



APG Consultants

Palynostratigraphic Data

Gordon #1 (reinterpreted from Price, 1997)

Report 651/01

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Sample Sample Number Depth Preparation Number	Palynostratigraphic Unit Palynofacies <i>Index Species</i>	Inferred Lithostratigraphic Unit <i>(Log interpreted Unit)</i>	Inferred Depositional Environment Lithology	Palynomorph			Remarks
				Preservation	Yield <i>(Organic yield)</i>	Diversity	
SWC 60 s6298 1035.0m P19271	APK321 <i>Pilosporites - Cyathidites</i> Palynofacies [<i>P. notensis</i> , <i>P. parvispinosus</i> , <i>C. variabilis</i> , <i>F. asymmetricus</i> <i>F. wonthaggiensis</i> / <i>lunaris</i> , <i>C. hughesii</i>]	Eumeralla Formation <i>(Eumeralla Formation)</i>	Fluvial Sandstone, f. grained; & Claystone, slightly carbonaceous.	Fair	High [<i>Extremely low</i>]	Moderate	Land plant spores and pollen dominant. Bisaccate and trisaccate pollen remnants prominent; inaperturate pollen notable. Fern spores prominent; mostly <i>Cyathidites</i> , <i>Pilosporites</i> notable and diverse. Lycopod spores conspicuous; mostly <i>Retitriletes</i> . Bryophyte spores notable and moderately diverge; mostly <i>Cooksonites</i> and <i>Foraminisporis</i> . Algal forms scarce.
	Base <i>F. asymmetricus</i>						
SWC 59 s6297 1063.0m P19270	APK32 possibly APK321 <i>Pilosporites - Cyathidites</i> Palynofacies [<i>P. notensis</i> , <i>P. parvispinosus</i> , <i>D. speciosus</i>]	Eumeralla Formation <i>(Eumeralla Formation)</i>	Fluvial lacustrine Siltstone, mid grey, carbonaceous flecks	Fair [Thin; over oxidised]	Moderate [<i>Extremely low</i>]	Low	Land plant spores and pollen dominant. Bisaccate pollen remnants prominent; inaperturate pollen notable. Fern spores prominent but restricted in diversity; mostly <i>Cyathidites</i> . Lycopod spores conspicuous; mostly <i>Retitriletes</i> . Leiospheres and <i>S. reticulatus</i> notable
SWC 58 s6296 1105.0m P19269	APK122 - APK3 tentatively APK3 Conifer Palynofacies [<i>C. hughesii</i> , <i>D. speciosus</i>]	Eumeralla Formation <i>(Eumeralla Formation)</i>	Fluvial - swamp Siltstone, brownish black; carbonaceous laminations.	Poor [thin, corroded, fragmented]	High [<i>High</i>]	Low	Palynoflora dominated by saccate pollen, ?inaperturate pollen and cuticle remnants (mostly unidentifiable); cheirolepidiacean pollen prominent. Spores prominent but restricted in diversity; <i>Cyathidites minor</i> , <i>Retitriletes</i> and <i>Neoraistrickia</i> conspicuous. Almost no bryophyte spores present. Algal forms scarce. [<i>The prominence of Cheirolepidiacean pollen, the scarcity of Ruffordiaspora and the absence of Pilosporites and Foraminisporis are unusual in the Eumeralla; the association is indistinguishable from the APK122 assemblages of the mid Crayfish Sub Group</i>]
SWC 57 s6295 1118.0m P19268	APK321 <i>Pilosporites - Cyathidites</i> Palynofacies [<i>P. notensis</i> , <i>P. ingramii</i> , <i>P. parvispinosus</i> , <i>C. variabilis</i> , <i>C. hughesii</i> , <i>Crybelosporites</i> 'burgeri' <i>M. evansii</i>]	lower Eumeralla Formation <i>(Eumeralla Formation)</i>	Paralic lagoonal Siltstone, mid dark olive grey, carbonaceous flecks	Fair	Moderate [<i>Extremely low</i>]	High	Palynoflora dominated by land plant spores; diverse fern association; <i>Cyathidites</i> dominant (mostly <i>C. minor</i> but with <i>C. punctatus</i> conspicuous); <i>Osmundacidites</i> and <i>Ruffordiaspora</i> prominent; <i>Pilosporites</i> notable. Bryophyte spores notable and relatively diverse; <i>Aequitriradites</i> and <i>Cooksonites</i> - <i>Verrucosiporites</i> conspicuous; <i>Foraminisporis</i> group and sphagnaceous forms scarce. Lycopod spores sparse but moderately diverse. Conifer pollen prominent; <i>M. antarcticus</i> conspicuous. Algal forms notable; mostly <i>Sigmopollis</i> and leiospheres; isolated <i>M. evansii</i> and spinose acritarch.
	Base <i>Pilosporites</i> spp., <i>F. wonthaggiensis</i> , <i>C. variabilis</i>						
	Windermere Sandstone Member 1124m						



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				Preservation	Yield <i>(Organic yield)</i>	Diversity	
SWC 55 1184.0m s6294 P19239	APK122 - APK31 probably Upper APK21 - APK31 tentatively Upper APK21 - APK22 <i>Ruffordiaspora - Cyathidites</i> Palynofacies <i>[D. speciosus, Crybelasporites berberoides, M. evansii]</i>	basal Eumeralla Formation or uppermost Laira Formation <i>(Eumeralla Formation)</i>	Fluvial Claystone, mid grey, silty	Fair - poor	Moderate <i>[Very low]</i>	Low	Restricted (?specialised) fern spore dominated palynoflora; mostly <i>Cyathidites minor</i> , <i>Osmundacidites</i> prominent; <i>Ruffordiaspora</i> notable. Bryophyte spores notable; mostly <i>Aequitriradites</i> . Fragmented saccate pollen, inaperturate pollen and corroded cuticle sheets conspicuous. Few leiospheres and <i>S. reticulatus</i>
SWC 54 1211.0m s6293 P19240	APK122 - APK31 probably Upper APK21 - APK31 tentatively Upper APK21 - APK22 <i>Ruffordiaspora - Cyathidites</i> Palynofacies <i>[D. speciosus, C. hughesii]</i>	basal Eumeralla Formation or uppermost Laira Formation <i>(Eumeralla Formation)</i>	Fluvial - lacustrine Siltstone, dark grey - black, argillaceous in part.	Fair to fresh	Moderate <i>[High]</i>	Low	Restricted (?specialised) fern spore dominated palynoflora; mostly <i>Cyathidites minor</i> , <i>Osmundacidites</i> conspicuous; <i>Ruffordiaspora</i> notable. Saccate and inaperturate pollen scarce. Few aquatic forms; <i>S. reticulatus</i> and leiospheres notable
	Base consistent, notable, modestly diverse and notable <i>Ruffordiaspora spp.</i>						
	<p style="text-align: center;">Sample Gap Crayfish Sub Group (Laira Formation) 1212m</p>						There is an indication of Middle APK21 associations being preserved in Bus Swamp #1, Gordon #1, Mocamboro #11 and Digby #1 which suggests that there is a hiatus within the upper Crayfish Sub Group (Laira Formation) perhaps in addition to the regional unconformity between the Eumeralla Formation and Crayfish Sub Group. This contrasts with the Penola Trough upper Crayfish section where the upper Crayfish section is truncated with the progressive loss of the APK212 and APK211 section towards the Trough margins as in Katnook tp Sawpit to Robinson and possibly Heathfield to Tullich to McEachern.
SWC 53 1275.0 s6292 P19241	Upper APK122 - APK31 probably Upper APK122 - Middle APK21 possibly Middle APK21 <i>Osmundacidites</i> Palynofacies <i>[D. speciosus, C. hughesii, M. florida, ?T. reticulatus, C. stylosus, C. neofornicatus, A. spinulosus, Januasporites spp, Ruffordiaspora spp, M. evansii (abundant)]</i>	upper Laira Formation <i>(Laira Formation)</i>	Paralic coastal plain Claystone, mid lt grey; v. fine sandstone in part	Fair	Moderate <i>[Very low]</i>	Moderate	Palynoflora dominated by land plant spores. Fragmented saccate pollen prominent; mostly bisaccate but trisaccate pollen notable. Cheirolepidiacean pollen notable. Fern spores subdominant but somewhat restricted in diversity; <i>Osmundacidites</i> prominent; <i>Cyathidites</i> conspicuous; <i>Ruffordiaspora</i> present but scarce; <i>Contignisporites spp.</i> notable and modestly diverse.. Bryophytes scarce but moderately diverse (they become very scarce and restricted below this level). Small leiospheres conspicuous in the -20µm fraction; <i>M. evansii</i> conspicuous; few <i>S. reticulatus</i> and <i>Michrystidium</i> present. <i>This association could be representative of any part of the lower Eumeralla or Crayfish Sub Group; the notable occurrence of M. evansii and the persistence of some of the Bryophyte forms may favour APK21 perhaps supported by the somewhat equivocal specimen of T. reticulatus (the Middle APK21 index taxon). The association is reminiscent of the APK21 of Mocamboro 11 and Digby.</i>



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				Preservation	Yield <i>(Organic yield)</i>	Diversity	
	Base <i>C. neofornicatus</i> , Base diverse and notable liverwort forms						
	Sample Gap						?Intra - Crayfish hiatus
SWC 52 1369.0m s6291 P19242	Upper APK122 - Middle APK21 possibly Upper APK122 <i>Osmundacidites</i> Palynofacies <i>[D. speciosus, C. hughesii, F. dailyi, A. spinulosus C. mediae, M. evansii]</i>	basal Laira Formation or upper Pretty Hill Formation <i>(Laira Formation)</i>	Paralic coastal plain Mudstone, mid grey, arenaceous	Fair	Moderate <i>[Extremely low]</i>	Moderate	Palynoflora dominated by spores; mostly <i>Osmundacidites</i> , <i>Cyathidites</i> prominent; <i>C. equalis</i> and <i>L. verrucatus</i> notable; <i>Contignisporites spp</i> notable and modestly diverse. Saccate pollen remnants subdominant. Few leiospheres; few <i>M. evansii</i> ; isolated <i>S. reticulatus</i> and <i>Michrystidium</i> present.
	Base <i>C. mediae</i> , <i>A. spinulosus</i>						
SWC 51 1413.0m s6290 P19243	APK12 - APK2 very tentatively APK122 Lycopod Palynofacies <i>[R. australiensis, C. equalis, C. hughesii]</i>	basal Laira Formation or upper Pretty Hill Formation <i>(Laira Formation)</i>	Fluvial Mudstone, dark grey, arenaceous in part.	Very poor strongly corroded	Very low <i>[Extremely low]</i>	Low	Sparse palynoflora of mostly spore remnants with only the more robust forms identifiable: <i>Cyathidites</i> , <i>Ceratosporites equalis</i> , <i>Leptolepidites major</i> and <i>Retitriletes</i> conspicuous. Fragmented saccate pollen remnants conspicuous.
	Pretty Hill Formation 1416.0m						
SWC 50 1428.0m s6289 P19244	APJ2 - APK2 <i>Cyathidites</i> Palynofacies <i>[L. verrucatus]</i>	basal Laira Formation or upper Pretty Hill Formation <i>(Pretty Hill Formation)</i>	Fluvial - lacustrine Claystone, dark grey	Very poor thin, corroded	Very low <i>[Extremely low]</i>	Very low	Sparse palynoflora of mostly unidentifiable saccate pollen, cuticle and spore remnants: <i>Cyathidites</i> , <i>Leptolepidites verrucatus</i> and <i>Retitriletes</i> conspicuous. Small leiospheres notable



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				Preservation	Yield <i>(Organic yield)</i>	Diversity	
SWC 49 1482.5m s6288 P19245	APK122 - Middle APK21 very tentatively APK122 Lycopod Palynofacies <i>[D. speciosus, C. equalis, L. belfordii Concavissimisporites "sparsus"]</i>	basal Laira Formation or upper Pretty Hill Formation <i>(Pretty Hill Formation)</i>	Fluvial Claystone, mid dark grey, arenaceous in part	Poor corroded	Moderate <i>[Extremely low]</i>	Moderate	Restricted palynoflora of mostly spores; <i>Cyathidites</i> and <i>Retitriletes</i> conspicuous; <i>L. belfordii</i> , <i>B. spectabilis</i> , <i>Klukisporites</i> , <i>Leptolepidites</i> and <i>Neoraistrickia</i> notable. Saccate pollen prominent; mostly unidentifiable remnants. Very few aquatic forms.
SWC 48 1510.0m s6287 P19246	APK122 - Middle APK2 very tentatively APK122 Lycopod Palynofacies <i>[D. speciosus, C. hughesii, M. evansii]</i>	basal Laira Formation or upper Pretty Hill Formation <i>(Pretty Hill Formation)</i>	Fluvial - lacustrine Mudstone, mid brown grey, grading to v. fine sandstone in part	Poor	Moderate <i>[Very low]</i>	Moderate	Palynoflora dominated by land plant spores; mostly <i>Retitriletes</i> and <i>Osmundacidites</i> , <i>Cyathidites</i> , <i>Leptolepidites</i> conspicuous. Bisaccate pollen prominent. Leiospheres and <i>M. evansii</i> notable
SWC 47 1536.0m s6223 P19247	APK122 - Middle APK21 tentatively APK122 <i>Osmundacidites</i> Palynofacies <i>[D. speciosus, C. hughesii, C. equalis. Converrucosporites cf C. exquisitus 637]</i>	basal Laira Formation or upper Pretty Hill Formation <i>(Pretty Hill Formation)</i>	Fluvial Claystone, dark grey	Fair	Moderate <i>[Low]</i>	Low	Palynoflora dominated by land plant spore and pollen remnants. Fern spores subdominant but restricted in diversity; mostly <i>Osmundacidites</i> spp with <i>Cyathidites minor</i> , <i>C. equalis</i> and <i>L. verrucatus</i> notable. Lycopod spores notable but relatively diverse; mostly <i>Retitriletes</i> spp. Bryophytes very scarce. Almost no aquatic forms noted. Cuticle sheets prominent in oxidised residue. <i>[Absence of F. wonthaggiensis not reliable in view of low Bryophyte association]</i>
	"Sawpit Sandstone" Member 1448.0m						
SWC 46 1549.0m s6222 P19248	Not examined		Siltstone, mid dark grey				Very low organic recovery



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				Preservation	Yield <i>(Organic yield)</i>	Diversity	
SWC 44 1593.25m s6221 P19249	APK1 - APK2 tentatively APK1 Conifer Palynofacies [<i>C. hughesii</i> , <i>C. stylus</i>]	lower Laira Formation or Pretty Hill Formation <i>("Sawpit Sandstone", Pretty Hill Formation)</i>	Fluvial Laminite, dark grey siltstone & v. fine off white sandstone,	Poor corroded fragmented	Moderate [<i>Low</i>]	Low	Palynoflora dominated by inaperturate pollen and saccate pollen. Fern spores conspicuous; mostly <i>Cyathidites</i> and <i>Osmundacidites</i> . Lycopod spores notable; mostly <i>Retitriletes</i> and <i>Kekryphalospora</i> . Bryophytes scarce. Almost no aquatic forms noted.
SWC 43 1614.0m s6220 P19250	APJ6 - APK2 tentatively APK12 ? <i>Osmundacidites</i> - <i>Retitriletes</i> Palynofacies [<i>C. equalis</i> , <i>M. evansii</i> , <i>C. "hemisphericus"</i>]	lower Laira Formation or Pretty Hill Formation <i>("Sawpit Sandstone", Pretty Hill Formation)</i>	Fluvial Siltstone, lt - mid grey brown; v. fine sandstone in part	Poor thin corroded	Low - Moderate [<i>Very low</i>]	Moderate	Palynoflora mostly unidentifiable saccate pollen, inaperturate pollen and cuticle remnants. Spores restricted in diversity; <i>Osmundacidites</i> prominent; <i>Cyathidites</i> and <i>Retitriletes</i> conspicuous. Few leiospheres; isolated <i>M. evansii</i> .
Between 1614m & 1761m	Sample Gap Sawpit #1 "basal shale unit" 1736m						Sandy section; additional samples from this section unlikely to yield definitive palynomorph associations.
SWC 40 1761.0m s6219 P19251	Mid APK122 - Middle APK21 possibly Mid APK122 <i>Osmundacidites</i> - <i>Retitriletes</i> Palynofacies [<i>D. cloisonne</i> , <i>D. speciosus</i> , <i>C. hughesii</i> , <i>R. "mega-australiensis"</i> , <i>M. evansii</i>]	lower Laira Formation or Pretty Hill Formation <i>("Sawpit Basal Shale" member, Pretty Hill Formation)</i>	Paralic coastal plain Siltstone, mid - mid dark grey	Poor thin corroded	Low [<i>Very low</i>]	Low	Palynoflora mostly unidentifiable spore, saccate pollen and cuticle remnants. Spores prominent but restricted in diversity; <i>Osmundacidites</i> and <i>Retitriletes</i> conspicuous. Algal forms scarce; isolated <i>M. evansii</i> and <i>Michrystidium</i> .
	Base <i>R. "mega-australiensis"</i>						
SWC 39 1768.0m s6218 P19252	APJ2 - APK3 very tentatively APK1 Lycopod Palynofacies [<i>L. verrucatus</i> ,]	lower Laira Formation or Pretty Hill Formation <i>("Sawpit Basal Shale" member Pretty Hill Formation)</i>	Lacustrine Claystone, mid grey	Very poor	Very low [<i>Extremely low</i>]	Very low	Sparse restricted palynoflora of mostly unidentifiable fragmented saccate pollen and cuticle remnants. Spore fragments subdominant; <i>Cyathidites</i> and <i>Retitriletes</i> conspicuous. Algal forms notable; mostly leiospheres.



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				Preservation	Yield <i>(Organic yield)</i>	Diversity	
SWC 38 1810.0m s6217 P19253	Not examined	<i>(Pretty Hill Sandstone)</i>	Mudstone, mid greenish grey, sandstone in part; calcite veins				Very low organic recovery
SWC 36 1882.0m s6216 P19254	APK12 - APK21 possibly APK12 <i>Osmundacidites</i> Palynofacies <i>[C. equalis, C. hughesii]</i>	lower Laira Formation or Pretty Hill Formation <i>("Sawpit basal shale unit", Pretty Hill Formation)</i>	Paralic lagoonal Siltstone, mid - dark grey.	Very poor	Low <i>[Extremely low]</i>	Low	Palynoflora mostly unidentifiable saccate pollen and cuticle remnants; inaperturate pollen notable. Spores fragments subdominant but restricted in diversity; <i>Osmundacidites</i> conspicuous. Leiospheres notable, few <i>Micrhystridium</i> .
	<p align="center">Sample Gap McEachern Sandstone 1900m Casterton Formation 2118m</p>						Sandy section; additional samples from this section unlikely to yield definitive palynomorph associations.
SWC27 2126.0m s6211 P19255	APK1 tentatively APK11 Casterton Palynofacies <i>[C. 'quasihughesii', ?R. 'backhousei']</i>	Casterton Formation <i>(Casterton Formation)</i>	Fluvial Siltstone, dark grey	Very poor <i>diffuse, corroded & fragmented</i>	Moderate <i>[Very low]</i>	Very low	Palynoflora of mostly corroded and fragmented inaperturate pollen remnants (often difficult to distinguish from the abundant very fragmented and corroded cuticle remnants); very few forms could be identified; few recognisable saccate pollen.. Spores scarce and very restricted in diversity. Few aquatic algal spores; almost entirely leiospheres.
SWC 26 2128.6m s6210 P19256	APJ62 - APK2 tentatively APK11 Casterton aquatic palynofacies <i>[C. equalis]</i>	Casterton Formation <i>(Casterton Formation)</i>	Lacustrine Siltstone, mid dark grey brown	Pollen: very poor <i>diffuse, corroded & fragmented</i> Acritarchs: fair - fresh.	High <i>[Low]</i>	Very low	Palynoflora of mostly strongly corroded inaperturate pollen fragments (mostly difficult to distinguish from the abundant very fragmented and corroded cuticle remnants); very few forms could be identified. Few recognisable saccate pollen. Aquatic algal spores subdominant to co dominant; almost entirely thin and moderately thick walled leiospheres. Spores very scarce and extremely restricted in diversity.



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				Preservation	Yield <i>(Organic yield)</i>	Diversity	
SWC 25 2160.0m s6209 P19257	APJ62 - APK2 tentatively APK11 Casterton Palynofacies <i>[C. equalis]</i>	Casterton Formation <i>(Casterton Formation)</i>	Fluvial Siltstone, mid grey brown; v. fine sandstone in part	Extremely poor diffuse, corroded & fragmented	Moderate <i>[Low]</i>	Very low	Palynoflora mostly strongly corroded thin ?inaperturate pollen, ?saccate pollen and cuticle fragments; few forms could be recognised. Spores extremely scarce and restricted in diversity. Isolated algal spores present.
SWC 20 2205.0m s6208 P19258	APJ62 - APK2 tentatively APK11 Casterton Palynofacies <i>[C. equalis]</i>	Casterton Formation <i>(Casterton Formation)</i>	Lacustrine Siltstone, light mid brownish grey; off white sandstone laminations	Pollen: extrm. poor diffuse, corroded & fragmented Algae: fair	Moderate <i>[Moderate]</i>	Very low	Palynoflora mostly strongly corroded thin inaperturate pollen remnants together with cuticle fragments; very few forms could be identified; few recognisable saccate pollen. Spores very scarce and restricted in diversity. Algal spores conspicuous; mostly thin walled and small leiospheres.
SWC 19 2215.0m s6191 P19259	APJ6 - APK2 tentatively APK11 Casterton palynofacies	Casterton Formation <i>(Casterton Formation)</i>	Fluvial Siltstone, mid brown; fine sandstone in part.	Extremely poor diffuse, corroded & fragmented	Moderate <i>[Moderate]</i>	Extremely low	Palynoflora mostly strongly corroded thin ?inaperturate pollen remnants and cuticle fragments; very few forms could be identified; few recognisable saccate pollen. Spores extremely scarce and restricted in diversity. Few algal spores (mostly leiospheres) present.
SWC 18 2235.0m s6190 P19260	APJ62 - APK2 tentatively APK11 Casterton Palynofacies <i>[C. equalis]</i>	Casterton Formation <i>(Casterton Formation)</i>	Fluvial Siltstone, dark brown black, claystone in part	Very poor diffuse, corroded & fragmented	High <i>[Moderate]</i>	Low	Palynoflora dominated by corroded inaperturate pollen remnants and cuticle fragments; few recognisable saccate pollen. Spores sparse and restricted in diversity; <i>Osmundacidites</i> and <i>Ceratospirites equalis</i> notable; <i>Contignisporites cooksoniae</i> represented by several specimens. Algal spores very rare; mostly leiospheres.
SWC 17 2270.0m s6189 P19261	APJ62 - APK2 tentatively APK11 Casterton Palynofacies <i>[C. equalis, C. glebulentus]</i>	Casterton Formation <i>(Casterton Formation)</i>	Fluvial Siltstone, dark brown black, claystone in part	Very poor diffuse, corroded & fragmented	Moderate <i>[Moderate]</i>	Very low	Palynoflora dominated by thin corroded inaperturate pollen remnants and cuticle fragments; few recognisable saccate pollen; pollen and cuticle remnants often difficult to distinguish. Spores very sparse and restricted in diversity; <i>Osmundacidites</i> and <i>Cyathidites</i> notable. Algal spores extremely rare; mostly leiospheres.



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				Preservation	Yield <i>(Organic yield)</i>	Diversity	
SWC 16 2295.5m s6188 P19262	APK1 tentatively APK11 <i>Retitriteles</i> Palynofacies [<i>C. equalis</i> , <i>R. purbeckensis</i>]	Casterton Formation <i>(Casterton Formation)</i>	Fluvial Siltstone, mid dark brown	Very poor corroded fragmented	Low [<i>Low</i>]	Very low	Sparse palynoflora of mostly unidentifiable remnants. Land plant spores dominant; Lycopods (mostly <i>Retitriteles</i> and <i>Kekryphalospora</i>) prominent and moderately diverse. Few recognisable inaperturate or saccate pollen. Few possible algal spores.
SWC 15 2325.0m s6187 P19263	APK1 tentatively APK11 Casterton Palynofacies [<i>R. australiensis</i> , <i>C. equalis</i>]	Casterton Formation <i>(Casterton Formation)</i>	Fluvial Siltstone, mid dark brown, carbonaceous	Very poor diffuse, stained corroded & fragmented	Moderate [<i>Moderate</i>]	Very low	Palynoflora dominated by thin strongly corroded ?inaperturate pollen remnants and cuticle fragments; few recognisable saccate pollen; pollen and cuticle remnants often difficult to distinguish. Spores very sparse and restricted in diversity; <i>Retitriteles</i> and <i>Kekryphalospora</i> notable. Algal spores extremely rare; mostly leiospheres.
SWC 14 2337.5m s6186 P19264	APJ62 - APK1 tentatively APK11 Casterton Palynofacies [<i>C. equalis</i>]	Casterton Formation <i>(Casterton Formation)</i>	Lacustrine Siltstone mid dark brown, carbonaceous	Ext poor diffuse, stained corroded & fragmented	Very high [<i>Very high</i>]	Extremely low	Palynoflora consists almost entirely of thin strongly corroded inaperturate pollen, thin ?leiospheres and cuticle tissue fragments; few forms could be identified. Some humic staining but less than the section 2295 - 2325m. Land plant spores extremely scarce.
SWC 12 2350.0m s6185 P19265	APJ6 - APK1 tentatively APK11 Casterton oil shale aquatic palynofacies [<i>?R. purbeckensis</i> , <i>?R. watheroensis</i>]	Casterton Formation <i>(Casterton Formation)</i>	Lacustrine Siltstone, dark brownish grey, carbonaceous	Pollen: fair - poor Spores: very poor Algae: fair - fresh	Very high [<i>Very high</i>]	Very low	Palynoflora dominated by somewhat corroded but mostly entire inaperturate pollen; bisaccate pollen notable. Cuticle tissue highly corroded, diffuse and finely divided; less humic staining than at 2295 - 2337.5m. Land plant spores extremely scarce and restricted in diversity. Algal spores prominent; mostly thin walled and small leiospheres including <i>Granodiscus minutia</i> . [Palynoflora seem similar to the section from 2105m - 2270m but inaperturate pollen better preserved; spore association differs in that <i>C. equalis</i> absent but doubt that it is significantly older. Very few forms free of the granular-fibrous matrix in unoxidized + 20µm fraction]



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