

## Contents

Abstract .....	IV	7.2.6	Concluding remarks .....	45
1. Introduction .....	1	7.3	The Southern Facies belt .....	45
2. Geological setting .....	2	7.3.1	Fluvial environment .....	46
3. Subdivision of the Lower Devonian		7.3.2	Coastal to nearshore environment .....	47
Rhenohercynian Basin .....	4	7.3.3	Shallow sea siliciclastic environment .....	49
4. Stratigraphic framework .....	6	7.3.4	Outer offshore environment .....	53
5. Sedimentological data .....	8	7.3.5	Fauna and flora .....	53
6. Rocks, grain size range, and bedforms .....	9	7.3.6	Concluding remarks .....	55
7. Sedimentary environments .....	11	8.	Depositional model of the Rhenohercynian	
7.1 The Northern Facies belt .....	11		Basin .....	56
7.1.1 Fluvial environments .....	13	8.1	The Northern Facies belt .....	56
7.1.2 Deltaic environments .....	19	8.2	The Central Facies belt .....	58
7.1.3 Interdistributary bay .....	21	8.3	The Southern Facies belt .....	60
7.1.4 Tidal environment .....	24	8.4	Comments on the "Mitteldeutsche	
7.1.5 Fauna and flora .....	32		Schwelle" .....	61
7.1.6 Concluding remarks .....	34	9.	Factors controlling the depositional model .	64
7.2 The Central Facies belt .....	35	9.1	Palaeogeography and palaeoclimatic	
7.2.1 Prodelta environment .....	35		conditions .....	64
7.2.2 Basinal environment .....	37	9.2	Subsidence .....	65
7.2.3 Tidal environment .....	38	9.3	The sea level .....	67
7.2.4 Shoreface environment .....	41	9.4	The mode of siliciclastic input .....	69
7.2.5 Fauna and flora .....	43	10.	Conclusions .....	71
7.2.5.1 Hunsrückschiefer basinal environment .....	43		Acknowledgements .....	73
7.2.5.2 Shallow sea to deltaic environment .....	45		References .....	74