

TABLE 10

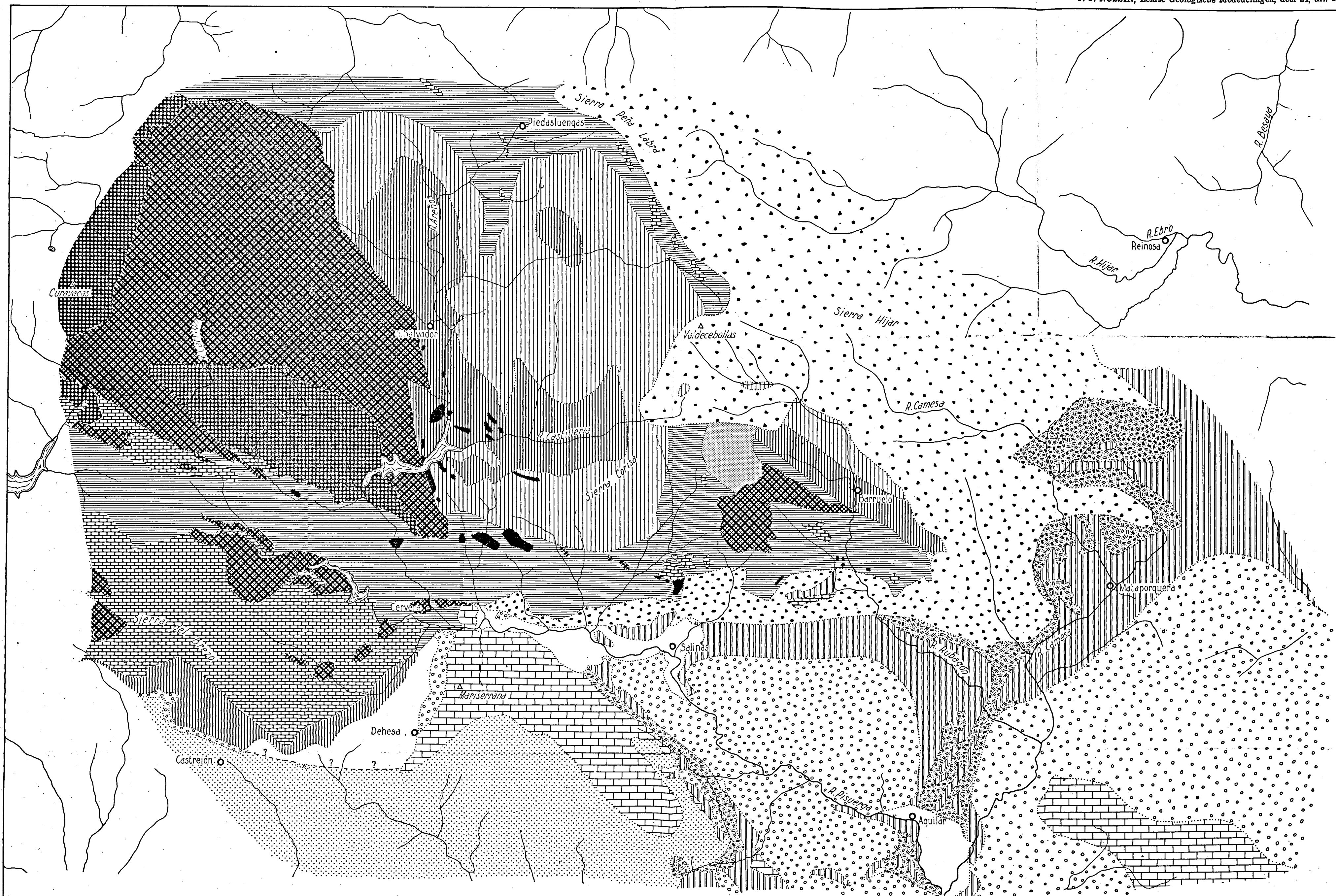
No	From	tourmaline	zircon	rutile	anatase	garnet	staurolite	andalusite	kyanite	sillimanite	amphiboles	augite s.l.	hypersthene	epidote	alterite s.l.	brookite	chloritoid	topaz	corundum	spinel	
64	HP terrace																				
65	Herreruela terracepart	63	16	9											11	1					
	San Felices "	38	35	12	1		4				x			1	9						
16	Cervera "	12	56	15			4			1				1	10		1				
33	" "	15	44	21											20						
53	" "	6	46	11		3								2	30		2				
58	" "	45	27	11			3								14						
59	" "	45	32	11		1	1							3	7						
73	" "	23	55	5		1	1			1					14						
24	Rabanal "	22	33	12											33						
25	" "	15	58			1									26						
26	" "	12	60	14		2									12						
27	" "	17	37	14		1									31						
40	Dehesa "	7	68	14	1		1								8		1				
60	" "	17	65	4	1	2	2								9						
71	" "	35	41	12	1		1							1	9						
67	} conglomerate pebbles from Dehesa terracepart	32	39	8		4	13	2							2						
68		45	17	10		4	14				1				9						
69		87	2	7	2	1									1						
70		48	9	12		17	14														
31	LH terrace																				
32	Cervera "	9	75	14		x							1		(17)			1			
	" "	7	62	11			1				4				15						
212	Humin	20	50	12		1								3	14						
211	HM terrace						2								6	6					
	San Mames	11	60	15																	
	MM terrace																				
6	} Barcenilla	45	32	8		4	4								7						
7		36	32	3		10	3	1				1	1	1	12						
8		34	33	7	1	8	14	1					1	1	2						
9		41	19	13	2	2	14	1					1	1	5				1		
3	LM terrace																				
4	S. of Cervera	17	51	20	2	1	2								7						
28	" "	27	39	12	2	1	1	2		1		1	1	13							
29	SE. of Cervera	9	71	12		x									8						
29	" "	6	71	6		1									14					2	
10	} Ligüerzana, N. bank	65	11	4		6	13											1			
11		51	19	9	1	2	14		2				1		1						
12		55	30	5	1	3	6														
201	HL terrace																				
	Aguilar	7	57	17			6							1	11	1					
44	Lower terrace																				
45	Rio Lores	13	55	22			1							1	7		1				
46	" "	16	47	16	1	2				1					17						
116	Rio Areños	10	38	13				1							35		2	1			
117	Arbejal	11	57	11		5		1					10	5							
104	Salinas/Barcenilla	10	62	13		6	1	1						4	3						
210	Villanueva	13	63	13		4	3							3	5						
202	Dam Aguilar	5	65	13	1	6	2							3							
	Downstr. Aguilar	12	57	9		3	2							2	13	2					

TABLE 13

No	From	tourmaline	zircon	rutile	anatase	garnet	staurolite	andalusite	kyanite	sillimanite	amphiboles	augite s.l.	hypersthene	epidote	alterite s.l.	brookite	topaz
<u>HR terrace</u>																	
111	Porquera	32	33	16	1			1						2	15		
206	Cillamayor	14	58	13	1									1	13		
203	Matabaniega	19	51	11			2							4	13		
<u>MR terrace</u>																	
57	Matabuena	25	53	9		2								3	8		
<u>LMR terrace</u>																	
109	Revilla	20	56	15											9		
	Nestar	10	70	19	1												
<u>Lower terrace</u>																	
35	Porquera	22	50	12											16		
110	Porquera	31	40	12		1	9	1	1					1	2		2
74	Cillamayor	42	17	9	1	1							1	1	8	1	19
75	Cillamayor	35	30	7	2	1					1		1		13		10
118	Nestar	32	41	16	3	1	2								2		3
114	Menaza	39	37	13	1	3	2							2	3		
101	Wealden clay Matamorisca	7	55	6	1	1	3	4						1	1		21

TABLE 16

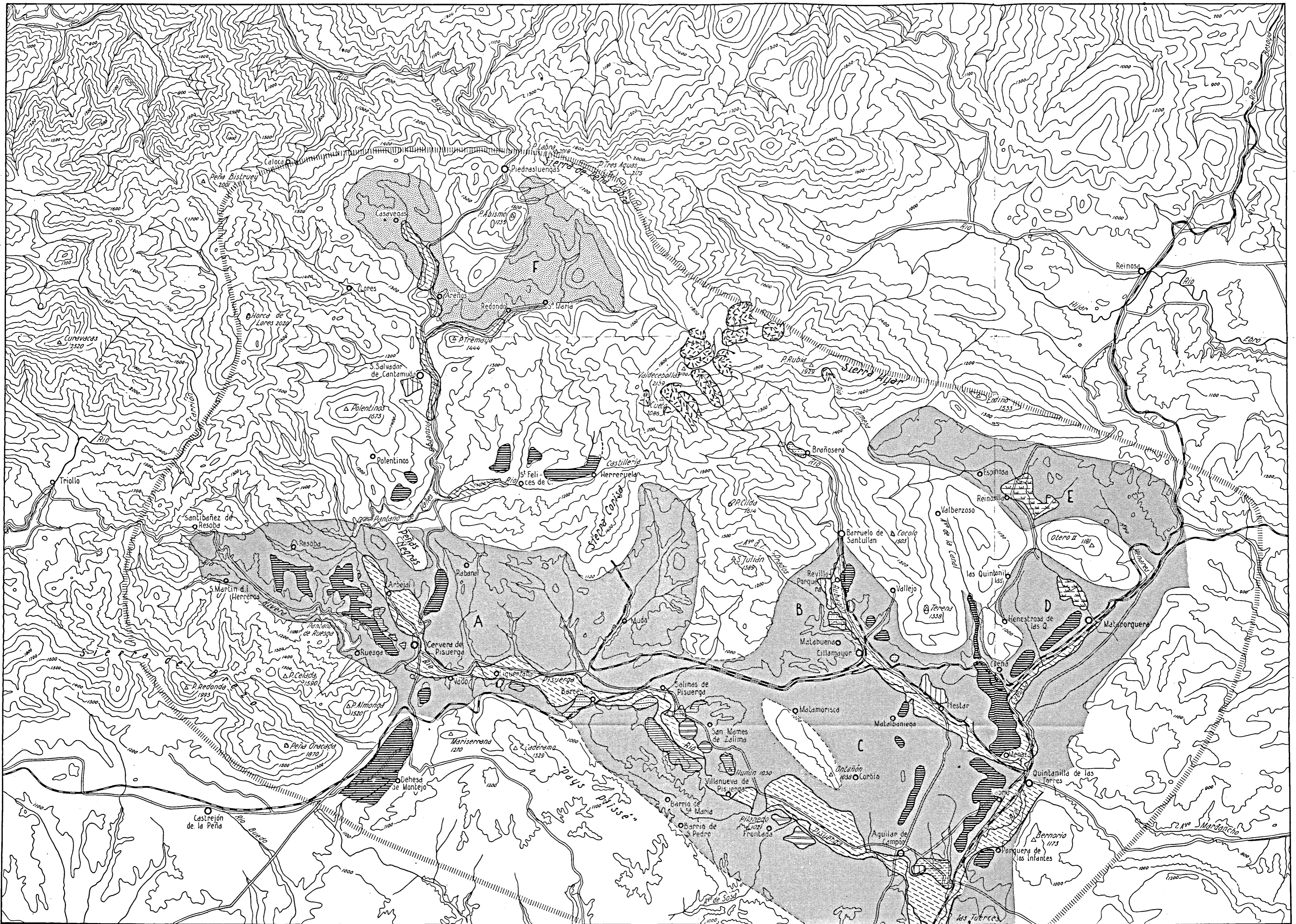
No	From	tourmaline	zircon	rutile	anatase	garnet	staurolite	epidote	alterite	brookite
<u>HC terrace</u>										
204	Menaza NW	29	41	8	1	2	5	3	11	
115	Menaza	45	30	17	1		1	2	4	
113	Cabria N	22	56	12	1	1	5		3	
112	Cabria NW	30	31	12	2		1	2	22	
106	Cabria	30	41	10	2	1	6	4	6	
208	A ^{yo} de la Canal	19	45	15			4	1	16	
121	Cuena terrace	37	44	13		1	2	1	2	
122	Cuena terrace	50	36	9		1	3		1	
<u>Sandy layers</u>										
213	Mataporquera	30	50	8			3	1	8	
120	Cuena	61	25	10			1	2	1	
205	Cuena	19	43	18			1	7	9	3



Tertiary	Stephanian A	river	Igneous rocks
Cenomanian-Maastrichtian	Westphalian D-C	mountain top	Palaeozoic
Wealden	Westphalian B	lake	Mesozoic
Jurassic	Westphalian A	Quaternary sediments omitted	Marine Palaeogene
Keuper	Namurian, Viséan	Scale: 0 1 2 3 4 5 km	Terrestrial Palaeog., Neog. and Pleistoc.
Permo-Triassic	Devonian		
Stephanian B-C	Igneous rocks		

SIMPLIFIED GEOLOGICAL MAP OF THE PISUERGA DRAINAGE AREA

IN THE CANTABRIAN MOUNTAINS
 After maps published by de Sitter, Ciry and Karrenberg

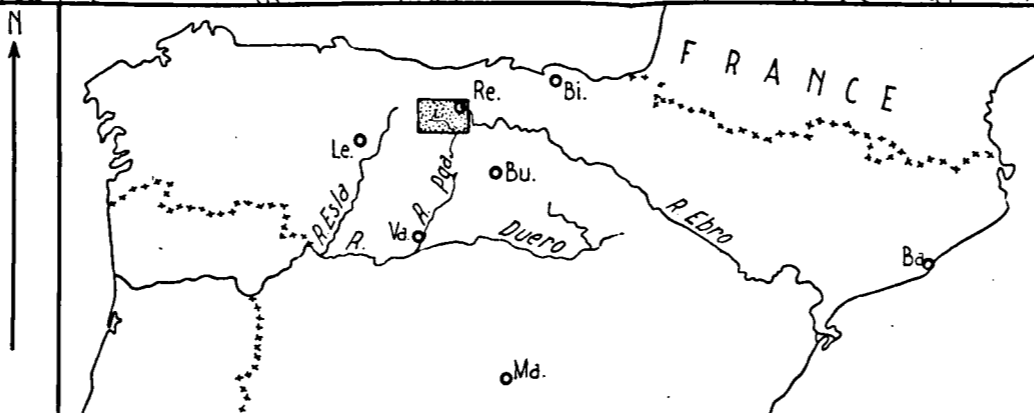


	Glacial cirque		Planation surfaces		mountain or hilltop
	river		lake		contour line, interval 100 m
	railway		main road		locality
	boundary of the investigated area				

FLUVIATILE TERRACES		
	HP	HR
	LH	
	HM	MR
	MM	LMR
	LM	
	HL	
	Lower terr.	Lower terr.
	Marsh	

	Pisuerga		Rubagón		Camesa
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Scale: 1:100,000
0 1 2 3 4 5 km



GEOMORPHOLOGICAL ASPECTS OF THE PISUERGA DRAINAGE AREA
IN THE CANTABRIAN MOUNTAINS

by J.J. Nossin

map 1