

Figure 16. Depositional profile 3, with restored architecture of Jurassic depositional sequences.

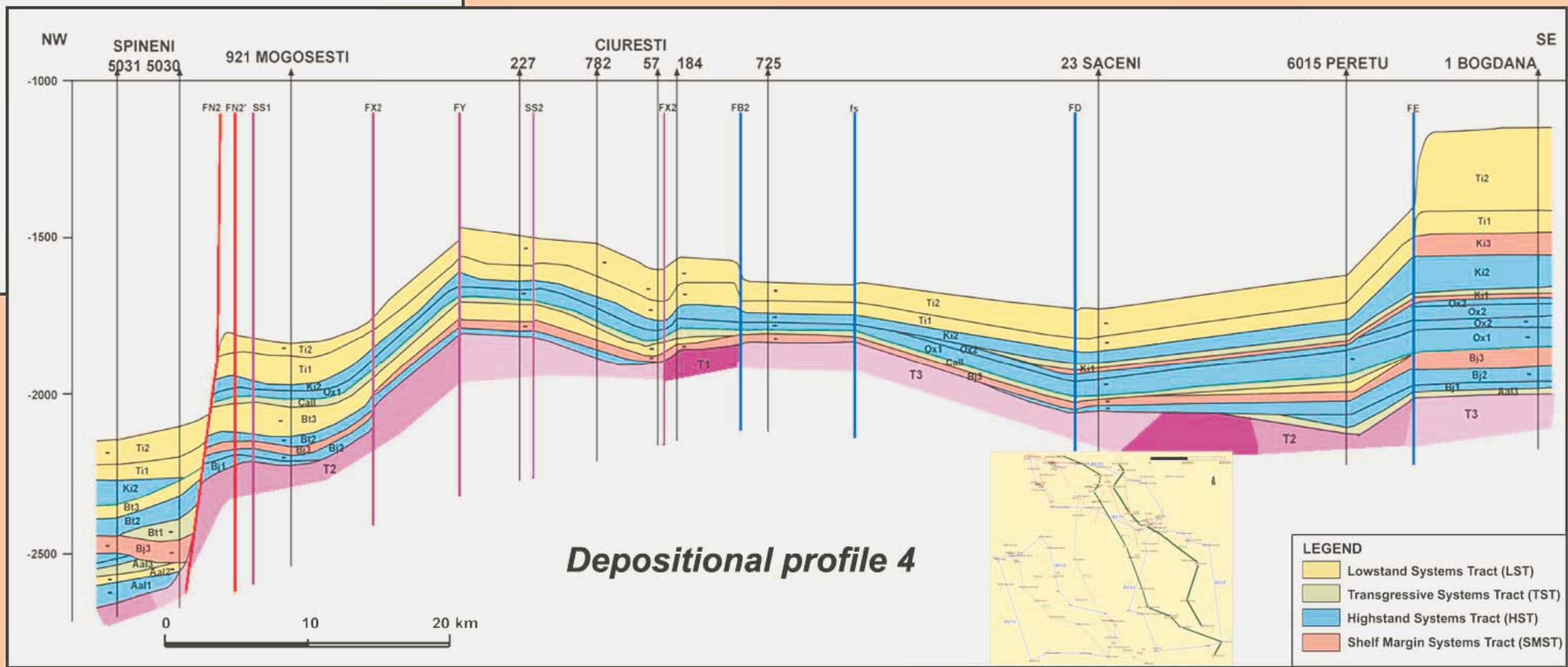


Figure 17. Depositional profile 4. Restored architecture of Jurassic depositional sequences.

TYPE	No.	SEQUENCE OR SET	ABBR.	RELATIVE INTENSITY UPLIFT / SUBSIDENCE	BASIN TYPE	RELATIVE INTENSITY STRIKE-SLIP / NORMAL FAULTS	MAJOR DEPOSITIONAL SYSTEMS
SUPERSEQUENCE ORDER 2	22	SC 3	TST	7	7	7	7
	21	LST	SC	7	7	7	7
	20	LST	SC	7	7	7	7
	19	SMST	INC	7	7	7	7
	18	HST	INC	7	7	7	7
	17	HST	INC	7	7	7	7
	16	HST	INC	7	7	7	7
	15	HST	INC	7	7	7	7
	14	HST	INC	7	7	7	7
	13	HST	INC	7	7	7	7
SUPERSEQUENCE ORDER 3	12	HST	INC	7	7	7	7
	11	LST	INC	7	7	7	7
	10	HST	INC	7	7	7	7
	9	HST	INC	7	7	7	7
	8	HST	INC	7	7	7	7
	7	HST	INC	7	7	7	7
	6	HST	INC	7	7	7	7
	5	HST	INC	7	7	7	7
	4	HST	INC	7	7	7	7
	3	HST	INC	7	7	7	7

Figure 19. Jurassic tectonic and eustatic events on the Moesian Platform.

SYSTEMS TRACTS	DEPOSITIONAL SYSTEMS	OIL FIELD (Examples)
J3	Mound / Prt - Sbt	
	Submarine channel	
	Shelf margin	CIURESTI N. BARLA
J2	Mound / Prt	
	Mound / Inner shelf	
	Shelf margin	CIURESTI N.
	Regressive littoral bars	CIURESTI S.
	Distal bars	OPORELU
	Delta	FAURESTI
	Fan delta	MAMU
	Regressive littoral bars	MALU MARE
	Submarine channel	MAMU
	Fan delta	DRAGANU
J1	Regressive littoral bars	MALU MARE
	Fan delta	DRAGANU
	Littoral bars	MALU MARE
	Regressive littoral bars	FAURESTI
	Delta front	MALU MARE
	Fan delta	
J1	Delta front, Littoral / Spt	FAURESTI
	Fan delta	DRAGANU
J1	Delta front	DRAGANU
	Delta front	DRAGANU

Figure 22. Systems tracts related to the oil fields.

The Middle Jurassic depositional systems are represented by coastal fluviatile domain, littoral and off-shore bars, strand plain, delta system, shelf, shelf margin, slope, fan delta and basin (Figure 20). Offshore distal sandbars, littoral bars, and delta front and fan delta represent the prospects for Iancu Jianu, Fauresti, Spineni, Oprelu, Bacea, and Ciuresti hydrocarbon fields.

In Late Jurassic, the depositional systems consisted of carbonate shoals, banks or reefs on the internal and external shelf, a marginal shelf, faulted slopes, and basin (Figure 21). The main prospect is represented by Tithonian carbonate shelf margin with diagenetic control on the pore system.

In Callovian, due to regional extensional conditions, the Moesian Platform tilted and rotated, and an important discontinuity occurred as a maximum flooding surface. This surface was used as a marker in restoring of the depositional profiles. Other III order composite sequences are of Oxfordian and Tithonian ages. These are composed by higher frequency IV and V order sequences, as minor transgressive-regressive cycles. The Tithonian sequences are defined as two autochthonous carbonate wedges in a LST regime. To the south, the Tithonian carbonate wedges have an aggradational geometry, strongly influenced by the constant subsidence rate superposed on a general tendency of rapid sea level lowering. To the north, the distal pelagic carbonate facies shows progradational geometry on the by-pass, faulted (in the strike - slip system) slope, with a low rate of sedimentation.



Figure 20. Late Bajocian depositional systems-Falling Stage Systems Tract.

Due to the strike-slip deformation in the NW, high subsidence prevailed. The uplift influenced the sedimentation in the NE and SE, where subaerial erosion resulted in intraformational hiatus or re-sedimentation (Figures 19, 20, and 21). In late Bajocian, late Callovian, and late Tithonian, the strike-slip system was more active, while the influence of the syndepositional normal faults decreased.

To illustrate the distribution of the linkage and contemporaneous depositional systems, two examples were chosen: late Bajocian siliciclastic Falling Stage Systems Tract and late Tithonian carbonate autochthonous wedge Lowstand Systems Tract.

STANDARD CHRONOSTRATIGRAPHY				CHRONOSTRATIGRAPHY AND GLOBAL EUSTATIC CYCLES				CHRONO - SEQUENCE STRATIGRAPHY JURASSIC - MOESIAN PLATFORM				ABBREVIATIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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111	LZA - 112	LZA - 113	LZA - 114	LZA - 115	LZA - 116	LZA - 117	LZA - 118	LZA - 119	LZA - 120	LZA - 121	LZA - 122	LZA - 123	LZA - 124	LZA - 125	LZA - 126	LZA - 127	LZA - 128	LZA - 129	LZA - 130	LZA - 131	LZA - 132	LZA - 133	LZA - 134	LZA - 135	LZA - 136	LZA - 137	LZA - 138	LZA - 139	LZA - 140	LZA - 141	LZA - 142	LZA - 143	LZA - 144	LZA - 145	LZA - 146	LZA - 147	LZA - 148	LZA - 149	LZA - 150	LZA - 151	LZA - 152	LZA - 153	LZA - 154	LZA - 155	LZA - 156	LZA - 157	LZA - 158	LZA - 159	LZA - 160	LZA - 161	LZA - 162	LZA - 163	LZA - 164	LZA - 165	LZA - 166	LZA - 167	LZA - 168	LZA - 169	LZA - 170	LZA - 171	LZA - 172	LZA - 173	LZA - 174	LZA - 175	LZA - 176	LZA - 177	LZA - 178	LZA - 179	LZA - 180	LZA - 181	LZA - 182	LZA - 183	LZA - 184	LZA - 185	LZA - 186	LZA - 187	LZA - 188	LZA - 189	LZA - 190	LZA - 191	LZA - 192	LZA - 193	LZA - 194	LZA - 195	LZA - 196	LZA - 197	LZA - 198	LZA - 199	LZA - 200	LZA - 201	LZA - 202	LZA - 203	LZA - 204	LZA - 205	LZA - 206	LZA - 207	LZA - 208	LZA - 209	LZA - 210	LZA - 211	LZA - 212	LZA - 213	LZA - 214	LZA - 215	LZA - 216	LZA - 217	LZA - 218	LZA - 219	LZA - 220	LZA - 221	LZA - 222	LZA - 223	LZA - 224	LZA - 225	LZA - 226	LZA - 227	LZA - 228	LZA - 229	LZA - 230	LZA - 231	LZA - 232	LZA - 233	LZA - 234	LZA - 235	LZA - 236	LZA - 237	LZA - 238	LZA - 239	LZA - 240	LZA - 241	LZA - 242	LZA - 243	LZA - 244	LZA - 245	LZA - 246	LZA - 247	LZA - 248	LZA - 249	LZA - 250	LZA - 251	LZA - 252	LZA - 253	LZA - 254	LZA - 255	LZA - 256	LZA - 257	LZA - 258	LZA - 259	LZA - 260	LZA - 261	LZA - 262	LZA - 263	LZA - 264	LZA - 265	LZA - 266	LZA - 267	LZA - 268	LZA - 269	LZA - 270	LZA - 271	LZA - 272	LZA - 273	LZA - 274	LZA - 275	LZA - 276	LZA - 277	LZA - 278	LZA - 279	LZA - 280	LZA - 281	LZA - 282	LZA - 283	LZA - 284	LZA - 285	LZA - 286	LZA - 287	LZA - 288	LZA - 289	LZA - 290	LZA - 291	LZA - 292	LZA - 293	LZA - 294	LZA - 295	LZA - 296	LZA - 297	LZA - 298	LZA - 299	LZA - 300	LZA - 301	LZA - 302	LZA - 303	LZA - 304	LZA - 305	LZA - 306	LZA - 307	LZA - 308	LZA - 309	LZA - 310	LZA - 311	LZA - 312	LZA - 313	LZA - 314	LZA - 315	LZA - 316	LZA - 317	LZA - 318	LZA - 319	LZA - 320	LZA - 321	LZA - 322	LZA - 323	LZA - 324	LZA - 325	LZA - 326	LZA - 327	LZA - 328	LZA - 329	LZA - 330	LZA - 331	LZA - 332	LZA - 333	LZA - 334	LZA - 335	LZA - 336	LZA - 337	LZA - 338	LZA - 339	LZA - 340	LZA - 341	LZA - 342	LZA - 343	LZA - 344	LZA - 345	LZA - 346	LZA - 347	LZA - 348	LZA - 349	LZA - 350	LZA - 351	LZA - 352	LZA - 353	LZA - 354	LZA - 355	LZA - 356	LZA - 357	LZA - 358	LZA - 359	LZA - 360	LZA - 361	LZA - 362	LZA - 363	LZA - 364	LZA - 365	LZA - 366	LZA - 367	LZA - 368	LZA - 369	LZA - 370	LZA - 371	LZA - 372	LZA - 373	LZA - 374	LZA - 375	LZA - 376	LZA - 377	LZA - 378	LZA - 379	LZA - 380	LZA - 381	LZA - 382	LZA - 383	LZA - 384	LZA - 385	LZA - 386	LZA - 387	LZA - 388	LZA - 389	LZA - 390	LZA - 391	LZA - 392	LZA - 393	LZA - 394	LZA - 395	LZA - 396	LZA - 397	LZA - 398	LZA - 399	LZA - 400	LZA - 401	LZA - 402	LZA - 403	LZA - 404	LZA - 405	LZA - 406	LZA - 407	LZA - 408	LZA - 409	LZA - 410	LZA - 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611	LZA - 612	LZA - 613	LZA - 614	LZA - 615	LZA - 616	LZA - 617	LZA - 618	LZA - 619	LZA - 620	LZA - 621	LZA - 622	LZA - 623	LZA - 624	LZA - 625	LZA - 626	LZA - 627	LZA - 628	LZA - 629	LZA - 630	LZA - 631	LZA - 632	LZA - 633	LZA - 634	LZA - 635	LZA - 636	LZA - 637	LZA - 638	LZA - 639	LZA - 640	LZA - 641	LZA - 642	LZA - 643	LZA - 644	LZA - 645	LZA - 646	LZA - 647	LZA - 648	LZA - 649	LZA - 650	LZA - 651	LZA - 652	LZA - 653	LZA - 654	LZA - 655	LZA - 656	LZA - 657	LZA - 658	LZA - 659	LZA - 660	LZA - 661	LZA - 662	LZA - 663	LZA - 664	LZA - 665	LZA - 666	LZA - 667	LZA - 668	LZA - 669	LZA - 670	LZA - 671	LZA - 672	LZA - 673	LZA - 674	LZA - 675	LZA - 676	LZA - 677	LZA - 678	LZA - 679	LZA - 680	LZA - 681	LZA - 682	LZA - 683	LZA - 684	LZA - 685	LZA - 686	LZA - 687	LZA - 688	LZA - 689	LZA - 690	LZA - 691	LZA - 692	LZA - 693	LZA - 694	LZA - 695	LZA - 696	LZA - 697	LZA - 698	LZA - 699	LZA - 700	LZA - 701	LZA - 702	LZA - 703	LZA - 704	LZA - 705	LZA - 706	LZA - 707	LZA - 708	LZA - 709	LZA - 710	LZA - 711	LZA - 712	LZA - 713	LZA - 714	LZA - 715	LZA - 716	LZA - 717	LZA - 718	LZA - 719	LZA - 720	LZA - 721	LZA - 722	LZA - 723	LZA - 724	LZA - 725	LZA - 726	LZA - 727	LZA - 728	LZA - 729	LZA - 730	LZA - 731	LZA - 732	LZA - 733	LZA - 734	LZA - 735	LZA - 736	LZA - 737	LZA - 738	LZA - 739	LZA - 740	LZA - 741	LZA - 742	LZA - 743	LZA - 744	LZA - 745	LZA - 746	LZA - 747	LZA - 748	LZA - 749	LZA - 750	LZA - 751	LZA - 752	LZA - 753	LZA - 754	LZA - 755	LZA - 756	LZA - 757	LZA - 758	LZA - 759	LZA - 760	LZA - 761	LZA - 762	LZA - 763	LZA - 764	LZA - 765	LZA - 766	LZA - 767	LZA - 768	LZA - 769	LZA - 770	LZA - 771	LZA - 772	LZA - 773	LZA - 774	LZA - 775	LZA - 776	LZA - 777	LZA - 778	LZA - 779	LZA - 780	LZA - 781	LZA - 782	LZA - 783	LZA - 784	LZA - 785	LZA - 786	LZA - 787	LZA - 788	LZA - 789	LZA - 790	LZA - 791	LZA - 792	LZA - 793

Figure 18. Chronostratigraphy and sequence stratigraphy of Jurassic successions on the Moesian Platform, correlated with global eustatic cycles.

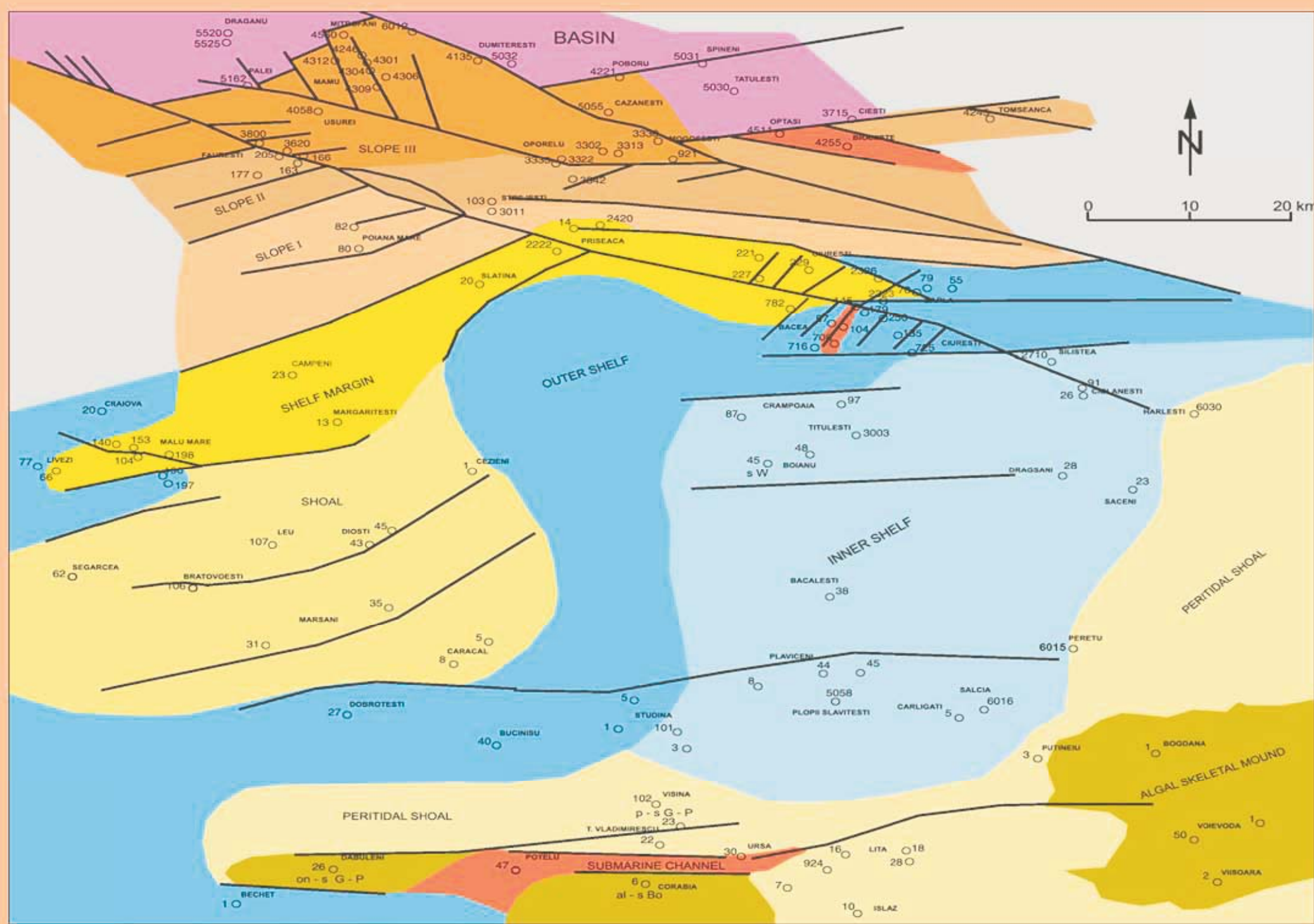


Figure 21. Late Tithonian depositional systems-Lowstand Systems Tract.

Conclusions

The defining of the major events in the basin evolution of Central Moesian Platform (Figure 22) led to the following conclusions:

- Based on older and new considerations, Permian-Jurassic successions may be interpreted in terms of intracratonic extensional basins followed by subaerial erosion and strike-slip deformation in the northern part of the study area; in the southern-central areas, conditions for thermal subsidence of the basin prevailed.
- The hydrocarbon fields are distributed asymmetrically. The fields producing from the Triassic and the Dogger are located in Malu Mare, Iancu Jianu, Negreni; South Ciuresti, Fauresti, Spineni, Simnic, Ghercesti, Circea, Malu Mare, and Ciuresti fields are producing from the Dogger, only, while North Ciuresti and Barla fields are also producing from the Tithonian.
- It is worth noting that most of the Jurassic commercial hydrocarbon accumulations are encountered in the strike-slip basin, and they are controlled by antithetic and synthetic, en echelon faults and other typical secondary features.