UNIVERSITAT DE BARCELONA

El volcanismo calcoalcalino y peralcalino del suroeste de Cerdeña (Italia) y mineralizaciones asociadas

Ariana Carrazana Di Lucia

VOLCANOSTRATIGRAPHIC COLUMNS, SAN PIETRO ISLAND

References

- Ignimbrites
- Piroclastic surge and ash flow
- Welded ignimbrite
- Lava-dome
- Lava-dome (breccia)
- Columnar disjunction
- Ash fall
- Pumices
- Flattened pumices
- Accidental lithic fragments
- Obsidian with perlitic texture
- Lithic-rich pipes
- Burrows
- UC04-A Subunit legend
- Magmatic folds hosting Mn
- Mn nodules
- Mn stockworks
- Mn breccias
- Pervasive Mn dissemination
- Jasper and massive Mn (manto)
- Mine

LCO2 subunit reference

6	Ignimbrite (pervasive Mn dissemination)
5	Ash flow with accretional lapilli
4	Epiclastic layer (lithic rich with LCO1-D fragment)
3	Ash flow with white pumice (Mn impregnation)
2	Pyroclastic Surge (with jasper fragments)
1	Ash fall

ANEXO I: Capítulo 6: Columnas litoestratigáficas con alta resolución gráfica. Para más detalles ver explicación en el capítulo de referencia (apartado 6.5.2).

Annex I: Chapter 6: Volcanostratigraphic Columns. See explanations in Section 6.5.2.

GEOLOGICAL MAP AND VOLCANOSTRATIGRAPHIC COLUMNS, SAN PIETRO ISLAND

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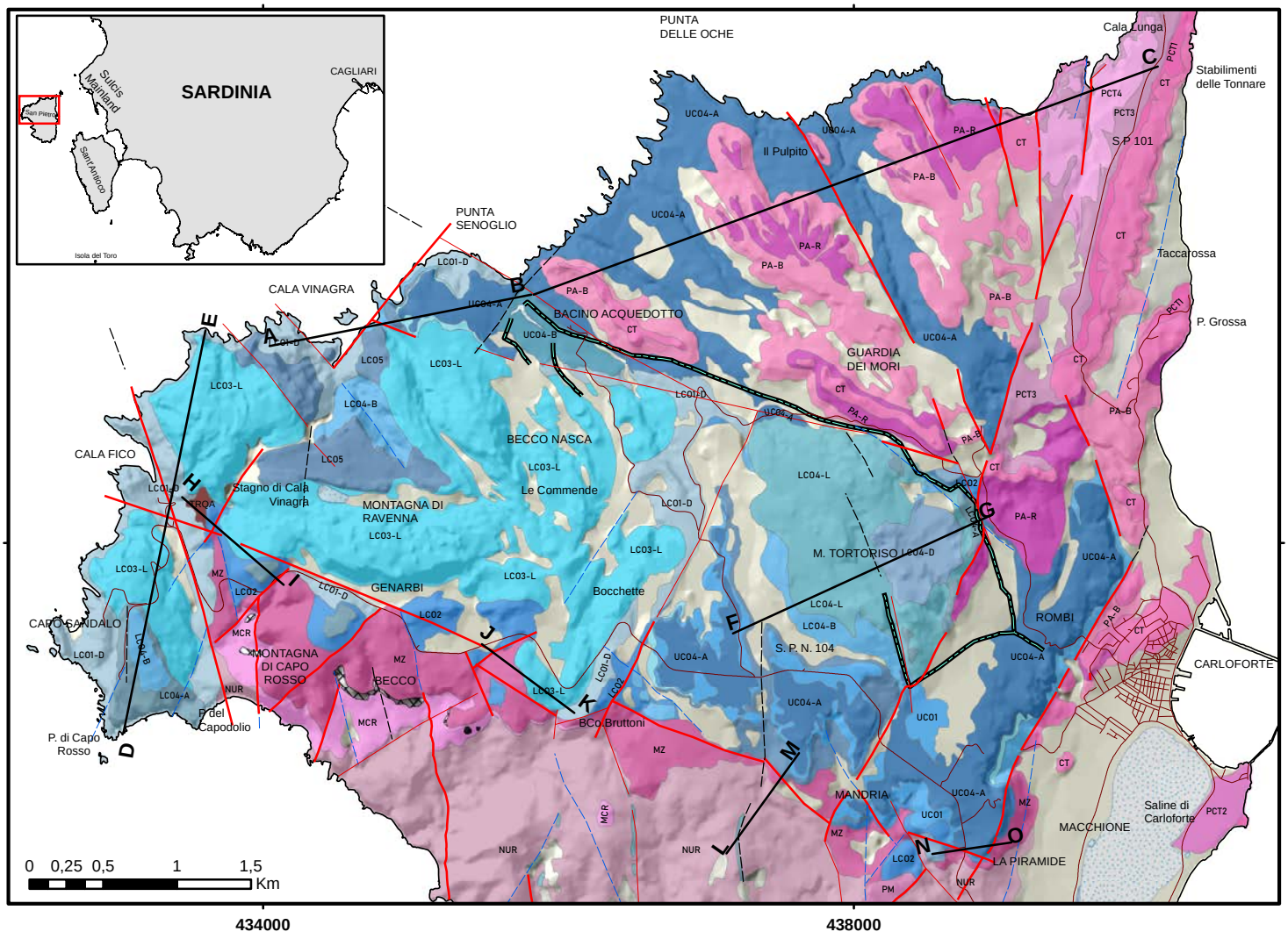


Quaternary Materials
- Holocene-Pleistocene Sediments

Lithostratigraphic Columns Correlation

Symbols
- Roads and Towns
- Mining dumps

Hydrography
- Aqueduct
- Natural and Artificial lakes
- Salt marsh

Structures
- Main Normal fault
- Normal fault
- Inferred Normal fault
- Hypothetic Normal fault

Neogen Volcanic Rocks

Upper Rhyolite Series
Unit, Subunit, Formal Name
- PM, PM, Punta Mingosa
- PCT, PCT5, Post Calasetta
- PCT, PCT4, Post Calasetta
- PCT, PCT3, Post Calasetta
- PCT, PCT2, Post Calasetta
- PCT, PCT1, Post Calasetta
- CT, CT, Calasetta
- PA, PA-R, Paringianu
- PA, PA-B, Paringianu

Upper Comendite Series
Unit, Subunit, Formal Name
- AQD, UCO4-B, Acquedotto
- CF, UCO4-A, Carloforte
- MU, UCO1, Monte Ulmus

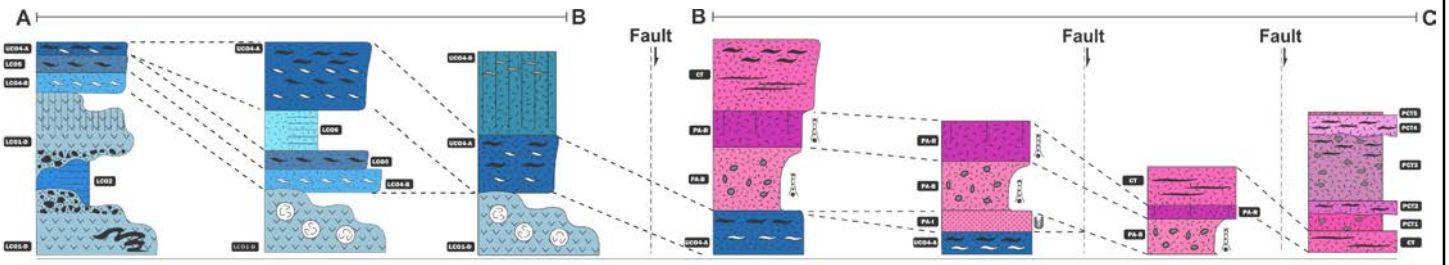
Lower Comendite Series
Unit, Subunit, Formal Name
- CO, LCO6, Cala Lunga
- CO, LCO5, Ventrischio
- CO, LCO4-B, Punta Senoglio
- PT, LCO4-A, Capo Sandalo
- PT, LCO4-D, Monte Tortoriso
- PT, LCO4-L, Monte Tortoriso
- CO, LCO3, Nuraghe de Gianni Efisi
- CO, LCO3-L, Ravenna-Becco-Nasca
- CO, LCO2, Genarbi
- CO, LCO1-D, Cala Vinagra

Trachyte Series
Unit, Subunit, Formal Name
- TRQA, TRQA, Trachyandesite SE Cala Fico

Middle Rhyolite Series
Unit, Subunit, Formal Name
- MZ, MZ, Matzaccara
- MCR, MCR, Montagna di Capo Rosso
- NUR, NUR, Nuraxi

Lithostratigraphic columns references

Ignimbrites	Pumices	Magmatic folds hosting Mn
Piroclastic surge and ash flow	Flattened pumices	Mn nodules
Welded ignimbrite	Accidental lithic fragments	Mn stockworks
Lava-dome	Obsidian with perlitic texture	Mn breccias
Lava-dome (breccia)	Lithic-rich pipes	Pervasive Mn dissemination
Columnar disjunction	Burrows	Jasper and massive Mn (manto)
Ash fall	UCO4-A Subunit legend	Mine



Simplified and schematic stratigraphic columns (not to scale) showing the volcanic succession in N-NW of the San Pietro Island, from lower comendite series to upper rhyolite series. Other columns and correlations are presented in Chapter 6.

GEOLOGICAL MAP OF THE VOLCANIC UNITS, SAN PIETRO ISLAND, SW SARDINIA, ITALY

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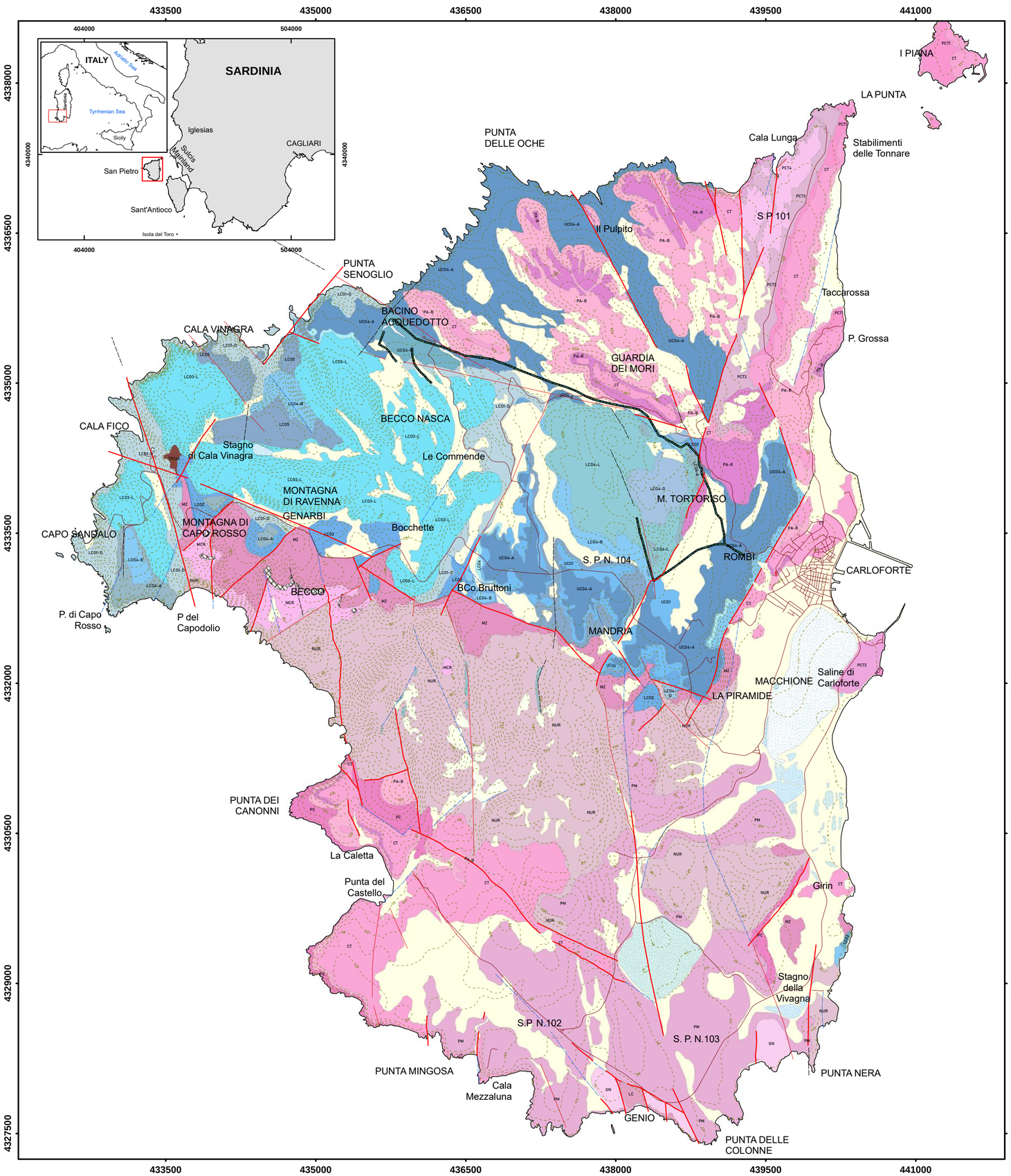
UNIVERSITAT DE BARCELONA



Lithostratigraphic References

Quaternary Post-Volcanic Materials

- Sediments-Holocene
- Sediments-Pleistocene

Neogene (Miocene) Volcanic Materials

UNIT, SUBUNIT, FORMAL NAME

Upper Rhyolites Series

- GN, GN, Geniò
- LC, LC, Le Colonne
- PM, PM, Punta Mingosa
- PCT, PCT5, Post Calasetta
- PCT, PCT4, Post Calasetta
- PCT, PCT3, Post Calasetta
- PCT, PCT2, Post Calasetta
- PCT, PCT1, Post Calasetta
- CT, CT, Calasetta
- PA, PA-R, Paringianu
- PA, PA-B, Paringianu

Upper Comendites Series

- AQD, UCO4-B, Acquedotto
- CF, UCO4-A, Carloforte
- MU, UCO3-B, Monte Ulmus
- MU, UCO3-A, Monte Ulmus
- MU, UCO1, Monte Ulmus

Lower Comendites Series

- CO, LCO6, Cala Lunga
- CO, LCO5, Ventrischio
- CO, LCO4-B, Punta Senoglio
- PT, LCO4-A, Capo Sandalo
- PT, LCO4-D, Monte Tortoriso
- PT, LCO4-L, Monte Tortoriso
- CO, LCO3, Nuraghe de Gianni Efisi
- CO, LCO3-L, Ravenna-Becco-Nasca
- CO, LCO2, Genarbi
- CO, LCO1-D, Cala Vinagra

Trachyte Series

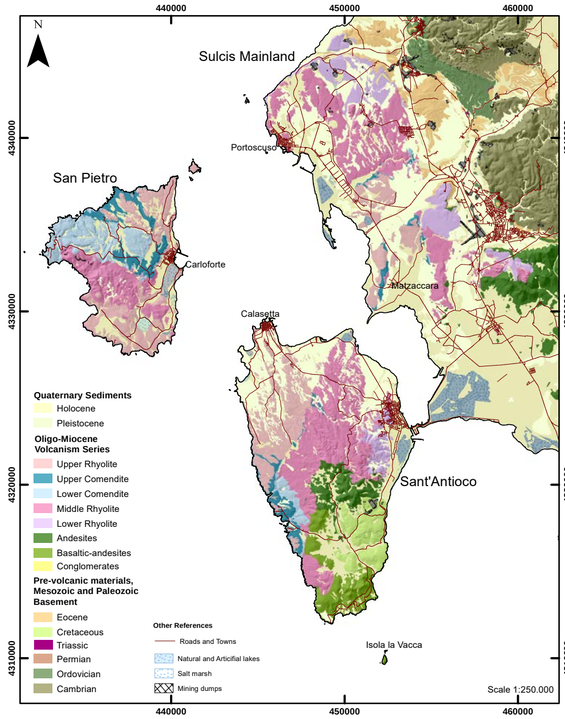
- TRQA, TRQA, Trachyandesite SE Cala Fico

Middle Rhyolites Series

- MZ, MZ, Matzaccara
- MCR, MCR, Montagna di Capo Rosso
- NUR, NUR, Nuraxi
- PC, PC, Punta dei Cannoni

0 0,5 1 2 Km

Graphic Scale



Map of the Cenozoic Volcanism of the W Sector of Sulcis (Sardinia)

SAN PIETRO MAP INFORMATION

Projection WGS84, UTM, Zone 32S. Scale: 1:30.000

For the lithostratigraphic interpretation, 165 cartographic control points and 946 petro-geochemical samples were used.

Direction: Domingo Gimeno Torrente*

Colaborations: Zoraida Roselló Espuny and Guillem Gisbert Pinto.

GIS dataset (modified) from SardegnaGeoportale: http://www.sardegnageoportale.it/

Previous Geological Maps:

a) Novarese V., Tarrico M., Pullé G., 1933. I. di S.Pietro, Capo Sperone. Foglio 232-232 bis dell'I.G.M, R. Ufficio Geologico. Scala 1:100.000. Roma.

b) Garbarino C., Lirer L., Maccioni L., Salvadori I., et al. 1990. Carta Vulcanologica dell'Isola di S. Pietro (Sardegna). Ente Minerario Sardo. Scala 1:25.000. S.E.L.C.A, Firenze.

c) Botta P., Salvadori I., Garbarino C., Orrù P.E, Rizzo R., et al. 2015. Progetto CARG-ISPRA. Carta 1:50.000 dell'I.G.M. Isola di S. Pietro. Foglio 563. No Consegna.

Symbols

- Topographic contours (10 m)
- Roads and Towns
- Mining dumps

Hydrography

- Aqueduct
- Natural and Artificial lakes
- Salt marsh

Structures

- Main Normal fault
- Normal fault
- Inferred Normal fault
- Hypothetic Normal fault

* Departament de Mineralogia, Petrologia i Geología Aplicada. Facultat de Ciències de la Terra. Universitat de Barcelona. C/Martí i Franquès s/n. 08028. Barcelona. Spain

GEOLOGICAL MAP OF THE VOLCANIC UNITS, SANT'ANTIOCO ISLAND, SW SARDINIA, ITALY

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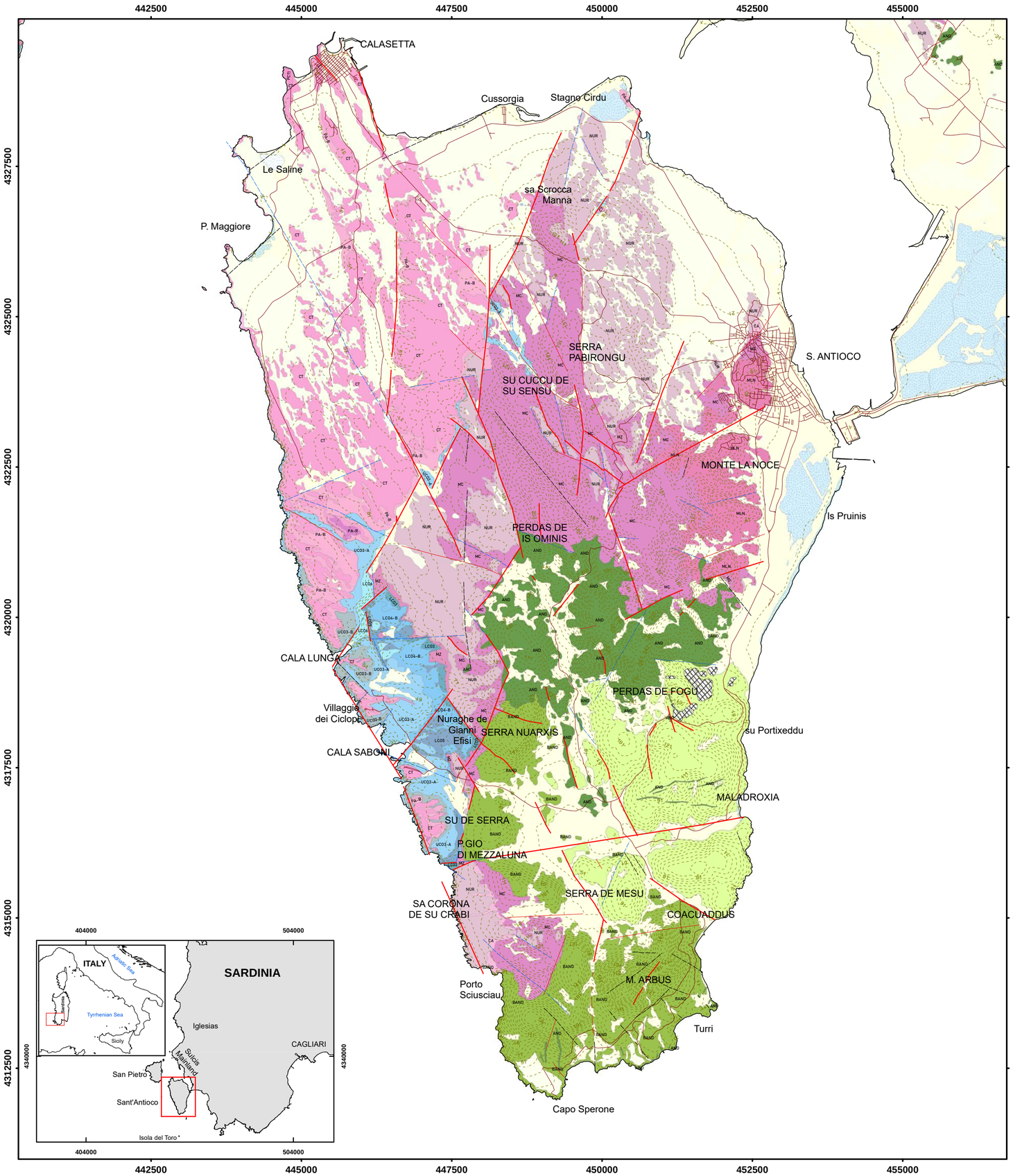


Lithostratigraphic References

Quaternary Post-Volcanic Materials

- Sediments-Holocene
- Sediments-Pleistocene

Neogene Volcanic Materials

UNIT, SUBUNIT, FORMAL NAME

Upper Rhyolites Series

- PCT, PCT4, Post Calasetta
- PCT, PCT3, Post Calasetta
- PCT, PCT2, Post Calasetta
- PCT, PCT1, Post Calasetta
- CT, CT, Calasetta
- PA, PA-R, Paringianu
- PA, PA-B, Paringianu

Upper Comendites Series

- MU, UCO3-B, Monte Ulmus
- MU, UCO3-A, Monte Ulmus
- MU, UCO2, Monte Ulmus
- MU, UCO1, Monte Ulmus

Lower Comendites Series

- CO, LCO6, Cala Lunga
- CO, LCO5, Ventrischio
- CO, LCO4-B, Punta Senoglio
- CO, LCO3, Nuraghe de Gianni Efisi
- CO, LCO2, Genarbi

Middle Rhyolites Series

- MZ, MZ, Matzaccara
- NUR, NUR, Nuraxi
- CA, CA, Conca is Angius
- MC, MC, Monte Crobu

Lower Rhyolites Series

- MLN, MLN, Monte la Noce
- CM, CM, Corona Maria

Andesites Series

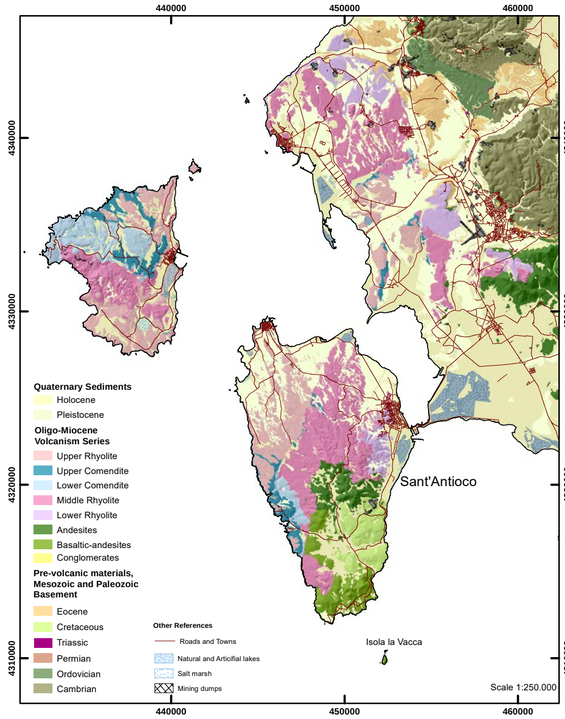
- AND, AND, Andesites
- BAND, BAND, Basaltic-andesites

Mesozoic Basement

- Urgonian Facies

0 0,5 1 2 3 Km

Graphic Scale



Map of the Cenozoic Volcanism of the W Sector of Sulcis (Sardinia)

SANT'ANTIOCO ISLAND MAP INFORMATION

Projection WGS84, UTM, Zone 32S. Scale: 1:50.000

For the lithostratigraphic interpretation, 165 cartographic control points and 946 petro-geochemical samples were used.

Direction: Domingo Gimeno Torrente*

Colaborations: Natalia Díaz Peñalver, Anna Rodríguez López, Laia Ramón Sala and Guillem Gisbert Pinto.

GIS dataset (modified) from SardegnaGeoportale: http://www.sardegnageoportale.it/

Previous Geological Maps:

a) Novarese V., Tarrico M., Pullé G., 1933. I. di S.Pietro, Capo Sperone. Foglio 232-232 bis dell'I.G.M, R. Ufficio Geologico. Scala 1:100.000. Roma.

b) Maccioni L., Marchi M., Assorgia A. 1990. Carta Geopetrografica dell'Isola di S. Antioco (Sardegna). Scala 1:25.000. S.E.L.C.A, Firenze.

c) Salvadori I., Carmignani L., Ulzega A., Pasci S., Orrù P.E, et al. 2012. Progetto CARG-ISPRA. Carta 1:50.000 dell'I.G.M. Carbonia. Foglio 564. Consegna_v1.003_2012Ottobre12.

Symbols

- Topographic contours (10 m)
- Roads and Towns
- Mining dumps

Hydrography

- Natural and Artificial lakes
- Salt marsh

Structures

- Main Normal fault
- Normal fault
- Inferred Normal fault
- Hypothetic Normal fault

* Departament de Mineralogia, Petrologia i Geología Aplicada. Facultat de Ciències de la Terra. Universitat de Barcelona. C/Martí i Franquès s/n. 08028. Barcelona. Spain

GEOLOGICAL MAP OF THE VOLCANIC UNITS, SULCIS MAINLAND, SW SARDINIA, ITALY

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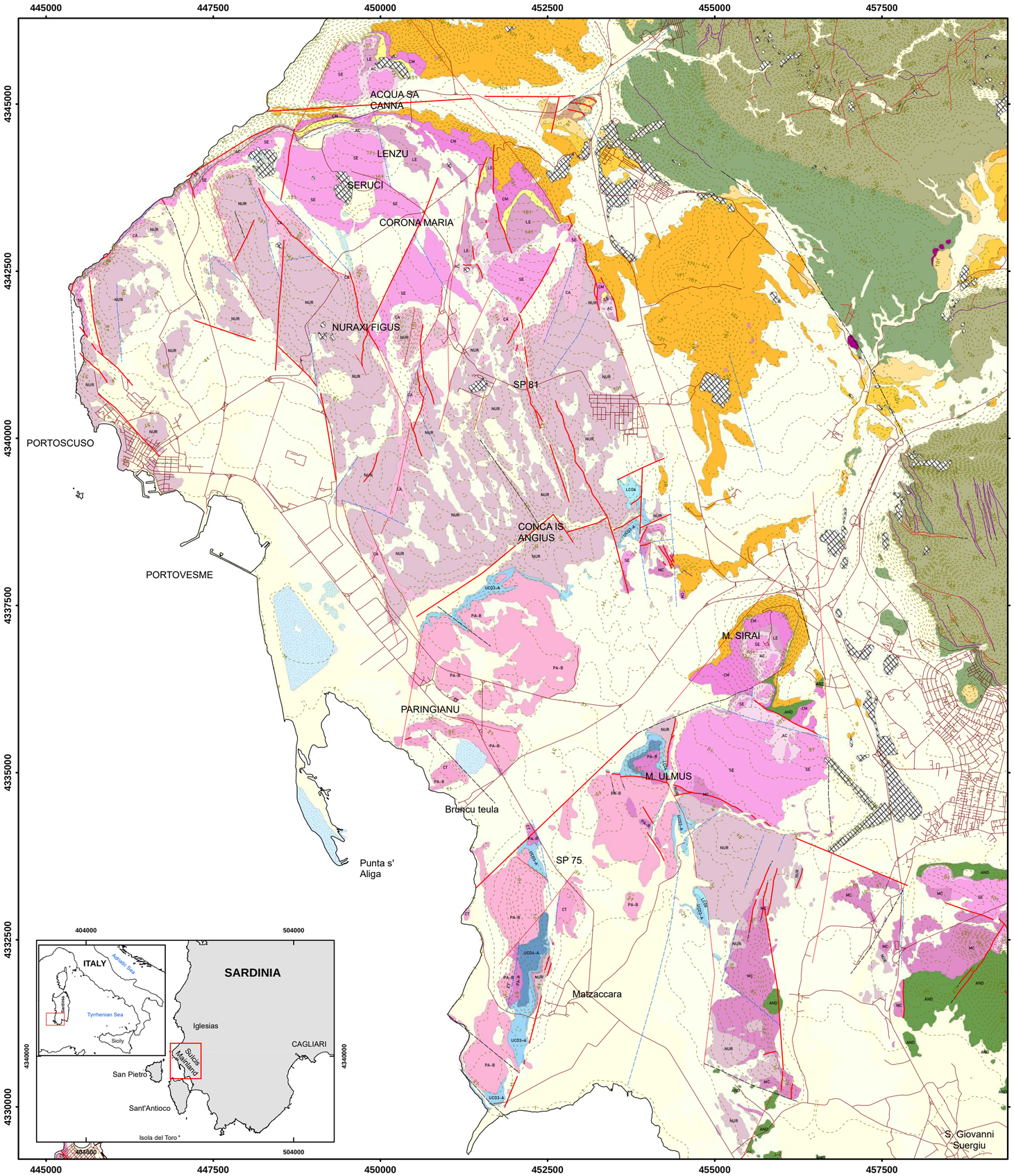


Lithostratigraphic References

Quaternary Post-Volcanic Materials

- Sediments-Holocene
- Sediments-Pleistocene

Neogene Volcanic Materials

UNIT, SUBUNIT, FORMAL NAME

Upper Rhyolites Series

- CT, CT, Calasetta
- PA, PA-R, Paringianu
- PA, PA-B, Paringianu

Upper Comendites Series

- CF, UCO4-A, Carloforte
- MU, UCO3-A, Monte Ulmus
- MU, UCO1, Monte Ulmus

Lower Comendites Series

- CO, LCO6, Cala Lunga
- CO, LCO4-B, Punta Senoglio
- PT, LCO4-A, Capo Sandalo

Middle Rhyolites Series

- MZ, MZ, Matzaccara
- NUR, NUR, Nuraxi
- CA, CA, Conca is Angius
- MC, MC, Monte Crobu

Lower Rhyolites Series

- SE, SE, Seruci
- AC, AC, Acqua sa Canna
- LE, LE, Lenzu
- CM, CM, Corona Maria

Andesites Series

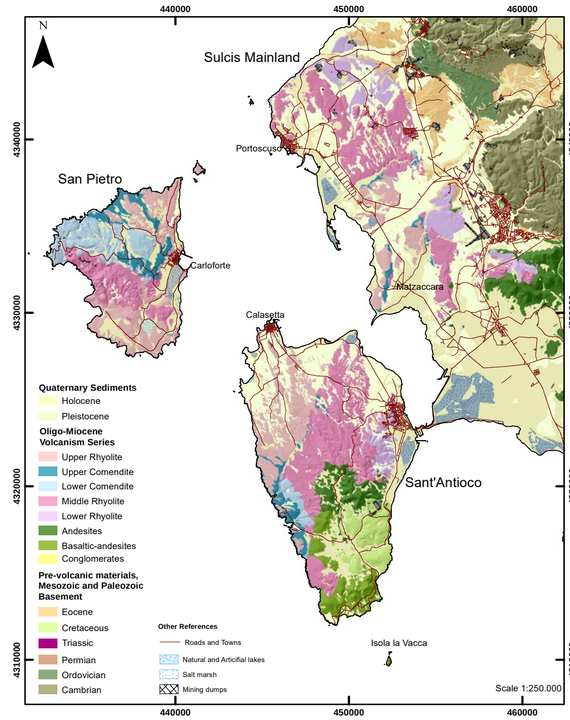
- AND, AND, Andesites
- BAND, BAND, Basaltic-andesites
- Conglomerates

Paleogene Pre-Volcanic Materials

- Cixerri Fm.
- Lignitifero Fm.
- Miliolitico Fm.

Mesozoic and Paleozoic Basement

- Muschelkalk and Keuper
- Guardia Pisano Fm.
- Post-Sardic Unconformity
- Pre-Sardic Unconformity



Map of the Cenozoic Volcanism of the W Sector of Sulcis (Sardinia)

SULCIS MAINLAND MAP INFORMATION

Projection WGS84, UTM, Zone 32S. Scale: 1:45.000

For the lithostratigraphic interpretation, 165 cartographic control points and 946 petro-geochemical samples were used.

Direction: Domingo Gimeno Torrente*

Colaborations: Guillem Gisbert Pinto.

GIS dataset (modified) from SardegnaGeoportale: http://www.sardegnageoportale.it/

Previous Geological Maps:

a) Novarese V., Tarrico M., Pullé G., 1933. I. di S.Pietro, Capo Sperone. Foglio 232-232 bis dell'I.G.M, R. Ufficio Geologico. Scala 1:100.000. Roma.

b) Assorgia A., Fadda A., Ottelli, L. (eds). 1994. Carta Geologica del bacino carbonifero del Sulcis (Sardegna Sud Occidentale). CARBOSULCIS S.p.A. Escala 1:25.000, Selca Editrice, Firenze.

c) Salvadori I., Carmignani L., Ulzega A., Pasci S., Orrù P.E, et al. 2012. Progetto CARG-ISPRA. Carta 1:50.000 dell'I.G.M. Carbonia. Foglio 564. Consegna_v1.003_2012Ottobre12.

d) Botta P., Pertusati P.C., Salvadori L., Pascucci V., Pasci S., Orrù P.E, et al. Progetto CARG-ISPRA. Carta 1:50.000 dell'I.G.M. Iglesias. Foglio 555. Consegna 20 Febbraio 2015.

Symbols

- Topographic contours (10 m)
- Roads and Towns
- Mining dumps

Hydrography

- Natural and Artificial lakes

Structures

- Main Normal fault
- Normal fault
- Inferred Normal fault
- Hypothetic Normal fault
- Reverse fault

0 0,5 1 2 3 Km

Graphic Scale

* Departament de Mineralogia, Petrologia i Geología Aplicada. Facultat de Ciències de la Terra. Universitat de Barcelona. C/Martí i Franquès s/n. 08028. Barcelona. Spain

Anexo I. Tabla 16.1 [6.3]. Columna volcanoestratigráfica generalizada para el SW de Cerdeña (tabla 6.3 del capítulo 6, con alta resolución gráfica).

Annex I: Table 16.1 [6.3]: Summary of the volcanostratigraphic column for SW Sardinia (high-resolution table). See more explanations in chapter 6.

Period / Epoch	Stratigraphic Series	Stratigraphy Unit	Formal Name	Locality Type	Main Area	MAP CODE	Stratigraphy and Geochemistry Subunit	Description	Rock Type	Magmatic Series	Geodinamic Context	Thickness (meter)		
												SP[1]	SA[1]	SU[2]
Quaternary / Holocene and Pleistocene	**SEDIMENTS**	**SED**	-	-	-	SED	SED	colluvial, alluvial, beach, wind, lacustrine and palustrine sediments, anthropic deposits.	Sediments					
Neogene / Miocene	**UPPER RHYOLITES (URH)**	**GN**	GENIÒ	GENIÒ	SAN PIETRO	GN	GN	moderately welded ash flow and intercalated ash fall lithofacies.	Rhyolite	ALKALINE	ANOROGENIC	10	no outcrops	no outcrop
		LC	LE COLONNE	PUNTA DELLE COLONNE	SAN PIETRO	LC	LC	moderately consolidated ash flow with a strong argillic alteration.	Rhyolite			10	no outcrop	no outcrop
		PM	PUNTA MINGOSA	PUNTA MINGOSA	SAN PIETRO	PM	PM	moderately welded violet-red ignimbrite (top), and poorly welded grey ignimbrite (bottom).	Rhyolite			10-50	no outcrop	no outcrop
		PCT	POST CALASETTA	LA PUNTA-LA TONNARA	SAN PIETRO	PCT5	PCT5	white ash flow with incipient eutaxitic texture.	Rhyolite			1-3	no outcrop	no outcrop
						PCT4	PCT4	rheomorphic greyish ignimbrite (ranging to purple in a blister level) with big pumices (dm to m-size).				3-5	2	no outcrop
						PCT3	PCT3	grey upper breccia with brown pumices (cm to dm-size) and juvenile magmatic components (red drops). Accidental lithics are frequent.				4-7	2	no outcrop
						PCT2	PCT2	moderately welded red ignimbrite with grey and white pumices. Accidental lithics from CT units.				2-10	2	no outcrop
						PCT1	PCT1	grey lower breccia with accidental lithics and juvenile magmatic components (red drops).				3	3	no outcrop
		CT	CALASETTA*	CALASETTA	SANT'ANTIOCO	CT	CT	densely welded and eutaxitic ignimbrite. High porphyricity.	Rhyolite			10	15	5
							CT-v	black basal vitrophyre.				1,5-2	3	0,5-1
		PA	PARINGIANU	PUNTA DELLE OCHE	SAN PIETRO	PA-R	PA-R	moderately to densely welded pink ignimbrite, elutriation vertical pipes are frequent.	Rhyolite			5-7	3-5	3
						PA-B	PA-B	white massive lapilli-tuff with elutriation vertical pipes. Accidental lithics fragments are very common.				7-10	5-10	40-60
							PA-I	finely stratified crystal-rich ash fall and flow beds, debris flow and epiclastic deposits with sedimentary structures (burrows and pisoliths).				3-5	5-7	unknown
	UPPER COMENDITES (UCO)	**AQD**	ACQUEDOTTO	ACQUEDOTTO	SAN PIETRO	UCO4-B	UCO4-B	greenish grey massive ignimbrite, densely welded and with pronounced columnar disjunction.	Rhyolite	PERALKALINE		5-10	no outcrop	no outcrop
		CF	CARLOFORTE	MANDRIA	SAN PIETRO	UCO4-A	UCO4-A	densely welded ignimbrite with black, red, white and brown pumices. Big (dm to m-sized) pumices on top. Highly marked eutaxitic texture.	Comendite			20-30	no outcrop	10-15
		MU	MONTE ULMUS	SU DE SERRA	SANT'ANTIOCO	UCO3-B	UCO3-B	massive ignimbrite with flat-bombs, flattened and unflattened pumice and calc-silicate xenoliths. Vesicles in pumice are highly silicified. Eutaxitic texture are common.	Comendite			no outcrop	5-10	no outcrop
				CALA SABONI		UCO3-A	UCO3-A	grey rheomorphic and eutaxitic ignimbrite with mafic minerals and scarce pumices.				no outcrop	30	20
						UCO2	UCO2	densely welded pink ignimbrite with scarce pumices.				2	2	2
						UCO1	UCO1-C	pink basal vitrophyre with abundant calc-silicate xenoliths.				1-4	1-4	1-4
							UCO1-B	brown basal vitrophyre with abundant calc-silicate xenoliths.				0,5	0,5	0,5
							UCO1-A	black basal vitrophyre with abundant calc-silicate xenoliths.				0,5-1	0,5-1	0,5-1
	LOWER COMENDITES (LCO)	**CO**	COMENDITES	CALA LUNGA	SANT'ANTIOCO	LCO6	LCO6	white ignimbrites (several flows) with ash-sized levels. Some lithofacies are rheomorphic lava-like, and others are proximal lithic breccias. Also are common accretionary lapilli (cm-size) towards the top of the ash flow unit.	Comendite			3-4	4-5	3
				VENTRISCHIO	SAN PIETRO	LCO5	LCO5	greenesh brown moderately welded ignimbrites with black pumices.				4-7	5-7	4
				PUNTA SENOGLIO	SAN PIETRO	LCO4-B	LCO4-B	green densely welded and eutaxitic ignimbrites whit black pumices.				5-10	10-15	2-4
		PT	PANTELLERITES	CAPO SANDALO	SAN PIETRO	LCO4-A	LCO4-A	green moderate to densely welded ignimbrites with white pumices.	Pantellerite			5	unknown	no outcrop
				M. TORTORISO		LCO4-D	LCO4-D	grey-pink dome (by oxidation mafic minerals) and dikes.				30-50	no outcrop	no outcrop
						LCO4-L	LCO4-L	grey-green lava flow with abundant mafic minerals.				30-50	no outcrop	no outcrop
		CO	COMENDITES	NURAGHE DE GIANNI EFISI	SANT'ANTIOCO	LCO3	LCO3	red densely welded ignimbrites.	Comendite			2-4	5-7	no outcrop
				RAVENNA-BECCO-NASCA	SAN PIETRO	LCO3-L	LCO3-L	domes and lava-flows with front flow folded and columnar disjunction in vent areas.				50-70	no outcrop	50
				GENARBI		LCO2	LCO2	ash fall, fine to medium pyroclastic surge, epiclastic rework beds, ignimbrites with different welding. The accretionary lapilli towards the top of the cooling unit are frequent.				10-20	7-10	2
				CALA VINAGRA		LCO1-D	LCO1-D	dome, autobrecciated domes and lava-dome flows.				20	no outcrop	no outcrop
	TRACHYTES (TRQ)	**TRQA**	TRACHYANDESITE OF CALA FICO SE SECTOR	CALA FICO	SAN PIETRO	TRQA	TRQA	dark brown lava-dome/laccolith.	Trachyandesite	TRANSITIONAL	TRANSITIONAL	20	no outcrop	no outcrop
	MIDDLE RHYOLITES (MRH)	**MZ**	MATZACCARA	LA TONNARA LA PIRAMIDE	SANT'ANTIOCO SAN PIETRO	MZ	MZ	ash fall and ignimbrites with variable welding. Bronze color biotite is a distinctive attribute of this unit.	Rhyolite	CALC-ALKALINE K-RICH TO SHOSHONITIC		25-50	25	10
		MCR	MONTAGNA DI CAPO ROSSO	BECCO-MONTAGNA DI CAPO ROSSO	SAN PIETRO	MCR	MCR	lava flow and moderately welded porphyritic ignimbrite. Lithic-rich.	Rhyolite			80	no outcrop	no outcrop
		NUR	NURAXI	PUNTA NERA	SAN PIETRO	NUR	NUR-p2	moderated welded ignimbrite with dm to m size pumices.	Rhyolite			>100	>100	>100
							NUR-p1	moderate welded ignimbrite with cm-size pumices.						
				SA CORONA DE SU CRABI	SANT'ANTIOCO		NUR-r	rheomorphic ignimbrite.						
							NUR-g	grey ash flow.						
				NURAXI FIGUS	ENTROTERRA SULCITANO		NUR-t	densely welded red ignimbrite. High porphyricity.						
							NUR-vr	pink basal vitrophyre.						
							NUR-vn	black basal vitrophyre.						
							NUR-vp	crystal-rich basal layer and black perlitic basal vitrophyre.						
		CA	CONCA IS ANGIUS	CONCA IS ANGIUS	ENTROTERRA SULCITANO	CA	CA	poorly to slightly welded ignimbrites (three main flows), degassing pipe is frequent. Abundant accidental lithic fragments.	Rhyolite			no outcrop	>20	30-50
		MC	MONTE CROBU	PERDA DE IS OMINIS	SANT'ANTIOCO	MC	MC-p	densely welded and eutaxitic brown ignimbrite with grey and black variable sizes pumices (cm-m).	Rhyolite		OROGENIC	no outcrop	>150	>50
							MC-g	grey moderately welded ignimbrite with mafic minerals.				no outcrop		
							MC-vr	pink basal vitrophyre.				no outcrop		
							MC-vn	black basal vitrophyre.				no outcrop		
		PC	PUNTA DEI CANNONI	PUNTA DEI CANONNI	SAN PIETRO	PC	PC	highly prophyritic and welded eutaxitic ignimbrite. Several flows.	Rhyolite			10	unknown	unknown
							PC-v	black basal vitrophyre.						
	LOWER RHYOLITES (LRH)	**MLN**	MONTE LA NOCE	MONTE LA NOCE	SANT'ANTIOCO	MLN	MLN	massive ash flow, densely welded ignimbrite and lava flow.	Rhyolite			no outcrop	80-100	no outcrop
							MLN-v	black basal vitrophyre.				no outcrop		
		SE	SERUCI	SERUCI	ENTROTERRA SULCITANO	SE	SE	densely welded and eutaxitic ignimbrite with basal vitrophyre.	Rhyolite			no outcrop	no outcrop	20-40
		AC	ACQUA SA CANNA	AQCUA SA CANNA	ENTROTERRA SULCITANO	AC	AC	poorly welded ignimbrite. Several flows.	Dacite			no outcrop	no outcrop	20-30
		LE	LENZU	LENZU	ENTROTERRA SULCITANO	LE	LE	densely welded and eutaxitic ignimbrite with basal vitrophyre. Big pumices (top).	Rhyolite			no outcrop	no outcrop	7-10
		CM	CORONA MARIA	CORONA MARIA	ENTROTERRA SULCITANO	CM	CM	variable welded ignimbrite with basal vitrophyre.	Dacite			no outcrop	no outcrop	20-40
	ANDESITES (AND)	**AND**	ANDESITES	PERDAS DE FOGU	SANT'ANTIOCO	AND	AND	lava flow, domes, dikes and breccias.	Andesites			no outcrop	>50	>50
		BAND	BASALTIC-ANDESITES	MONTE ARUBS-SERRA NUARXIS	SANT'ANTIOCO	BAND	BAND	lava flow, domes and breccias.	Basaltic-andesites			no outcrop	>50	unknown
Paleogene/ Oligocene and Eocene	**PRE-VOLCANIC**	**CIX**	CIXERRI Fm.	TERRAS COLLU (GONNESA AREA)	ENTROTERRA SULCITANO	CIX	CIX	claystone, sandstones, siltites, conglomerate.	Detritic, organogenous (lignite) and minor carbonate rocks			no outcrop	no outcrop	100-300
		LGN	LIGNITIFERO Fm.		ENTROTERRA SULCITANO	LGN	LGN	lignitiferous levels, limestones, marls, siltites.				no outcrop	no outcrop	40-70
		MLI	MILIOLITICO Fm.		ENTROTERRA SULCITANO	MLI	MLI	limestone (and minor marls). Its upper part contains a camptonite sill (around 2 meter-thick) widespread and continuous in the lignite Carbosulcis underground mine.				no outcrop	no outcrop	30-40
Cretaceous	**BASEMENT**	**URG**	URGONIAN FACIES	MALADROXIA	SANT'ANTIOCO	URG	KRT-m	limestone (mostly in mudstone facies)	Carbonates			no outcrop	50-80	100
Cambrian		**CBT**	GONNESA Fm.	CANALE DI SAN GIOVANNI	NEBIDA	GNN	CMB-g	Dolomia Gialla lithofacies (diagenetic after Calcare Ceroide).					no outcrop	150-300
							CMB-c	Calcare Ceroide Mb (limestone in mudstone lithofacies)						50-300
			NEBIDA Fm.	SANT'ANGELO	IGLESIAS	NEB	CMB-a	Matoppa Mb (archaeocyathid) limestone.						500

Tabla 16.1[6.3]: Litoestratigrafía del área de estudio. Los cambios más significativos en la cronoestratigrafía y las subdivisiones aplicadas al mapa se centran principalmente en las series MRH, LCO, UCO y URH. La parte inferior de la columna desde el Basamento hasta las AND y los depósitos cuaternarios no contienen modificaciones y se ajustan estrictamente al mapeo del proyecto CARG. *La unidad Calasetta también se encuentra en la literatura como Serra di Paringianu. Abreviaturas de la columna de espesor: SP= Isla San Pietro, SA= Isla Sant'Antioco, SU= Entroterra Sulcitano ([1]espesor en superficie, [2]espesor en superficie y en sondajes). Not outcrop: afloramientos desconocidos de estas unidades después de todos los mapas geológicos disponibles. Unknown: las áreas correspondientes pueden revisarse para determinar si estas unidades afloran o no.

*Lithostratigraphy of the study area. The most significant changes in chronostratigraphy and subdivisions applied to the map focus mainly on the MRH, LCO, UCO, and URH series. The lower part of the column from the Basement to AND and the Quaternary deposits contain no modifications and they strictly adjust to the mapping of the CARG project. *The Calasetta unit is also found in literature as Serra di Paringianu. Thickness column abbreviations: SP=San Pietro Island, SA=Sant'Antioco Island, SU=Entroterra Sulcitano (1surface thicknesses, 2surface and boreholes thicknesses). Not outcrop: unknown outcrops of these units after all the available geological maps. Unknown: corresponding areas might be reviewed to determine whether these units crop out or not.*