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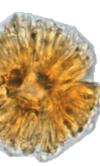
Palynology of the transition, thern Jurassic Surat retaceous Basin

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150										AGE (Ma)			
MESOZOIC (in part)									ERA				
JURASSIC (in part)					CRETACEOUS (in part)					PERIOD			
Late				Early					EPOCH				
Oxfordian	Oxfordian		Tithonian		Berriasian		Valanginian			Hauterivian	STAGE (AGE)		
		APJo	3			APK1				APK2 (in part)			
APJ5 (in part)	APJ6.1	APJ6.2.1	APJ6.2.2		APK1.1		APK1.2.1	APK1.2.2		APK2.1 (in part)	Price, 1997	S	PALYNOS:
Callialaspoi dampiei Superzone² (ii	rites ri n part)	٨	Microcachryidites Superzone ² (in part)							PORE-PO	NOSTRATI		
Murospora florida Association Zone ³	Retitriletes watherooensis Association Zone ³			Ruffordiaspora australiensis Interval Zone ^{1,2}				Foraminisporis wonthaggiensis Interval Zone ^{1,2} (in part)	Burger 1973¹, McKellar, in press³, Helby, Morgan & Partridge, 1987²	SPORE-POLLEN UNITS	TRATIGRAPHIC ZONES		
				}							W		
Walloon Coal Measures (in part) NJUNE CRE	Springbok Sandstone G	Westbourne Formation		Gubberamunda Sandstone		Orallo Formation			Mooga Sandstone	Bungil Formation (in part)	NORTHERN SURAT BASIN		
NJUNE CREEK GROUP										Burge		PRE	
McKellar 1998, in press; Wainman in press									Burger 1973	JUIES	PREVIOUS		
On Shiftward's with thurst											STUDY	SILL	

formally assessed for use in the Surat Basin schemes have been Neither of these

Existing Biozones





against previous Late Jurassic 2012) Early Cretaceous lithostratigraphy and biostratigraphy set and current palynological studies (timescale after Gradstein

Pro: offers up to 4 subdivisions Con: not formally published

Pro: for Con: or

ormally published only 1 subdivision

What's being done?

- boreholes are being documented. Bentonite samples from the Orallo Formation are at Formation The palynomorphs in the rocks of the upper Westbourne Formation — lower Mooga Sandstone from 3 stratigraphic
- State University's geochronology laboratory undergoing high-precision U-Pb, CA-IDTIMS dating of zircons.

It's the last part of studied and

Why study this section to fthe Surat Basin to be palynologically

- Is the most complete record of deposition in Queensland from this time period
 Contains a number of important aquifers
 The goal of this study is to produce a more accurate biozonation that will make distinguishing these formations easier and give us a better understanding of their deposition.

Presence	(used to define base of zone)	•	Spore- Pollen Zone
Present		Murospora florida	Murospora florida Association Zone/APJ5
Rare		Retitriletes watherooensis	Retitriletes watherooensis Association Zone/APJ6
Present		Neoraistrickia equalis	APJ6.2.1
Common		Foraminisporites daliyi	APJ6.2.2
Present		Ruffordiaspora australiensis/ Ruffordiaspora spp.	Ruffordiaspora australiensis Interval Zone/APK1
1 specimen from 18 slides, appears above APK1.2.2 index		Cyclosporites hughesi	APK1.2.1
Present		Dictyotosporite s speciosus	APK1.2.2
Absent (as expecte	٠-٧	Foraminispo wonthaggier	Foraminispo wonthaggien Interval Zone/APK2

slides from Table covering Australia from the Oxfordian to the showing the defining index fossils the upper Gubberamunda and lo of th ne formal and informal biozones Hauterivien and their presence in Mooga Sandstone



