LAND SUITABILITY MAP

NATURAL RUBBER

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

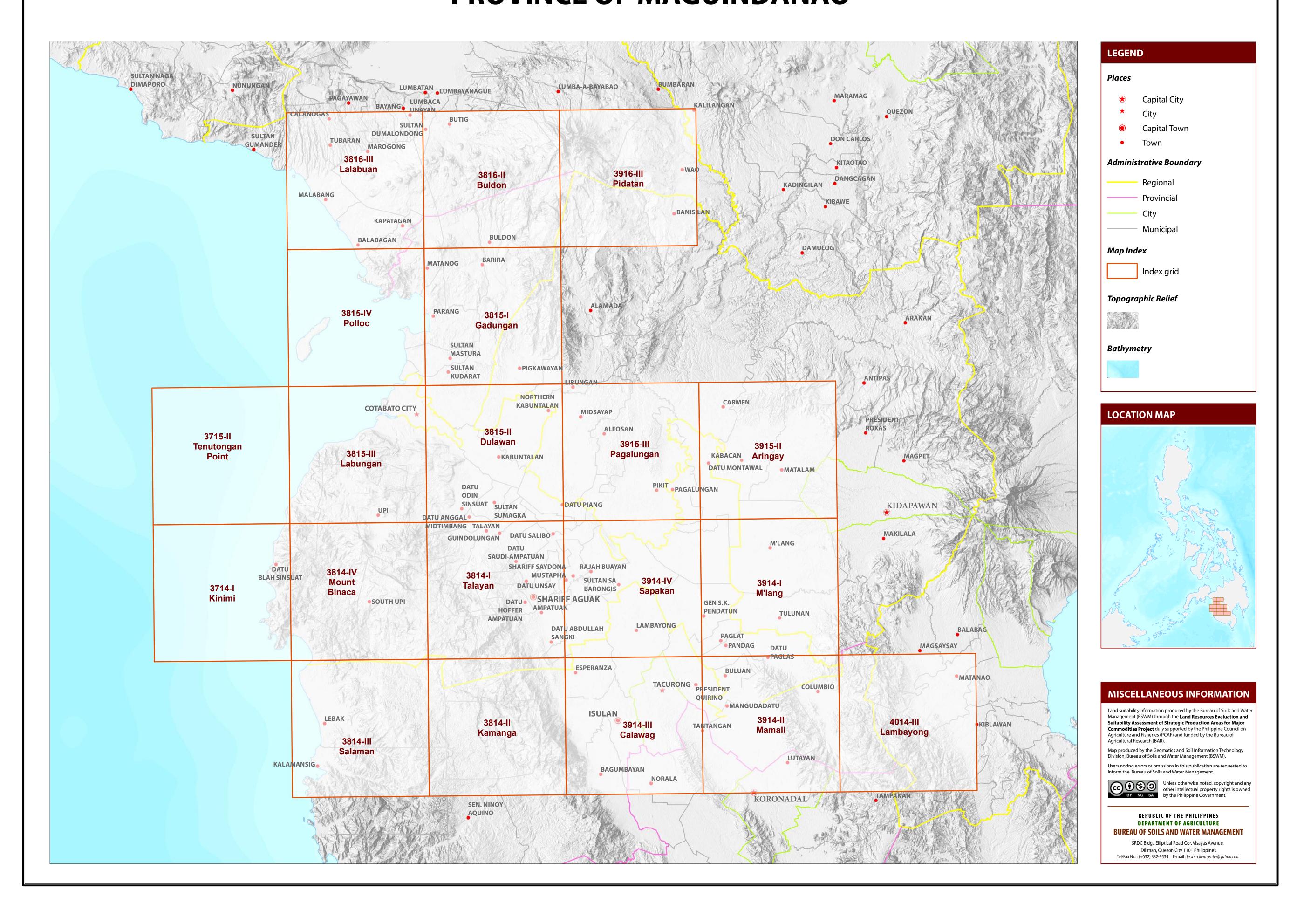
PROVINCE OF MAGUINDANAO





MAP INDEX

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF MAGUINDANAO



LAND SUITABILITY MAP FOR RUBBER

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF MAGUINDANAO, ARMM

EXTENT OF CHITARILITY FOR RURRER PRODUCTION BY MUNICIPALITY

				TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)						CONFLICT RESOLUTION (Ha)				TOTAL		
MUNICIPALITY	EXISTING RUBBER (Ha)		Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Cor S1	rn S2	Paddy rice, non-irrigated		Other crops		POTENTIAL EXPANSION AREA (Ha)		
AMPATUAN	S1	S2	S 3		S1 250	S2 57	31	39	S1 44	S2 1,239	1,834	1,234	31	S2	S1	S2	4.604
	-	-	-	-			-	105	44	1,239		-	-		-	-	4,696
BARIRA	-	-	-	-	2,850	6,534	-		186	1 000	972 665	403 690	-		-	-	10,864
BULDON	-	-	-	-	2,248	3,688	3	108	186	1,008		690	-		-	-	8,597
BULUAN DATH ARRIVA ALICANCIA	-	-	-	-	1,000	-	U	-	1	U	2,578	150	-		-	-	3,584
DATU ABDULLAH SANGKI	-	-	-	-	582	66	-	-	-	-	3,124	159	-	-	-	-	3,931
DATU ANGGAL MIDTIMBANG	-	-	-	-	864	87	- 10	2	-	6	357	37	-	-	-	-	1,353
DATU BLAH T. SINSUAT	-	-	-	-	1,916	1,166	13	206	49	953		78	-		-	-	4,438
DATU HOFFER AMPATUAN	-	-	-	-	189	2	-		17	1,207	114	417	-		-	_	1,946
DATU ODIN SINSUAT	-	-	-	-	2,747	1,007	60	1,969	31	4,343		1,599	-	-	-	-	12,347
DATU PAGLAS	-	-	-	-	449	73	2	41	337	1,359	2,847	142	-	-	-	_	5,252
DATU PIANG	-	-	-	-	694	21	60	84	-	-	1,234	17	-		-	-	2,110
DATU SALIBO	-	-	-	-	120	-	-	-	-		591	5	-		-	-	710
DATU SAUDI-AMPATUAN	-	-		-	196	15	13	140	20	64		2	-		-	_	1,806
DATU UNSAY	-	-	-	-	315	31	1	113	0	1,814		371	-	-	-	_	3,009
GEN. S.K. PENDATUN	-	-	-	-	1,343	-	-	-	-	-	1,051	-	-	-	-	_	2,394
GUINDULUNGAN	-	-	-	-	773	181	98	845	336	2,159		173	-	-	-	_	5,910
KABUNTALAN	-	-	-	-	609	4	168	-	-	-	1,080	0	-	-	-	-	1,862
MAMASAPANO	-	-	-	-	667	17	-	-	-	-	1,037	43	-	-	-	-	1,764
MANGUDADATU	-	-	-	-	269	109	11	54	17	151	428	11	-	-	-	-	1,050
MATANOG	-	-	-	-	1,208	3,796	0	123	-	-	102	310	-	-	-	-	5,539
NORTHERN KABUNTALAN	-	-	-	-	58	-	-	-	-	-	3,720	-	-	-	-	-	3,778
PAGAGAWAN	-	-	-	-	2,032	3	-	-	-	_	4,465	-	-	_	-	-	6,500
PAGALUNGAN	-	-	-	-	2,638	4	-	-	-	-	975	2	-	-	-	_	3,620
PAGLAT	-	-	-	-	573	-	-	-	-	-	934	9	-	-	-	_	1,515
PANDAG	-	-	_	-	821	27	1	12	1	11	1,834	3	-	-	-	_	2,709
PARANG	-	-	_	-	1,855	4,012	-	-	655	2,254	338	103	-	-	-	_	9,218
RAJAH BUAYAN	-	_	_	-	515	11	381	379	-	-	3,315	44	-	-	-	_	4,644
SHARIFF AGUAK	-	_	_	-	203	2	-	-	23	65	670	15	-	-	-	_	978
SHARIFF SAYDONA MUSTAPHA	_	_	_	-	285	60	265	557	_	-	2,156	10	-	_	-	_	3,332
SOUTH UPI	-	-	_	_	0	2,318	_	329	_	1,080	1	6,709	-	-	_	_	10,437
SULTAN KUDARAT	-	-	_	_	6,470	2,327	30	-	411	1,169	2,319	51	-	-	-	_	12,777
SULTAN MASTURA	_	-	_	_	2,167	273	-	-	273	649	· · ·	5	-	-	_	_	4,263
SULTAN SA BARONGIS	_	-	-	_	962		_	_		-	2,632	13	_	_	_	_	3,606
TALAYAN	<u> </u>	_	-	_	963	119	5	399	315	727	<u> </u>	900	_	_	_	_	4,753
TALITAY	<u> </u>	_	_	_	891	35		-	-	- , 2,	257	0	_	_	_	_	1,182
UPI	<u> </u>	_	_	_	1,207	3,803	20	340	63	3,242		5,675	_		_	_	14,925
Total Area (Ha)	-	_	<u> </u>	_	40,930	29,849	1,130	5,846	2,780	23,501	48,137	19,232	-	<u> </u>	_		171,405

Note: Delivery of rubber planting materials must be started on the onset of rainy season. *establishment of shade trees prior to planting of rubber.

AGRONOMIC REQUIREMENT OF RUBBER PRODUCTION

LAND UTILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE
	S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD, SPD	5.6 -7.2	high	none-slight	none-slight	none-few	<500	1000-2000	III, IV
Rubber Tree	S2	8 - 30	30 - 100	FSL, L, SiL, SL	PD,VPD	4.5 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1000	2001-4500	I, II, III
	S3	>30	<30	S, LS, CSL	ED	<4.5 - > 7.9	low	severe	severe	many	>1000	<1000 >4500	
·	•											· '	,

	\$3	>30	<30	S, LS, CSL	ED	<4.5 - > 7.9	low	severe	severe	many	>1000	>45	500	
SLOPE (%	%)		SOIL DR	AINAGE		SOIL REACT	ION (pH)		SOIL TEXT	ΓURE				
0 - 3	- level to gently sl	oping	ED	- excessively drained		< 4.5 - 6	extremely acid		Coarse			Fine		
3 - 8	- gently sloping to	undulating	WD	- well drained		4.5 - 5.0 - v	very strongly acid		S	- sand		SC	- sandy clay	7
8 - 18	- undulating to ro	ling	MWD	- moderately well dra	ined	5.1 - 5.5 - s	strongly acid		LS	- loamy sand		SiC	- silty clay	
18 - 30	- rolling to moder	ately steep	SPD	- somewhat poorly dr	ained	5.6 - 6.0 - r	medium acid		CSL	- coarse sandy loam		С	- clay	
30 - 50	- steep		PD	 poorly drained 		6.1 - 6.5 - s	slightly acid		SL	- sandy loam		HC	- heavy clay	7
> 50	- very steep		VPD	- very poorly drained		6.6 - 7.2 - r	neutral		Medium					
						7.3 - 7.8 - r	mildly alkaline		FSL	- fine sandy loam				
SOIL DEF	РТН (ст)		SURFAC	E IMPEDIMENT		7.9 - 8.4 - r	moderately alkaline		L	- loam				
0 - 30	- very shallow		ROCK OU	TCROPS		> 8.5 - 5	strongly alkaline		SiL	- silt loam				
30 - 50	- shallow		< 10%	- none - few					CL	- clay loam				
50 - 100	- moderately deep)	10 - 30%	- common					SiCL	- silty clay loam				
> 100	- deep to very dee	p	> 30%	- many					SCL	- sandy clay loam				

Rc3 - Many

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

T3 - Steep to very steep

ELEVATION	SOIL DRAINAGE
El2 - 500 - 1000m or 2000 - 2500m El3 - < 500m or > 2500m	D2 - Somewhat poorly drained to poorly drainedD3 - Very poorly drained or excessively drained
SLOPE/TOPOGRAPHY	SOIL TEXTURE
T2 - Undulating to moderately steep	Tc - Coarse texture

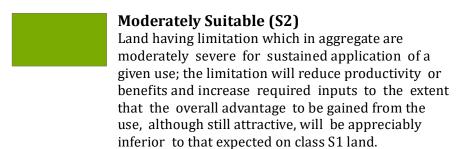
SOIL DEPTH Sh2 - Shallow to moderately deep (30 - 100cm) Sh3 - Very shallow (< 30cm)	SOIL EROSIONE2 - Moderate erosionE3 - Severe erosion
ROCK OUTCROPS Rc2 - Common	FLOODING F2 - Moderate seasonal flooding

- Severe seasonal flooding

SUITABILITY CLASSES:

Highly Suitable (S1) Land having no significant limitation to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.

Marginally Suitable (S3) Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.



Not Suitable / Not Relevant Land having limitations which may be surmountable in time but which cannot be corrected with existing knowledge at currently acceptable cost; the limitations are so severe as to preclude successful sustained use of the land in the given manner. Existing forest, shrubland greater than 18% slope, irrigated paddy rice and miscellaneous land types such as built up areas, roads, etc are considered as not relevant.

CLIMATE TYPE

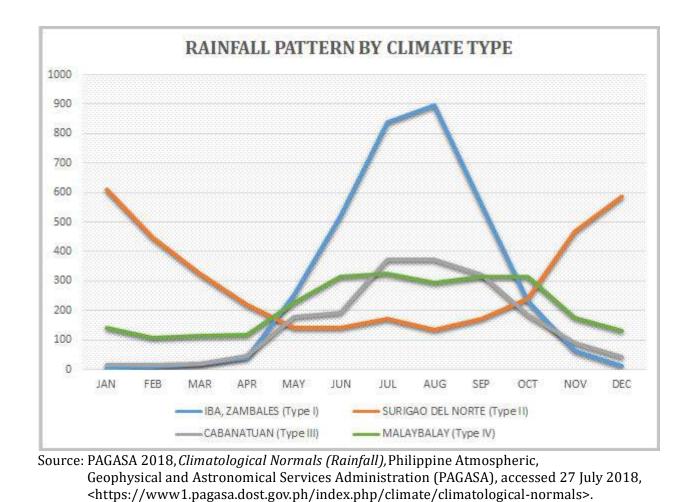
TYPE I: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.

TYPE III: No very pronounced maximum rain period, with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles Type I since it has a short dry season.

TYPE IV: Rainfall is more or less evenly distributed throughout the year. This type resembles Type II since it has no dry

Western part of Maguindanao is classified as climate Type IV and Eastern part is Type III.



18 T2-El2

19 T2-El2-E3

20 T2-El2-E3-Sh2-Rc2 **30** T3-E3

8 F3-D2

10 Sh2-Rc2

9 Sh2

CODE	LANDUSE					
2	Paddy rice, non-irrigated					
4	Corn					
116	Coconut					
126	Grassland, unmanaged					
134	Shrubs, unmanaged					
144	Falcata					

48 T3-El2-E3-Sh3-Rc3

49 T3-El3-E3-Sh3-Rc3

50 T3-El3

LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
El2	11	T2	21	T2-El2-E3-Sh2-Rc3	31	T3-E3-Rc2	41	T3-F3-D2
El2-E2-Sh2-Rc3	12	T2-E2-Sh2-Rc2	22	T2-El2-Sh2-Rc2	32	T3-E3-Sh2-Rc3	42	T3
El2-Sh2-Rc2	13	T2-E3	<i>23</i>	T2-El2-Sh2-Rc3	33	T3-E3-Sh3-Rc2	43	Т3-Е3
El3	14	T2-E3-Rc2	24	T2-El3-E3-Sh2-Rc2	34	T3-E3-Sh3-Rc3	44	T3-E3-Rc3
El3-Sh2-Rc2	15	T2-E3-Rc3	<i>25</i>	T2-El3-E3-Sh2-Rc3	35	T3-E12	45	T3-E3-Sh3-Rc3
F2-D2	16	T2-E3-Sh2-Rc2	26	T2-El3-Sh2-Rc2	36	T3-El2-E3	46	T3-El2
F2-Tc	17	T2-E3-Sh2-Rc3	27	T2-F2-D2	37	T3-El2-E3-Sh3-Rc2	47	T3-El2-E3

38 T3-El2-E3-Sh3-Rc3

39 T3-El3-E3-Sh3-Rc2

40 T3-El3-E3-Sh3-Rc3

28 T2-F3-D2

29 T3

