantle-rock.
	Tsi	Duricrust.	Light	Flat, mesa-capping.	Steeply incised escarpments. Little soil development.	Dendritic drainage pattern from mesas.	Vegetation mainly confined to creek-valleys.					Structureless mantle-rock.
	Tse	Laterite.	Dark	Flat, mesa-capping.	Steeply incised escarpments. Little soil development.	Dendritic drainage pattern from mesas.	Variable from light to heavy mulga scrub.	-	-	-	-	Structureless mantle-rock.
CRETACEOUS	K	Highly lateritised sandstone, siltstone mudstone, conglomerate.	Dark	Flat, mesa-type.	Steeply incised escarpments.	Dendritic drainage pattern from mesas.	Bare mesa-slopes. Top of mesas and plateaux well vegetated.	-	-	-	-	Structureless mantle-rock.
?TRIASSIC	Rt	Tarlton Formation - Boulder beds, sandstone, siltstone.	Dark	Flat, mesa-type.	Little soil development. Steeply incised escarpments.	Dendritic drainage pattern from mesas.	Bare slopes. Lightly timbered plateaux.	-	-	-	-	Structureless mantle-rock.
?UPPER DEVONIAN	D	Current-bedded red to white sandstone.	Medium - dark	Fairly rugged strike ridges. Trend N-NW.	Little soil development. Sandy soils follow easily eroded beds.	Deeply incised gullies at right angles to strike ridges.	Medium scrub cover.	Distinct bedding trends.	-	Creeks follow joint directions near faults.	Minor cross-faults displace bedding trends.	Sandstone-type lithology indistinguishable from Carlo Sandstone.
MIDDLE ORDOVICIAN	Omm	Mithaka Formation - Sandstone, siltstone.	Medium - dark	Subdued topography at edges of Cretaceous plateaux. Lower beds form low cuestas.	Sandy soil development.	Dendritic - influenced by overlying Cretaceous.	Mainly relatively bare of vegetation.	Indistinct trends on cuestas. No trends visible beneath Cretaceous cover.	-	-	-	-
	Omc	Carlo Sandstone - Current-bedded red sandstone.	Medium - dark	Rugged strike ridges trend NNW.	Little soil development. Some light sandy soils on dip slopes.	Deeply incised gullies at right angles to strike ridges.	Medium scrub cover.	Distinct bedding trends sometimes accentuated by vegetation along preferential beds.	-	Creeks follow joint directions near faults.	Minor cross-faults displace bedding trends.	Typical sandstone-type lithology.
	Omn	Nora Formation - Siltstone, sandstone, thin limestone.	Medium	Subdued slopes underlying escarpment of Carlo Sandstone.	Some soil development. Mainly covered by scree of Carlo Sandstone.	Creeks draining from Carlo Sandstone become gentler with wider alluvial flats.	Little vegetation cover.	Indistinguishable.	-	-	-	Shale-type lithology. Strike-valley between Ordovician carbonates below and Carlo Sandstone above.
CAMBRO-ORDOVICIAN	€-Ol	Upper Cambrian to Lower Ordovician carbonate sequence.	Light - medium	Low rounded subdued topography.	Soil and travertine development.	Fairly steeply incised gullies, mainly normal to bedding trends.	Medium-low brush-cover. Tends to favour thicker soil developments over less-resistant beds.	Thin and wavy distinct trends.	-	-	Not obvious.	Typical limestone-type lithology.
UPPER CAMBRIAN	€ua	Arrinthrunga Formation - Calcarenite, limestone, dolarenite, dolomite.	Light	Low rounded topography - steeper to the north along Craigie Fault.	Soil and travertine development.	Fairly steeply incised gullies, mainly normal to bedding trends.	Medium-low brush cover. Thicker cover favours certain beds.	Thin and wavy distinct trends.	-	-	Not obvious.	Typical limestone-type lithology.
MIDDLE CAMBRIAN	€mm	Marqua Beds - Thin bedded platy limestones, chert, sandstone.	Light (chert) to medium - dark (limestone)	Very subdued.	Heavy travertine and soil development.	Dendritic pattern from chert ridges. Gentle rounded timbered drainage-channels.	Variable from bare on chert ridges to dense on poorly outcropping thick travertine developments.	Thin and wavy indistinct trends.	-	-	-	Limestone-type lithology.
UPPER PROTEROZOIC SEDIMENTS	Pug	Grant Bluff Formation - Thin bedded sandstone, siltstone.	Light - medium	Prominent strike ridges and valleys.	Thin soils on resistant ridges. Thicker soils on softer beds.	Mainly fairly incised gullies normal to strike ridges.	Bare, creeks well timbered.	Thin bedding traces on ridges. Ill-defined in valleys.	-	-	Minor faults displace bedding trends.	Sandstone-type lithology with shale-type in valleys.
	Puf	Field River Beds.										
		(a) Upper Members - Quartzite, arkose, sandstone, greywacke, dolomite.	Variable but mainly light - medium.	Rugged with prominent strike ridges in folded areas. Dolomites form strike valleys or low rounded hills at base of quartzite-escarpments.	Scant soil development.	Variable - mainly normal to strike ridges. Sometimes parallel to strike valleys.	Bare to medium vegetation cover. Creeks well wooded. Dolomites well-wooded.	Well defined bedding traces in arenites. Thinner and wavy bedding traces in dolomites. Arkoses poorly bedded.	-	Well developed near faults.	Faults displace bedding trends.	Sandstone-type lithology mainly.
		(b) Lower Members - Siltstone, tillite, boulder beds, arkose.	Medium - grey	Low rounded topography. Some strike ridges due to arenites.	Thin soil development. Softer formations largely scree-covered.	Well timbered gullies and creeks. Some dendritic pattern. Fairly incised gullies.	Mainly bare of vegetation except for gullies.	Mainly poorly defined but well defined in arenite bands.	-	Well developed joints near faults.	Faults displace bedding trends. Also recognized by sharp changes in lithologic types.	Mainly shale-type with some sandstone-type lithology.
LOWER PROTEROZOIC INTRUSIVES	Pgr	Granite, Felspar Porphyry and Associated Intrusives.	Light - medium. Darker when lateritised or overlain by thin Tarlton cappings. Pegmatite-quartz veins and dykes, very light-toned.	Low rounded topography. Sharply peaked hills on quartz reefs.	Scant soil development.	Very subdued drainage.	Mainly bare of vegetation, some gullies well-wooded.	Structureless except for E-W trend of quartz reefs.	-	Well jointed NE and NW. Often occupied by pegmatite.	-	Typical granitic lithologies usually masked by younger superficial deposits.
ARCHAEAN	Aa	Mica Schists	Light	Low rounded subdued rises.	Fair soil cover.	Very subdued drainage.	Bare to medium vegetation.	-	Schistosity sometimes poorly visible.	-	-	Shale-type lithology.
		Meta-Arenites - Quartzites, meta siltstone etc.	Light - medium	Variable from rugged strike ranges to isolated low strike ridges.	Scant soil development.	Steep gullies normal to strike ridges. Larger creeks are wider smoother, well vegetated.	Bare to medium vegetation. Creeks well timbered.	Well defined bedding trends.	-	-	-	Sandstone-type lithology.
		Meta-Carbonates - Amphibolites, pyroxene-granulites etc.	Mainly light - medium. Sometimes dark.	Low strike ridges.	Fair soil cover.	Sharp gullies drain strike ridges. Larger creeks smoother.	Some bands well vegetated. Others bare rocky outcrops.	Thin wavy relict bedding sometimes poorly visible.	-	-	-	Limestone-type lithology.

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