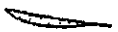
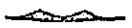
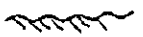
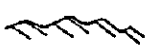
Appendix 2 Characteristics of Photogeologic Unit

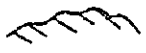
Characteristics of Photogeologic Units

Alota Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	bluish gray,gray, light gray	fine	meandering	very low	very low		-	partly dense	-	Unconsolidated sediments composed of gravel,sand and silt (Quaternary:Recent alluvial deposits,marshy sediments)
Qf	light purple,gray, light brown	fine	meandering, distributary	medium to high	very low		-	partly dense	-	Unconsolidated sediments composed of gravel,sand etc. (Quaternary:Composite fan deposits)
Qe	white,grayish white, ligte bluish green	fine	meandering	very low	very low		-	-	-	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qd	gray	medium	-	-	very low		-	-	-	Unconsolidated sediments composed mainly of sand (Quaternary:Eolian deposits)
Qg	blue	fine	-	-	very low		-	-	-	Mainly snow and ice (Quaternary:Glacial deposits)
Qv	gray,light gray, dark gray	coarse	trellis	high	high		-	-	-	Volcanic products composed mainly of lava flow,lava dome etc. (Quaternary:Rhyolite,dacite,andesite,basalt,ignimbrite etc.)
Pt	purplish gray, gray	fine	dendritic, pinnate	high	medium		bedded	-	-	Fine-grained sedimentary rocks (Pleistocene:Conglomerate,sandostone,mudstone,tuff etc.)
PlPt	light gray, white	medium	dendritic	medium	low		-	-	-	Fine to medium -grained sedimentary rocks (Pliocene to Pleistocene:Limestone,sandstone,carbonate rocks,chert etc.)
Pl	dark gray, greenish gray	medium	pinnate	high	medium		bedded	-	-	Fine to medium -grained sedimentary rocks (Pliocene:Conglomerate,sandstone,mudstone,tuff etc.)
Plv	dark gray, dark brownish gray	coarse	dendritic, radial	high	high		-	-	-	Mainly volcanic products,sedimentary rocks (Pliocene:Andesite,basalt,clastic rocks etc.)
Miv	light brown, greenish brown gray	medium	dendritic, radial	medium to high	high		-	-	-	Mainly volcanic products (Miocene:Rhyolite,dacite,andesite,ignimbrite,clastic rocks etc.)
Mi	brown	fine	pinnate	high	medium		partly bedded	-	-	Fine to medium-grained sedimentary rocks (Miocene:Conglomerate,sandstone,mudstone etc.)
Ol	brownish gray, light brownish gray	fine	pinnate, trellis	high	medium		partly bedded	-	-	Fine to medium-grained sedimentary rocks (Oligocene:sandstone,conglomerate,mudstone,tuff etc.)

Characteristics of Photogeologic Units

Alota Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Ks	dark bluish gray, bluish gray	medium	pinnate, dendritic	high	medium		-	-	-	Mainly volcanic products (Cretaceous:Andesite,rhyolite,dacite,ignimbrite,clastic rocks etc.)
Js	dark bluish gray, brown	medium	pinnate, trellis	high	medium		-	-	-	Fine to medium-grained sedimentary rocks (Upper Jurassic:Conglomerate,sandstone,mudstone,tuff etc.)
Jm	dark bluish gray, bluish green	medium	pinnate, trellis	high	medium		-	-	-	Mainly volcanic products (Middle Jurassic:Andesite,rhyolite,decite,clastic rocks etc.)
Pz	brownish gray, gray	coarse	trellis	high	medium		-	-	-	Mainly metamorphic rocks (Paleozoic :meta-sandstone,slate,meta-basalt,gneiss etc.)
S	yellowish gray	medium	dendritic	medium	medium		-	-	-	Fine to medium-grained sedimentary rocks (Silurian:Sandstone,quartzite etc.)
γm	white, light brownish gray	coarse	dendritic	high	very high		massive	-	-	Felsic igneous rocks (Mesozoic:Plutonic rocks)
γp	gray	coarse	rectangular, dendritic	high	high		massive	-	-	Somewhat intermediate igneous and metamorphic rocks (Paleozoic:Plutonic and metamorphic rocks)
	light yellowish gray	fine	radial	low	medium		massive	-	-	Alteration zone

Characteristics of Photogeologic Units

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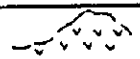
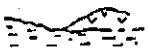
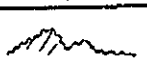
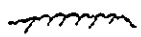
Atacama Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
			Drainage		Rock Resistance	Section	Bedding			
	Tone	Texture	Pattern	Density				Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qf	gray	fine	distributary	medium to high	very low		–	partly sparse	partly rare	Unconsolidated sediments composed of gravel,sand etc. (Quaternary:Composite fan deposits)
Qe	bluish white, light greenish gray	fine	parallel	medium	very low		–	partly sparse	–	Unconsolidated evaporited sediments (Quaternary:Marshy sediments)
Qd	yellow	medium	–	–	very low		–	–	–	Unconsolidated sediments composed mainly of sand (Quaternary:Eolian deposits)
Qv	dark gray, brown	coarse	radial, parallel	low	medium		partly bedded	–	–	Recent lava (Quaternary:Rhyolite,dacite,andesite,basalt,ignimbrite etc.)
PlPt	brown, light gray	fine, medium	distributary, parallel	medium to high, low to medium	low		–	–	–	Fine to medium-grained calcareous sediments (Plio-Pleistocene:Limestone,sandstone,carbonate rocks,chert etc.)
Plv	dark greenish gray, light brown	coarse	radial, parallel	low	medium		–	–	–	Lavas with composition between Qv and Miv (Pliocene:Andesite,basalt,clastic rocks etc.)
Miv	light pinkish gray, greenish gray	fine, coarse	parallel	medium	high		partly bedded	partly sparse	–	Eroded volcanic products and plateau of ignimbrite (Miocene:Rhyolite,dacite,andesite,ignimbrite,clastic rocks etc.)
Mic	light purple, light bluish green	fine	trellis, dendritic	high	low to medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Miocene:Conglomerate,sandstone,mudstone etc.)
OlMi	brownish gray, greenish brown	fine	dendritic, trellis	high	medium		bedded	partly bedded		Fine to coarse-grained sedimentary rocks (Oligocene to Miocene:Conglomerate,sandstone,shale,mudstone etc.)
PaEo	bluish purple	fine	dendritic	medium	medium		–	–	–	Felsic Volcanic rocks (Paleocene to Eocene:Rhyolite,basalt,ignimbrite,limestone,sandstone etc.)
Ks	light brown, dark green	fine	trellis	medium	medium		bedded	–	–	Mainly fine-grained sedimentary rocks and volcanic rocks (Cretaceous:Andesite,rhyolite,dacite,ignimbrite,clastic rocks etc.)
Js	dark green	medium	parallel	medium	high		well bedded	–	–	Medium to coarse-grained sedimentary rocks (Upper Jurassic:Conglomerate,sandstone,mudstone,tuff etc.)
Jm	dark blue, bluish brown,reddish brown	fine	parallel, dendritic	medium to high	medium		–	–	–	Fine to medium-grained sedimentary rocks and volcanic rocks (Middle Jurassic:Andesite,rhyolite,dacite,clastic rocks etc.)
Jlb	yellowish brown, greenish blue	fine	dendritic	high	low to medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Lower Jurassic:Evaporite)

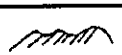
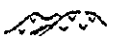
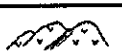
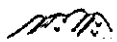
Characteristics of Photogeologic Units

Atacama Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Jle	dark blue	medium	pinnate, trellis	medium	medium		–	–	–	Fine to medium-grained volcanic rocks (Lower Jurassic:Alternative beds of andesite and rhyolite etc.)
Tr	dark brownish blue, reddish brown	fine	parallel, trellis	high	medium		well bedded	–	–	Fine to medium-grained sedimentary rocks and volcanic rocks (Middle to Upper Triassic:Sandstone,conglomerate,shale,rhyolite,andesite etc.)
CTr	greenish yellow brown, purplish brown	fine	dendritic, trellis	high	medium		–	–	–	Medium to coarse-grained sedimentary rocks and volcanic rocks (Carboniferous to Triassic:Tuff,ignimbrite,dacite,clastic rocks etc.)
D	yellowish brown	fine	trellis	medium	medium		bedded	–	–	Medium to coarse-grained sedimentary rocks (Devonian:Quartzite,slate,sandstone,conglomerate,limestone etc.)
Pz	yellowish brown	fine	dendritic, pinnate	high	medium to high		bedded	–	–	Fine to medium-grained metamorphic rocks (Paleozoic:Meta-sandstone,slate,meta-basalt,gneiss etc.)
γtb	light blue, light green	fine	dendritic	medium	low to medium		–	–	–	Somewhat felsic to mafic igneous rocks (Tertiary:Granitic rocks)
γta	green, light green	medium	dendritic	medium	medium to high		–	–	–	Felsic igneous rocks (Paleogene:Granitic rocks)
γmc	purple, greenish purple	coarse	dendritic	medium	high		–	–	–	Felsic igneous rocks (Somewhat Late Cretaceous to Early Tertiary:Granitic rocks)
γmb	greenish yellow, purplish brown	fine	dendritic	medium to high	high		–	–	–	Felsic igneous rocks (Late Jurassic to Early Tertiary:Granitic rocks)
γma	greenish white, whitish yellow	coarse	dendritic	medium	high		–	–	–	Felsic igneous rocks (Early Cretaceous:Granitic rocks)
γp	light yellowish brown, light gray	medium	dendritic	low	medium		massive	–	–	Felsic igneous rocks (Paleozoic:Granitic rocks,metamorphic rocks)
	light pinkish gray	coarse	dendritic	high	medium		massive	–	–	Alteration zone

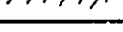
Characteristics of Photogeologic Units

Imilac Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Qf	light purple, gray	fine	distributary	medium to high	very low		–	–	–	Unconsolidated sediments composed of gravel,sand etc. (Quaternary:Composite fan deposits)
Qe	white, bluish white	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qv	dark gray, brown	medium	radial	low	medium to high		almost massive	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt)
Plv	dark purple, brown	medium	radial	low	medium to high		almost massive	–	–	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Miv	light purple, gray, yellowish brown	fine	pinnate, parallel	high, low	low to medium		partly bedded	–	–	Eroded volcanic products (Miocene:Andesite,dacite,basalt and pyroclastic rocks)
Mi	gray	fine	pinnate	medium	medium		almost massive	–	–	Fine to medium -grained sedimentary rocks (Miocene:Gravel,sand,silt,ignimbrite etc.)
OlMi	gray	fine	pinnate, dendritic	medium	medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Oligocene to Miocene:Continental conglomerate,sandstone,mudstone etc.)
Ev	brownish blue, dark grayish blue	coarse	dendritic	high	low to medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Paleocene to Eocene:Continental lava,ignimbrite,sandstone,agglomerate etc.)
KTv	brownish blue, dark grayish blue	coarse	dendritic	high	low to high		partly bedded	–	–	Volcanic and pyroclastic rocks (Upper Cretaceous to Lower Tertiary:Amdesitic/rhyolitic lava,volcanic breccia,ignimbrite etc.)
Ks	gray	fine	parallel	low	medium		partly bedded	–	–	Fine-grained sedimentary rocks (Cretaceous:Andesite,rhyolite,dacite,ignimbrite etc.)
Kiv	purplish brown	coarse	dendritic	high	medium to high		partly bedded	–	–	Volcanic and pyroclastic rocks (Lower Cretaceous:Andesitic/dacitic/rhyolitic lava,pyroclastic rocks etc.)
Jv	brownish blue, dark grayish blue	coarse	pinnate, dendritic	high	medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Jurassic:Andesitic tuff,lava etc.)
Ji	light brownish gray	fine	pinnate	high	medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Jurassic:Sandstone,calcareous sandstone,limestone,marl,mudstone etc.)
Trms	dark blue, purplish brown	fine to coarse	pinnate, dendritic	high	medium to high		partly bedded	–	–	Fine to medium -grained sedimentary rocks and volcanic rocks (Middle to Upper Triassic:Sandstone,conglomerate,mudstone and volcanic rocks)

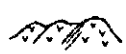
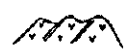
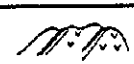
Characteristics of Photogeologic Units

Imilac Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Trv	brown	medium	dendritic	high	medium to high		almost massive	–	–	Volcanic rocks (Middle to Upper Triassic:Sandstone,conglomerate,mudstone and volcanic rocks)
CTrv	brownish purple	medium	dendritic	high	medium to high		massive	–	–	Volcanic rocks (Carboniferous to Triassic:Tuff,volcanic breccia,lava,ignimbrite etc.)
Dm	brown, dark brown	medium	dendritic	medium	high		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Devonian:Quartzite,phyllite,schist,gneiss,slate etc.)
Os	light yellowish brown	medium	dendritic	low	low		almost massive	–	–	Medium to coarse-grained sedimentary rocks (Lower to Middle Ordovician:Burruyacu F.etc.)
Pzm	dark blue	medium	dendritic	high	very high		massive	–	–	Medium-grained meta-sedimentary rocks (Paleozoic:Schist,meta-sandstone,gneiss etc.)
γt	light grayish white	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Tertiary:Undivided granitic rocks)
γkt	light grayish white	coarse	dendritic	high	medium to high		massive	–	–	Felsic igneous rocks (Late Cretaceous/Early Tertiary:Undivided granitic rocks)
γjt	yellowish brown	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Late Jurassic/Early Tertiary:Undivided granitic rocks)
γj	light green	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Jurassic:Undivided granitic rocks)
γp	light grayish white	coarse	dendritic, rectangular	high	very high		massive	–	–	Felsic igneous rocks (Silurian/Devonian:Undivided granitic rocks)
	reddish brown, light grayish white	fine	dendritic	medium	medium		massive	–	–	Alteration zone

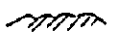
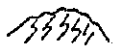
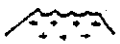
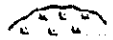
Characteristics of Photogeologic Units

Salvador Area

Unit	Photo-characteristics		Morphologic Expression				Bedding	Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section		Vegetation	Cultivation	
Qf	light purple, gray	fine	distributary	medium to high	very low		–	–	–	Unconsolidated sediments composed of gravel,sand etc. (Quaternary:Composite fan deposits)
Qe	white, bluish white	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qv	dark gray, brown	medium	radial	low	medium to high		almost massive	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt)
Plv	dark purple, brown	medium	radial	low	medium to high		almost massive	–	–	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Pl	light purple, light brown	fine	parallel	low	low		partly bedded	–	–	Fine to medium grained brittle sedimentary rocks (Quaternary:Unconsolidated sedinents,Miocene:Mainly continental sedimentary rocks)
Miv	light purple, gray	fine	pinnate, parallel	high, low	low to medium		partly bedded	–	–	Eroded volcanic products (Miocene:Andesite,dacite,basalt and pyroclastic rocks)
Mi	gray	fine	pinnate	medium	medium		almost massive	–	–	Fine to medium -grained sedimentary rocks (Miocene:Gravel,sand,silt,ignimbrite etc.))
Ev	brownish blue, dark grayish blue	coarse	dendritic	high	low to medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Paleocene to Eocene:Continental lava,ignimbrite,sandstone,agglomerate etc.)
KTv	brownish blue, dark grayish blue	coarse	dendritic	high	low to high		partly bedded	–	–	Volcanic and pyroclastic rocks (Upper Cretaceous to Lower Tertiary:Amdesitic/rhyolitic lava, ignimbrite etc.)
Kiv	purplish brown	coarse	dendritic	high	medium to high		partly bedded	–	–	Volcanic and pyroclastic rocks (Lower Cretaceous:Andesitic/dacitic/rhyolitic lava,pyrodastic rocks etc.)
Ki	light brown	fine	pinnate	medium	low to medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Lower Cretaceous:Sandstone,mudstone,siltstone,conglomerate,limestone etc.)
Jv	brownish blue, dark grayish blue	coarse	pinnate, dendritic	high	medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Jurassic:Andesitic tuff,lava etc.)
Ji	light brownish gray	fine	pinnate	high	medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Jurassic:Sandstone,calcareous sandstone,limestone,marl,mudstone etc.)
Trms	dark blue, purplish brown	fine to coarse	pinnate, dendritic	high	medium to high		partly bedded	–	–	Fine to medium -grained sedimentary rocks and volcanic rocks (Middle to Upper Triassic:Sandstone,conglomerate,mudstone and volcanic rocks)

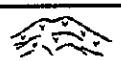
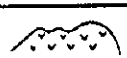
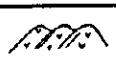
Characteristics of Photogeologic Units

Salvador Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
CTrv	brownish purple	medium	dendritic	high	medium to high		massive	–	–	Volcanic rocks (Carboniferous to Triassic:Tuff,volcanic breccia,lava,ignimbrite etc.)
Oim	light brown	coarse	dendritic	medium	medium		partly bedded	–	–	Fine -grained sedimentary to metamorphic rocks (Lower Ordovician:Meta-sedimentary rocks,volcanic rocks)
Oi	light pinkish gray	fine	trellis	medium	very high		almost massive	–	–	Medium -grained sedimentary rocks (Lower Ordovician:Phyllite,schist,limestone etc.)
Pzm	dark blue	medium	dendritic	high	very high		massive	–	–	Medium-grained meta-sedimentary rocks (Paleozoic:Schist,meta-sandstone,gneiss etc.)
PRm	purplish brown	coarse	dendritic, rectangular	high	very high		massive	–	–	Medium-grained meta-sedimentary rocks (Proterozoic:Gneiss,schist etc.)
γt	light grayish white	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Tertiary:Undivided granitic rocks)
γk	light grayish white	coarse	dendritic	high	medium to high		massive	–	–	Felsic igneous rocks (Early Cretaceous:Undivided granitic rocks)
γp	light grayish white	coarse	dendritic, rectangular	high	very high		massive	–	–	Felsic igneous rocks (Silurian/Devonian:Undivided granitic rocks)
pt	light grayish white	medium	dendritic	low	medium		massive	–	–	Felsic igneous rocks (Tertiary:Porphyritic rocks)
	reddish brown, light grayish white	fine	dendritic	medium	medium		massive	–	–	Alteration zone

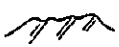
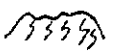
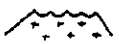
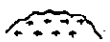
Characteristics of Photogeologic Units

Francisco Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
			Drainage		Rock Resistance	Section	Bedding			
	Tone	Texture	Pattern	Density				Vegetation	Cultivation	
Qa	gray, grayish white, green	fine	meandering	very low	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, clay etc. (Quaternary:Recent alluvial deposits)
Qf	light purple, gray	fine	distributary	medium to high	very low		–	–	–	Unconsolidated sediments composed of gravel, sand, clay etc. (Quaternary:Composite fan deposits)
Qe	white, bluish white	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qv	dark gray, brown	medium	radial	low	medium to high		almost massive	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt)
Paf	purplish gray	coarse	parallel	high	medium		–	–	–	Unconsolidated composite fan deposits composed of gravel,sand etc. (Pleistocene)
Plv	dark purple, brown	medium	radial	low	medium to high		almost massive	–	–	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Pls	light purple, gray	fine	pinnate, parallel	high	low to medium		partly bedded	–	–	Fine to medium-grained brittle sedimentary rocks (Upper Pliocene:Conglomerate,sandstone,mudstone etc.)
Miv	light purple, gray	fine	pinnate, parallel	high, low	low to medium		partly bedded	–	–	Eroded volcanic products (Miocene:Andesite,dacite,basalt and pyroclastic rocks)
Mi	gray	fine	pinnate	medium	medium		almost massive	–	–	Fine to medium -grained sedimentary rocks (Miocene:Gravel,sand,silt,ignimbrite etc.)
Ev	brownish blue, dark grayish blue	coarse	dendritic	high	low to medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Paleocene to Eocene:Continental lava,ignimbrite,sandstone,agglomerate etc.)
KTv	brownish blue, dark grayish blue	coarse	dendritic	high	low to high		partly bedded	–	–	Volcanic and pyroclastic rocks (Upper Cretaceous to Lower Tertiary:Andesitic/rhyolitic lava,volcanic breccia,ignimbrite etc.)
Kiv	purplish brown	coarse	dendritic	high	medium to high		partly bedded	–	–	Volcanic and pyroclastic rocks (Lower Cretaceous:Andesitic/dacitic/rhyolitic lava,pyrodastic rocks etc.)
Ki	light brown	fine	pinnate	medium	low to medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Lower Cretaceous:Sandstone,mudstone,siltstone,conglomerate,limestone etc.)
Jv	brownish blue, dark grayish blue	coarse	pinnate, dendritic	high	medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Jurassic:Andesitic tuff,lava etc.)

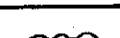
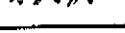
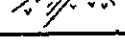
Characteristics of Photogeologic Units

Francisco Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Ji	light brownish gray	fine	pinnate	high	medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Jurassic:Sandstone,calcareous sandstone,limestone,marl,mudstone etc.)
Trms	dark blue, purplish brown	fine to coarse	pinnate, dendritic	high	medium to high		partly bedded	–	–	Fine to medium -grained sedimentary rocks and volcanic rocks (Middle to Upper Triassic:Sandstone,conglomerate,mudstone and volcanic rocks)
P	yellowish brown, light yellowish gray	coarse	pinnate, sub-trellis	medium	medium to high		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Permian:Continental quartzose sandstone,conglomerate etc.)
CTrv	brownish purple	medium	dendritic	high	medium to high		massive	–	–	Volcanic rocks (Carboniferous to Triassic:Tuff,volcanic breccia,lava,ignimbrite etc.)
Cav	dark brown	medium	sub-trellis	medium	medium to high		partly bedded	–	–	Volcanic rocks (Upper Carboniferous:Porphyry,agglomerate,volcanic breccia,andesite lava etc.)
Cs	light pinkish gray	coarse	trellis	medium	medium to high		bedded	–	–	Medium-grained sedimentary rocks (Upper Carboniferous:Sandstone,mudstone,volcanic breccia etc.)
Oiv	purplish brown light pinkish gray	coarse	trellis	medium	medium		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Lower Ordovician:Meta-sedimentary rocks,volcanic rocks)
Oi	light pinkish gray	fine	trellis	medium	very high		almost massive	–	–	Medium-grained sedimentary rocks (Lower Ordovician:Phyllite,schist,limestone etc.)
Pzm	dark blue	medium	dendritic	high	very high		massive	–	–	Medium-grained meta-sedimentary rocks (Paleozoic:Schist,meta-sandstone,gneiss etc.)
γt	light grayish white	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Tertiary:Undivided granitic rocks)
γk	light grayish white	coarse	dendritic	high	medium to high		massive	–	–	Felsic igneous rocks (Early Cretaceous:Undivided granitic rocks)
γm	light brownish gray	medium	dendritic	medium	high		massive	–	–	Felsic igneous rocks (Permian/Triassic:Undivided granitic rocks)
γp	light grayish white	coarse	dendritic, rectangular	high	very high		massive	–	–	Felsic igneous rocks (Silurian/Devonian:Undivided granitic rocks)
	reddish brown, light grayish white	fine	dendritic	medium	medium		massive	–	–	Alteration zone

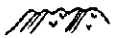
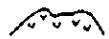
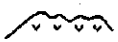
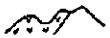
Characteristics of Photogeologic Units

Puntilla Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
			Drainage		Rock	Section	Bedding			
	Tone	Texture	Pattern	Density	Resistance			Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qf	light purple, gray	fine	distributary	medium to high	very low		–	partly sparse	–	Unconsolidated sediments composed of gravel,sand etc. (Quaternary:Composite fan deposits)
Qs	white, bluish white	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qv	dark gray, brown	medium	radial	low	medium to high		almost massive	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt)
Pef	purplish gray	coarse	parallel	high	medium		–	–	–	Unconsolidated composite fan deposits composed of gravel,sand etc. (Pleistocene)
Plv	dark purple, brown	medium	radial	low	medium to high		almost massive	–	–	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Pls	light purple, gray	fine	pinnate, parallel	high	low to medium		partly bedded	–	–	Fine to medium-grained brittle sedimentary rocks (Upper Pliocene:Conglomerate,sandstone,mudstone etc.)
Mis	light purplish gray, grayish white	fine	pinnate, parallel	high	medium		well bedded	–	–	Fine to medium -grained sedimentary rocks (Upper Miocene:Conglomerate,tuffaceous sandstone,mudstone etc.)
Mim	dark greenish blue	fine	pinnate	high	medium		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Middle Miocene:.Sandstone,conglomerate,mudstone)
Mi	gray	fine	pinnate	medium	medium		almost massive	–	–	Fine to medium -grained sedimentary rocks (Miocene:Gravel,sand,silt,ignimbrite etc.)
Ol	dark green	fine	pinnate, trellis	high	medium		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Oligocene:Sandstone,conglomerate,mudstone,andesitic volcanic breccia etc.)
OlMlv	dark green	fine	pinnate, trellis	high	medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Paleocene to Miocene:Acidic volcanic rocks etc.)
Ev	brownish blue, dark grayish blue	coarse	dendritic	high	low to medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Paleocene to Eocene:Continental lava,ignimbrite,sandstone,agglomerate etc.)
KTv	brownish blue, dark grayish blue	coarse	dendritic	high	low to high		partly bedded	–	–	Volcanic and pyroclastic rocks (Upper Cretaceous to Lower Tertiary:Amdesitic/rhyolitic lava,volcanic breccia,ignimbrite etc.)
Ki	light brown	fine	pinnate	medium	low to medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Lower Cretaceous:Sandstone,mudstone,siltstone,conglomerate,limestone etc.)

Characteristics of Photogeologic Units

Puntilla Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Jv	brownish blue, dark grayish blue	coarse	pinnate, dendritic	high	medium		partly bedded	–	–	Volcanic and pyroclastic rocks (Jurassic:Andesitic tuff,lava etc.)
Ji	light brownish gray	fine	pinnate	high	medium		bedded	–	–	Fine to medium -grained sedimentary rocks (Jurassic:Sandstone,calcareous sandstone,limestone,marl,mudstone etc.)
Trms	dark blue, purplish brown	fine to coarse	pinnate, dendritic	high	medium to high		partly bedded	–	–	Fine to medium -grained sedimentary rocks and volcanic rocks (Middle to Upper Triassic:Sandstone,conglomerate,mudstone and volcanic rocks)
Trc	grayish green	fine	sub-dendritic	low	medium		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Triassic:Continental sandstone,mudstone etc.)
Trd	light yellowish brown	coarse	pinnate, sub-trellis	high	high		well bedded	–	–	Fine to medium -grained sedimentary rocks (Triassic:Continental sandstone,mudstone etc.)
Trs	purplish gray, dark green	medium	dendritic	low	medium		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Triassic:Continental tuffaceous sandstone,black mudstone,conglomerate etc.)
PTrv	light brownish gray	medium	dendritic	medium	medium		massive	–	–	Volcanic rocks (Upper Permian to Triassic:Volcanic rocks)
P	yellowish brown, light yellowish gray	coarse	pinnate, sub-trellis	medium	medium to high		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Permian:Continental quartzose sandstone,conglomerate etc.)
Piv	dark blue	medium	dendritic	medium	medium		massive	–	–	Volcanic rocks (Lower Permian:Volcanic rocks)
CTrv	brownish purple	medium	dendritic	high	medium to high		massive	–	–	Volcanic rocks (Carboniferous to Triassic:Tuff,volcanic breccia,lava,ignimbrite etc.)
CP	brown	coarse	pinnate	high	medium		almost massive	–	–	Fine-grained sedimentary rocks (Carboniferous to Permian:Mudstone,slate,sandstone,conglomerate,limestone etc.)
Cav	dark brown	medium	sub-trellis	medium	medium to high		partly bedded	–	–	Volcanic rocks (Upper Carboniferous:Porphyry,agglomerate,volcanic breccia,andesite lava etc.)
Cs	light pinkish gray	coarse	trellis	medium	medium to high		bedded	–	–	Medium-grained sedimentary rocks (Upper Carboniferous:Sandstone,mudstone,volcanic breccia etc.)
Cl	light brown	coarse	trellis	medium	medium		bedded	–	–	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)

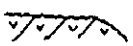
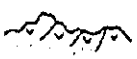
Characteristics of Photogeologic Units

Puntilla Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
			Drainage		Rock	Section	Bedding			
	Tone	Texture	Pattern	Density	Resistance			Vegetation	Cultiva-tion	(Correlation with Available Geologic Map)
Do	purplish brown	fine	dendritic	low	medium to high		partly bedded	–	–	Coarse-grained sedimentary rocks (Devonian to Carboniferous:Sandstone,mudstone,conglomerate etc.)
Ds	purplish brown, dark bluish brown	medium	trellis, parallel	medium	medium to high		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Upper Devonian:Sandstone,mudstone etc.)
Oe	purplish brown	coarse	trellis	high	high		almost massive	–	–	Fine-grained sedimentary rocks (Upper Ordovician:Sandstone,mudstone etc.)
Oi	light pinkish gray	fine	trellis	medium	very high		almost massive	–	–	Medium-grained sedimentary rocks (Lower Ordovician:Phyllite,schist,limestone etc.)
Pzm	dark blue	medium	dendritic	high	very high		massive	–	–	Medium-grained meta-sedimentary rocks (Paleozoic:Schist,meta-sandatone,gneiss etc.)
PRm	purplish brown	coarse	dendritic, rectangular	high	very high		massive	–	–	Medium-grained sedimentary rocks (Proterozoic:Gneiss,schist etc.)
γt	light grayish white	conrse	dendritic	high	high		–	–	–	Felsic igneous rocks (Tertiary:Undivided granitic rocks)
γm	light brownish gray	medium	dendritic	medium	high		–	–	–	Felsic igneous rocks (Permian/Triassic:Undivided granitic rocks)
γpd	gray	medium	–	–	very high		–	–	–	Dike rocks within γp
γp	light grayish white	coarse	dendritic, rectangular	high	very high		–	–	–	Felsic igneous rocks (Silurian/Devonian:Undivided granitic rocks)
ρp	brown	fine	dendritic	medium	very high		–	–	–	Felsic igneous rocks (Permian:Porphyritic rocks)
	reddish brown, light grayish white	fine	dendritic	medium	medium		–	–	–	Alteration zone

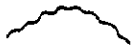
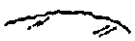
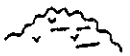
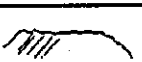
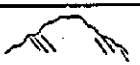
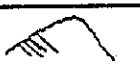
Characteristics of Photogeologic Units

Vicuna Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, grayish white	fine	meandering	very low	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel,sand and silt (Quaternary:Recent alluvial deposits)
Qf	purple, red	fine	distributary	medium to high	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel,sand and silt (Quaternary:Composite fan deposits)
Qg	blue	fine	–	–	very low		–	–	–	Glacial deposits (Quaternary:Glacial deposits)
Mis	gray, light purple	fine	pinnate, trellis	high	low to medium		partly bedded	–	–	Fine to medium-grained sediments (Upper Miocene:Conglomerate,tuff etc.)
Mim	purplish brown, greenish brown	coarse	dendritic, pinnate	medium	medium		–	–	–	Medium to coarse-grained sedimentary rocks (Middle Miocene:Sandstone,conglomerate,tuff etc.)
Mimv	greenish brown	coarse	pinnate, dendritic	low to medium	high		–	–	–	Volcanic rocks (Middle Miocene:Acidic volcanic rocks)
OlMiv	pink, reddish brown	medium	trellis, pinnate	medium	medium to high		–	–	–	Volcanic rocks (Oligocene to Miocene:Acidic volcanic rocks)
Ol	dark green	fine	pinnate	high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Oligocene:Sandstone,conglomerate,mudstone etc.)
PaEo	bluish purple	fine	dendritic	high	medium		–	–	–	Acidic volcanic rocks (Paleocene to Eocene:Rhyolitic,basaltic lavas)
Ks	greenish gray	medium	pinnate, dendritic	high	medium		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Upper Cretaceous:Andesite,dacite etc.)
Km	bluish green	coarse	dendritic	medium	high		–	–	–	Medium to coarse-grained sedimentary rocks (Middle Cretaceous:Sandstone,conglomerate etc.)
Kib	whitish yellow	coarse	parallel	medium	medium		–	–	–	Fine to medium-grained sedimentary rocks (Lower Cretaceous:Sandstone,calcareous sandstone etc.)
Kia	bluish brown	fine	dendritic	very high	low		–	–	–	Volcanic rocks (Lower Cretaceous:Andesitic,dacitic,volcanic breccia etc.)
Jb	greenish brown	medium	pinnate	medium	medium		–	–	–	Volcanic sedimentary rocks (Jurassic:Andesitic tuff)

Characteristics of Photogeologic Units

Vicuna Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
			Drainage		Rock	Section	Bedding			
	Tone	Texture	Pattern	Density	Resistance			Vegetation	Cultivation	(Correlation with Available Geologic Map)
Ja	brown	coarse	dendritic	medium	medium		–	–	–	Medium to coarse-grained sedimentary rocks (Jurassic:Sandstone,calcareous sandstone etc.)
Trv	purplish brown	fine	dendritic	high	medium		partly bedded	–	–	Volcanic rocks (Upper Triassic:Effusive rocks)
Trb	light purplish gray	medium	dendritic	medium	medium		–	–	–	Medium to coarse-grained sedimentary rocks (Triassic:Continental sandstone,mudstone etc.)
Tra	purplish gray, green	medium	dendritic	high	medium		partly bedded	–	–	Fine to medium -grained sedimentary rocks (Triassic:Continental tuffaceous sandstone,black mudstone etc.)
Psvb	green, greenish brown	coarse	dendritic	very low	high		–	–	–	Volcanic rocks (Upper Permian:Acidic porphyry)
Psva	greenish brown	medium	pinnate	medium	medium to high		partly bedded	–	–	Volcanic rocks (Upper Permian:Dacite,rhyolite)
CTr	purplish brown	medium	parallel	medium	medium		–	–	–	Volcanic rocks (Carboniferous to Triassic:Tuff,volcanic breccia etc.)
CPb	reddish brown	coarse	dendritic	medium	high		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Carboniferous to Permian:Continental sandstone etc.)
CPa	bluish brown	medium	dendritic	medium to high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Carboniferous to Permian:Continental sandstone etc.)
Cs	purplish gray, purplish brown	fine	trellis	medium	medium to high		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)
Cl	yellowish brown	coarse	trellis	high	medium		almost massive	–	–	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)
DC	purplish brown	fine	dendritic	low	medium		partly bedded	–	–	Coarse-grained sedimentary rocks (Devonian to Carboniferous : Sandstone,mudstone etc.)
DS	purplish brown, light brown	medium	trellis, parallel	high	high		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Upper Devonian:Mudstone,sandstone etc.)
Di	dark purple	fine	trellis	medium	high		partly bedded	partly sparse	–	Medium-grained sedimentary rocks (Lower Devonian:Mudstone,sandstone etc.)

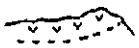
Characteristics of Photogeologic Units

Vicuna Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Os	purplish brown	coarse	trellis	high	high		partly bedded	partly sparse	–	Fine-grained sedimentary rocks (Upper Ordovician : Sandstone, mudstone etc.)
γt	white, yellowish white	coarse	dendritic	medium	high		–	–	–	Felsic igneous rocks (Early Miocene : Granitic rocks)
αm	yellow, brown	medium	dendritic	medium	medium		–	–	–	Intermediate volcanic rocks (Late Triassic:Intrusive rocks at the bottom of volcano)
γm	yellow, brown	fine	dendritic	high	medium to high		–	–	–	Somewhat felsic igneous rocks (Late Cretaceous : Plutonic rocks)
δp	yellowish brown	medium	pinnate	medium	medium		–	–	–	Volcanic rocks (Middle Permian : Rhyolite)
γp	greenish brown, yellowish brown	coarse	rectangular, dendritic	high	very high		massive	partly sparse	–	Somewhat felsic igneous rocks (Permian:Granite, granodiorite etc.)
	light yellowish gray	fine	parallel	medium	high		massive	–	–	Alteration zone

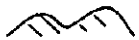
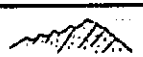
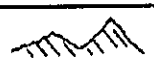
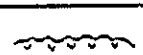
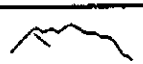
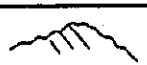
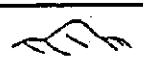
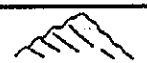
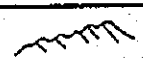
Characteristics of Photogeologic Units

Illapel Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, grayish white, green	fine	meandering	very low	very low		—	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Recent alluvial deposits)
Qf	light purple, light bluish gray	fine	distributary	medium to high	very low		—	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand etc. (Quaternary:Composite fan deposits)
Qe	white, grayish white	fine	meandering	very low	very low		—	—	—	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qg	blue, bluish gray	fine	none,partly distributary	very low	very low		—	—	—	Ice and unconsolidated sediments composed of gravel,sand,silt etc. (Quaternary:Glacier and glacial deposits)
MiPl	bluish green gray	medium	dendritic	high	medium		—	partly bedded	—	Andesitic,rhyolitic and basaltic volcanic rocks (Miocene to Pliocene:Volcanic rocks)
Mis	gray, light purple	medium	pinnate, trellis	high	medium		partly bedded	—	—	Medium to coarse-grained sedimentary rocks (Upper Miocene:Conglomerate,sandstone etc.)
Mim	greenish gray, gray	medium	pinnate, trellis	high	low to medium		bedded	—	—	Fine to medium-grained sedimentary rocks (Middle Miocene:Sandstone,conglomerate,siltstone,tuff etc.)
Miv	dark gray, gray	fine	pinnate	medium	medium		—	—	—	Volcanic rocks(felsic?) (Middle Miocene:Dike rocks,effusive rocks etc.)
Mil	greenish gray, yellowish gray	fine	pinnate	medium	medium		—	—	—	Intermediate volcanic rocks (Lower Miocene:Effusive rocks etc.)
OlMiv	brownish gray, greenish gray	medium	pinnate, dendritic	medium	medium		—	—	—	Felsic Volcanic rocks (Oligocene to Miocene:Acidic to intermediate effusive rocks)
PaEo	bluish purple	fine	dendritic	medium	medium		—	—	—	Felsic and mafic volcanic rocks (Paleocene to Eocene:Rhyolitic and basaltic effusive rocks)
Ks	yellowish gray, greenish gray	medium	pinnate, dendritic	high	medium		bedded	—	—	Medium to coarse-grained sedimentary rocks (Upper Cretaceous:Sandstone,conglomerate,siltstone,volcanic rocks etc.)
Ki	brownish gray, bluish gray	medium	dendritic	medium	high		—	—	—	Intermediate to felsic volcanic rocks (Lower Cretaceous:Andesitic,dacitic and rhyolitic effusive rocks)
Kib	bluish green	fine	dendritic	medium	medium		—	—	—	Intermediate to felsic volcanic rocks (Lower Cretaceous:Andesite,dacite,rhyolite etc.)

Characteristics of Photogeologic Units

Illapel Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Ja	white, grayish white	fine	pinnate	medium	high		bedded	—	—	Medium to coarse-grained sedimentary rocks (Jurassic:Conglomerate,evaporite etc.)
Jb	yellowish gray, brownish gray	fine	pinnate	medium	medium to high		bedded	—	—	Fine to medium-grained sedimentary rocks (Jurassic:Conglomerate,sandstone,siltstone etc.)
J	brown	medium	dendritic, pinnate	medium to high	medium to high		partly bedded	sparse	—	Fine to medium-grained sedimentary rocks (Jurassic:Conglomerate,sandstone,tuff etc.)
Tr	brown, brownish gray	medium	pinnate	high	medium		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Triassic:Sandstone,conglomerate,siltstone,volcanic rocks etc.)
Trs	gray, whitish gray	fine	dendritic	medium	low		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Upper Triassic:Continental sandstone,mudstone,intermediate tuff etc.)
Trv	yellowish gray, gray	medium	dendritic	medium	medium		—	—	—	Intermediate volcanic rocks (Upper Triassic:Effusive rocks etc.)
Trs	brownish gray, green	medium	dendritic	high	medium		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Lower Triassic:Continental tuffaceous sandstone,black mudstone,conglomerate etc.)
Ps	brownish gray	coarse	pinnate, dendritic	high	medium to high		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Upper Permian:Continental quartzose sandstone,conglomerate etc.)
CP	brownish gray, dark gray	coarse	trellis	high	medium		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Carboniferous to Permian:sandstone,limestone etc.)
Cs	light brownish gray, grayish white	medium	trellis	medium to high	medium to high		partly bedded	—	—	Medium-grained sedimentary rocks (Upper Carboniferous:Sandstone,mudstone,volcanic breccia etc.)
Ci	dark bluish gray	coarse	parallel	medium	high		partly bedded	—	—	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)
Ds	purplish brown, light brown	medium	trellis, parallel	high	high		partly bedded	—	—	Medium-grained sedimentary rocks (Upper Devonian:Sandstone,mudstone etc.)
Di	dark purple	fine	trellis	medium	high		partly bedded	—	—	Medium-grained sedimentary rocks (Lower Devonian:Mudstone,sandstone etc.)
SD	purplish brown	medium	trellis	high	medium to high		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Silurian to Devonian:Sandstone,conglomerate etc.)

Characteristics of Photogeologic Units

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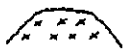
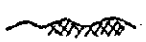
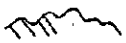
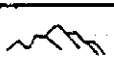
Illapel Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Os	purplish brown	coarse	trellis	high	high		partly bedded	—	—	Fine-grained sedimentary rocks (Upper Ordovician:Sandstone,mudstone etc.)
Osc	light brownish gray	medium	pinnate	medium	medium		partly bedded	—	—	Fine-grained sedimentary rocks (Upper Ordovician:Limestone?)
γt	white, yellowish white	coarse	dendritic	high	high		massive	—	—	Felsic igneous rocks (Miocene:Plutonic rocks)
γm	light brown, light yellowish brown	coarse	dendritic	high	high		massive	—	—	Somewhat felsic igneous rocks (Cretaceous to Early Tertiary:Plutonic rocks)
γp	light greenish brown	coarse	rectangular, dendritic	high	very high		massive	—	—	Somewhat felsic igneous rocks (Permian:Granite,granodiorite etc.)
	light yellow	coarse	dendritic	high	high		massive	—	—	Alteration zone

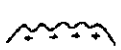
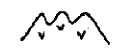
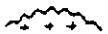
Characteristics of Photogeologic Units

Santiago Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	light purple, light yellowish gray	fine	meandering	low	low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Recent alluvial deposits)
Qf	light brown	fine	parallel, distributary	medium	low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Terrace and fan deposits)
Qd	light purple	medium	–	–	very low		–	–	–	Unconsolidated sediments composed mainly of sand (Quaternary:Eolian deposits)
Qg	light blue	fine	–	–	high		–	–	–	Unconsolidated sediments composed of gravel,sand (Quaternary:Glacial deposits)
Plv	dark brown	coarse	radial, sub-dendritic	medium	high		massive	–	–	Andesitic volcanic rocks (Pliocene:Andesite,pyrodastic flow deposits)
Miv	light yellowish brown	coarse	dendritic	high	high		massive	partly dense	–	Felsic volcanic rocks (Miocene:Andesitic volcanic breccia,rhyolitic volcanic breccia etc.)
Kav	dark brown, light purple	coarse	dendritic, sub-parallel	high	low to medium		–	partly dense	–	Andesitic volcanic rocks (Cretaceous:Andesitic volcanic breccia,rhyolitic volcanic breccia etc.)
Ks	light brown	medium	dendritic, pinnate	medium to high	medium to high		partly bedded	partly dense	–	Medium to coarse-grained sedimentary rocks (Cretaceous:Conglomerate,sandstone,mudstone,tuff etc.)
Kiv	light yellowish brown	medium	dendritic	medium	low to medium		–	partly dense	–	Andesitic volcanic rocks (Lower Cretaceous:Andesitic volcanic breccia,rhyolitic volcanic breccia etc.)
Ki	light brown	medium	dendritic, pinnate	medium to high	medium to high		partly bedded	partly dense	–	Medium to coarse-grained sedimentary rocks (Lower Cretaceous:Conglomerate,sandstone,tuff etc.)
K	dark brown, light brown	coarse	dendritic, sub-parallel	medium	medium to high		partly bedded	partly dense	–	Medium to coarse-grained sedimentary rocks (Cretaceous:Conglomerate,sandstone,andesitic to rhyolitic volcanic breccia etc.)
Js	dark brown, brown	coarse	dendritic, sub-parallel	medium	medium to high		partly bedded	sparse	–	Medium to coarse-grained sedimentary rocks (Upper Jurassic:Conglomerate,sandstone,andesitic volcanic breccia etc.)
J	brown	medium	dendritic, pinnate	medium to high	medium to high		partly bedded	sparse	–	Fine to coarse-grained sedimentary rocks (Jurassic:Conglomerate,sandstone,tuff etc.)

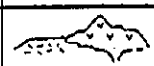
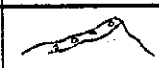
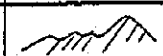
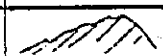
Characteristics of Photogeologic Units

Santiago Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Tr	brown	medium	dendritic, pinnate	medium	low to medium		partly bedded	sparse	—	Fine to coarse-grained sedimentary rocks (Triassic:Conglomerate,sandstone etc.)
Psv	brown, light yellowish brown	coarse	dendritic, trellis	medium	medium to high		—	sparse	—	Andesitic volcanic rocks (Upper Permian:Conglomerate,tuff,andesitic volcanic breccia etc.)
Pz	light brown	fine	pinnate, sub-parallel	medium to high	low		partly bedded	sparse	partly intense	Fine to medium -grained sedimentary rocks (Paleozoic:Mudstone,gneiss,serpentinite etc.)
γt	light yellowish brown	medium	dendritic, sub-parallel	medium	medium to high		massive	partly dense	—	Felsic igneous rocks (Tertiary:Granodiorite)
αm	light brown	medium	dendritic, sub-parallel	medium	medium to high		massive	sparse	—	Andesitic igneous rocks (Mesozoic:Andesite,rhyolite etc.)
γm	light yellowish brown, brown	medium	pinnate, sub-parallel	high	low		massive	sparse	—	Felsic igneous rocks (Mesozoic:Granodiorite)
γp	light yellowish brown, brown	medium	pinnate, sub-parallel	high	low		massive	sparse	partly intense	Felsic igneous rocks (Paleozoic:Granodiorite)
	light yellowish brown	medium	dendritic	medium	high		massive	—	—	Alteration zone

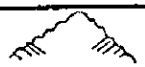
Characteristics of Photogeologic Units

Tupiza Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray	fine	meandering	very low	very low		–	partly dense	partly rare	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Recent unconsolidated sediments)
Qf	light purple, light brown	fine	distributary, meandering	low to medium	very low		–	partly sparse	–	Unconsolidated composite fan deposits composed of gravel,sand etc. (Quaternary:Recent unconsolidated sediments)
Qe	bluish white	fine	meandering	very low	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Recent unconsolidated sediments)
Qd	light gray	coarse	–	–	very low		–	–	–	Unconsolidated sediments composed mainly of sand (Quaternary:Recent unconsolidated sediments)
Qv	dark gray, light greenish gray	coarse	radial, parallel	low	low to medium		partly bedded	–	–	Recent volcanic products (Pliocene to Holocene:Andesite lava,ignimbrite etc.)
Pt	yellowish brown, dark purple	fine	parallel	low	low		partly bedded	partly sparse	–	Coarse-grained brittle semi-consolidated sediments (Quaternary:Unconsolidated sediments composed of gravel,sand,clay etc.)
Pl	light purplish gray, light green	coarse	parallel, trellis	medium to high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (partly brittle) Miocene to Oligocene:Muddy sandstone,mudstone etc.)
Plv	dark greenish gray	medium	parallel	low	medium		massive	–	–	Relatively young lavas Pliocene to Plenstocene:Andesitic to basaltic lava,pyroclastic rocks)
Mi	brown, light yellowish gray	fine	trellis, dendritic	medium to high	medium to high		partly bedded	–	–	Fine to medium-grained compact sedimentary rocks (Miocene:Conglomerate,sandstone etc.)
Miv	light pinkish gray, greenish gray	fine, coarse	parallel	medium	high		partly bedded	–	–	Eroded volcanic products-including plateau of ignimbrite) (Miocene:Andesite to dacite lava,ignimbrite etc.)
Ol	yellowish brown, greenish gray	coarse	trellis, parallel	medium	high		partly bedded	–	–	Coarse-grained compact sedimentary rocks Oligocene:Red polymictic conglomerate)
Eos	greenish gray	medium	trellis	medium	low		partly bedded	–	–	Medium-grained sedimentary rocks Eocene:Red sandstone,siltstone,conglomerate)
Eoi	light yellowish brown	medium	trellis	medium	medium to high		bedded	–	–	Medium-grained sedimentary rocks Eocene:Red sandstone,siltstone,conglomerate)
K	light green, light yellow	medium	trellis, dendritic	medium to high	high		bedded	–	–	Fine to medium-grained hard sedimentary rocks (Cretaceous:Conglomerate,sandstone,limestone etc.)

Characteristics of Photogeologic Units

Tupiza Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Siv	light yellowish brown	medium	radial	low	high		partly bedded	–	–	Almost massive hard volcanic rocks (Upper Silurian:Felsic and intermediate volcanic rocks)
Os	brown, dark bluish gray	coarse	trellis, dendritic	high	very high		partly bedded	partly sparse	–	Fine-grained hard compact sedimentary rocks (Upper Ordovician:Mudstone)
Oi	light brown, dark bluish gray	coarse	trellis	high	very high		partly bedded	–	–	Fine-grained hard compact sedimentary rocks (Lower Ordovician:Mudstone)
γt	light yellowish gray	fine	annular	low	high		massive	–	–	Felsic igneous rocks (Tertiary:Granitic rocks)
	light yellowish gray	coarse	–	–	medium to high		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

Susques Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray	fine	meandering	very low	very low		–	partly dense	partly rare	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Recent unconsolidated sediments)
Qf	light purple, gray, brown	fine	distributary	medium to high	very low		–	partly sparse	partly rare	Unconsolidated composite fan deposits composed of gravel,sand etc. (Quaternary:Recent unconsolidated sediments)
Qe	bluish white, light greenish gray	fine	parallel	medium	very low		–	partly sparse	–	Unconsolidated evaporated sediments (Quaternary:Evaporated sediments)
Qv	dark gray, brown	coarse	radial, parallel	low	medium		partly bedded	–	–	Recent volcanic products-including plateau of ignimbrite) (Pliocene to Holocene:Andesite lava,ignimbrite etc.)
Pt	light purple, yellowish brown	fine	parallel	low to medium	low		almost massive	–	–	Coarse-grained brittle semi-consolidated sediments (Quaternary:Recent sediments of gravel and pebble)
Pl	light brown, light greenish gray	fine	distributary, parallel	medium to high	medium		partly bedded	–	–	Medium to coarse-grained brittle sedimentary rocks (Quaternary:Recent sediments of gravel and pebble)
Plv	dark greenish gray, light brown	coarse	radial, parallel	low	medium		partly bedded	–	–	Relatively young lavas (Pliocene:Lavas)
Mi	brown, light purple	fine	trellis, dendritic	medium	medium		partly bedded	–	–	Fine to medium-grained compact sedimentary rocks (Miocene to Pliocene:Sedimentary rocks including volcanic products)
Miv	dark pinkish gray, greenish gray	fine, coarse	parallel	medium	high		partly bedded	partly sparse	–	Eroded volcanic products-including plateau of ignimbrite) (Miocene:Andesite to dacitic lava,ignimbrite etc.)
Ks	light grayish yellow	fine	dendritic	low	high		bedded	–	–	Hard compact carbonate rocks (Upper Cretaceous to Paleocene:Sbgrupo Balbnena)
Ki	light green, dark green	fine	trellis	medium	medium		bedded	–	–	Mainly fine-grained sedimentary rocks (Cretaceous:Salta G.)
P	light purplish gray	fine	parallel	low	low		almost massive	–	–	Fine-grained sedimentary rocks Permian:Sedimentary rocks,Cauchari F, Cerro Morado F.)
Ov	brown, yellowish brown	coarse	dendritic	low	medium		almost massive	–	–	Intermediate volcanic rocks and pyroclastic rocks (Ordovician:Volcanic rocks)
Oi	brown, dark gray	coarse	trellis	medium	high		bedded	–	–	Fine to medium-grained hard compact sedimentary rocks (Lower Ordovician:Santa Victoria G.)

Characteristics of Photogeologic Units

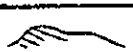
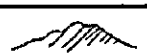
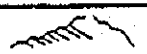
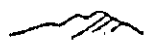
Susques Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
PRm	dark purple, dark green	medium	dendritic	high	medium		almost massive	–	–	Fine-grained meta sedimentary rocks (Proterozoic:Puncoviscana F.)
γa	light yellowish brown	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Jurassic to Early Cretaceous:Granitic rocks)
γp	light yellowish brown, light gray	medium	dendritic	low	medium		massive	–	–	Felsic igneous rocks (Ordovician:Plutonic rocks)
	light yellowish gray	fine	–	–	medium		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

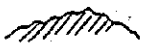
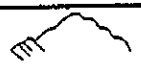
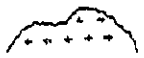
Pocitos Area

P-232 R-077 1/2

Unit	Photo-characteristics							Superficial		Probable Lithology
	Tone	Texture	Drainage Pattren	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Map)
Qa	light greenish gray	fine	meandering	very low	very low		–	partly dense	partly common	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Recent unconsolidated sediments)
Qf	light purple, gray, brown	fine	distributary	medium to high	very low		–	partly sparse	partly rare	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Recent unconsolidated sediments)
Qe	white, bluish white	fine	–	–	very low		partly bedded	–	–	Unconsolidated evaporated sediments (Quaternary:Evaporated sediments)
Qv	dark greenish gray, dark brown	coarse	radial, parallel	low	medium		partly bedded	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt,ignimbrite)
Pt	light purplish gray, greenish gray	fine	parallel	low to medium	low		partly bedded	–	–	Medium to coarse-grained brittle semi-consolidated sediments (Quaternary:Recent unconsolidated sediments)
Pl	light purplish gray, light green	fine	parallel	medium to high	low		partly bedded	partly sparse	–	Fine to medium-grained brittle sedimentary rocks (Quaternary:Recent unconsolidated sediments)
Plv	dark greenish gray, brown	coarse	radial, parallel	low	medium		partly bedded	–	–	Relatively young lavas (Pliocene to Pleistocene:Volcanic rocks)
Mi	light green, light purple	fine	trellis, dendritic	medium	low		bedded	–	–	Fine to medium-grained compact sedimentary rocks (Miocene to Pliocene:Pastos Grandes G.)
Miv	greenish gray, brownish gray	medium	parallel	medium	high		partly bedded	–	–	Eroded volcanic products-including plateau of ignimbrite) (Miocene:Volcanic rocks,ignimbrite)
Eo	dark green	fine	trellis	medium	medium		bedded	–	–	Fine-grained compact sedimentary rocks (Eocene:Red sandstone,siltstone,conglomerate)
Ks	dark purple	coarse	dendritic	high	medium		almost massive	–	–	Fine-grained hard compact sedimentary rocks (Upper Cretaceous:Subgrupo Balbuena)
K	light green	fine	trellis	medium	medium		bedded	–	–	Fine to medium-grained sedimentary rocks (Cretaceous:Subgrupo Pirgua)
P	light green, yellowish brown	fine	parallel	low	low		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Permian:Sedimentary rocks)
Os	light greenish gray	fine	dendritic	low	low		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Lower to Middle Ordovician:Burruyacu F.etc.)

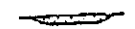
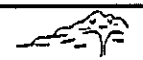
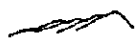
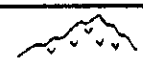
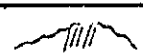
Characteristics of Photogeologic Units

Pocitos Area

Unit	Photo-characteristics							Superficial		Probable Lithology
	Tone	Texture	Drainage Pattren	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Map)
Oim	light brown	coarse	dendritic, parallel	medium	medium		partly bedded	–	–	Fine-grained sedimentary rocks to metamorphic rocks (Lower to Middle Ordovician:Las Vicunas F.etc.)
Ov	yellowish brown	coarse	dendritic	low	medium		almost massive	–	–	Intermedinte volcanic rocks,pyroclastic rocks (Ordovician:Volcanic rocks)
Oi	brown, grayish brown	coarse	trellis	medium	medium		bedded	–	–	Fine to medium-grained sedimentary rocks (Lower Ordovician:Santa Victoria G.)
Cm	light purplish gray, light yellow	fine	parallel, dendritic	medium	high		partly bedded	–	–	Medium-grained meta sedimentary rocks (Cambrian:Macon F.)
PRm	dark purple, light brown	medium	dendritic	high	high		almost massive	partly sparse	–	Fine-grained meta sedimentary rocks (Proterozoic:Puncoviscana F.)
γp	light purplish gray, light yellow	coarse	dendritic, trellis	high	high		massive	–	–	Felsic igneous rocks (Ordovician:Taca Taca F, Complejo Eruptivo Oire)
	reddish brown, light grayish white	fine	dendritic	medium	medium		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

Antofagasta Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray	fine	meandering	very low	very low		–	partly dense	partly rare	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Recent unconsolidated sediments)
Qf	light purple, gray, brown	fine	distributary	medium to high	very low		–	partly sparse	partly rare	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Recent unconsolidated sediments)
Qe	bluish white, light gray	fine	–	–	very low		–	partly sparse	–	Unconsolidated evaporated sediments (Quaternary:Evaporated sediments)
Qv	dark purple, light greenish gray	coarse	radial, parallel	low	low to medium		partly bedded	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt,ignimbrite)
Pl	light purple, light brown	fine	parallel	low	low		partly bedded	–	–	Fine to medium-grained brittle sedimentary rocks (Quaternary:Unconsolidated sediments,Miocene:Mainly continental sedimentary rocks)
Plv	dark purple, brownish gray	coarse	radial, parallel	low	medium		partly bedded	–	–	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Mi	light green, brownish gray	fine	trellis	medium	low		partly bedded	–	–	Fine to medium-grained compact sedimentary rocks (Miocene:Mainly Continental sedimentary rocks)
Miv	greenish gray, light brown	fine	parallel	medium	high		almost massive	–	–	Eroded volcanic products (Miocene:Andesite,dacite,basalt,pyroclastic rocks)
Os	light purplish brown	medium	dendritic	medium	high		almost massive	–	–	Medium-grained compact sedimentary rocks (Upper Ordovician:Mylonite)
Oim	light brown	coarse	dendritic	medium	medium		partly bedded	–	–	Fine-grained sedimentary rocks to metamorphic rocks (Lower Ordovician:Meta sedimentary rocks,volcanic rocks)
Oiv	purplish brown	coarse	trellis	medium	medium		almost massive	sparse	–	Fine to medium-grained massive sedimentary rocks (Lower Ordovician:Meta sedimentary rocks,volcanic rocks)
Oi	light brown, light gray	fine	dendritic	medium	medium to high		bedded	–	–	Fine to medium-grained sedimentary rocks (Lower Ordovician:Meta sedimentary rocks,volcanic rocks)
Cb	light purplish gray	coarse	dendritic	medium	medium		partly bedded	–	–	Carbonate rocks (Cambrian:Amphibolite,gneiss,meta-volcanic and calcareous rocks)

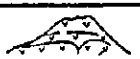
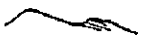
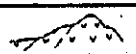
Characteristics of Photogeologic Units

Antofagasta Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Ca	purplish brown	fine	dendritic	medium	high		partly bedded	—	—	Hard compact metamorphic rocks (Cambrian:Phyllite,gneiss,meta volcanic rocks)
PRm	light pinkish brown	medium	parallel	high	high		partly bedded	—	—	Medium-grained meta sedimentary rocks (Proterozoic:Gneiss,schist etc.)
γp	light purplish gray	coarse	dendritic, trellis	high	very high		massive	partly sparse	—	Felsic igneous rocks (Late Ordovician:Undivided granitic rocks)
	reddish brown, light grayish white	fine	dendritic	medium	medium		massive	—	—	Alteration zone

Characteristics of Photogeologic Units

Belen Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, grayish white	fine	meandering	very low	very low		–	partly dense	partly intense	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Recent unconsolidated sediments)
Qf	light purple, gray	fine	distributary	medium to high	very low		–	partly sparse	partly intense	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Recent unconsolidated sediments)
Qe	white, bluish white	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Evaporated sediments)
Qd	light gray	medium	–	–	very low		–	–	–	Eolian deposits composed mainly of sand (Quaternary:Recent unconsolidated sediments)
Qv	dark purple, brown	coarse	radial	low	medium to high		partly bedded	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt)
Pl	light purple, gray	fine	pinnate	high	low to medium		almost massive	–	–	Fine to medium-grained brittle sedimentary rocks (Quaternary:Unconsolidated sediments,Miocene:Mainly continental sedimentary rocks)
Plv	dark purple, brownish gray	coarse	radial	low	medium to high		partly bedded	–	–	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Mib	light purplish brown	fine	pinnate	high	low		partly bedded	partly sparse	–	Fine-grained somewhat brittle sedimentary rocks (Miocene:Mainly continental sedimentary rocks)
Mia	light purplish brown	fine	pinnate, trellis	high	low to medium		partly bedded	partly sparse	–	Fine to medium-grained sedimentary rocks (Miocene:Mainly continental sedimentary rocks)
Miv	light purple, gray	fine	pinnate, parallel	high, low	low to medium		partly bedded	partly sparse	–	Eroded volcanic products (Miocene:Andesite,dacite,basalt,pyroclastic rocks)
Mi	light purplish gray, grayish white	fine	trellis	high	medium		bedded	partly sparse	–	Fine to medium-grained compact sedimentary rocks (Miocene:Mainly continental sedimentary rocks)
Olv	gray, grayish white	fine	parallel	very low	low to medium		partly bedded	–	–	Relatively young andesite lava (Oligocene:Andesite,dacite,basalt)
P	dark green, yellowish brown	coarse	trellis	medium	medium		partly bedded	–	–	Mainly fine-grained compact sedimentary rocks (Permian:Continental sandstone,conglomerate,mudstone,agglomerate)

Characteristics of Photogeologic Units

Belen Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Cs	light pinkish gray	coarse	trellis	medium	medium to high		partly bedded	–	–	Medium-grained sedimentary rocks (Upper Carboniferous:Conglomerate,sandstone,mudstone etc.)
Ci	dark green, brownish green	coarse	dendritic, trellis	medium	medium to high		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)
Os	light purplish brown	medium	dendritic	medium	high		almost massive	partly sparse	–	Medium-grained compact sedimentary rocks (Upper Ordovician:Mylonite)
Oin	purplish brown, light purplish gray	coarse	dendritic	high	medium		almost massive	partly sparse	–	Fine-grained massive sedimentary to metamorphic rocks (Lower Ordovician:Meta sedimentary rocks,volcanic rocks)
Oiv	purplish brown, dark green	coarse	trellis	medium	medium		partly bedded	partly sparse	–	Fine to medium-grained sedimentary rocks (Lower Ordovician:Meta sedimentary rocks,volcanic rocks)
Oi	light purplish gray, brownish gray	fine	dendritic	medium	medium to high		almost massive	sparse	–	Medium-grained sedimentary rocks (Lower Ordovician:Phyllite,schist,limestone etc.)
Cb	light pinkish gray	coarse	rectangular, dendritic	low to medium	medium		–	partly sparse	–	Carbonate rocks (Cambrian:Amphibolite,gneiss,meta-volcanic and calcareous rocks)
Ca	light purplish brown	medium	rectangular, trellis	high	high		–	partly sparse	–	Fine-grained sheared metamorphic rocks (Cambrian:Phyllite,schist,meta volcanic rocks)
PRm	gray	coarse	parallel	high	medium		almost massive	–	–	Medium-grained meta sedimentary rocks (Proterozoic:Gneiss,schist etc.)
γp	light pink, light yellowish brown	coarse	dendritic, trellis	high	very high		massive	partly sparse to moderate	–	Felsic igneous rocks (Late Ordovician:Undivided granitic rocks)
γpr	light purplish gray, gray	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Proterozoic:Undivided granitic rocks)
δp	brown	coarse	dendritic	high	high		massive	–	–	Mafic igneous rocks (Cambrian to Ordovician:Gabbro-norite,very mafic rocks etc.)
	reddish brown, light grayish white	fine	dendritic	medium	medium		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

Chilecito Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, grayish white	fine	meandering	very low	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Recent alluvial deposits)
Qf	light purple, gray	fine	distributary	modium to high	very low		–	partly sparse	partly intense	Unconsolidated sediments composed of gravel, sand etc. (Quaternary:Composite fan deposits)
Qe	white, bluish white	fine	centripetal	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qv	dark gray, brown	medium	radial	low	medium to high		almost massive	–	–	Recent volcanic products (Quaternary:Stratovolcanos composed of andesite and basalt)
Paf	purplish gray	coarse	parallel	high	medium		–	–	–	Unconsolidated composite fan deposits composed of gravel,sand etc. (Pleistocene)
Plaf	purplish gray	coarse	parallel	high	medium		–	–	–	Composite fan deposits composed of gravel,sand etc. (Pliocene)
Plv	dark purple, brown	medium	radial	low	medium to high		almost massive	–	–	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Pls	light purple, gray	fine	pinnate, parallel	high	low to medium		partly bedded	–	–	Fine to medium-grained brittle sedimentary rocks (Upper Pliocene:Conglomerate,sandstone,mudstone etc.)
Mis	light purplish gray, grayish white	fine	pinnate, parallel	high	medium		densely bedded	partly sparse to moderate	–	Fine to medium-grained sedimentary rocks (Upper Miocene:Conglomerate,tuffaceous sandstone,mudstone etc.)
K	dark greenish gray, yellowish brown	medium	sub-dendritic	high	low to medium		bedded	–	–	Medium to coarse-grained sedimentary rocks (Cretaceous:Sandstone,conglomerate,mudstone etc.)
Trs	grayish green	fine	sub-dendritic	low	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Triassic:Continental sandstone,mudstone etc.)
Trd	light yellowish brown	coarse	pinnate, sub-trellis	high	high		densely bedded	–	–	Fine to medium-grained sedimentary rocks (Triassic:Continental sandstone,mudstone etc.)
Trb	light purplish gray	medium	dendritic	low	low to medium		bedded	–	–	Medium to coarse-grained sedimentary rocks (Triassic:Continental sandstone,muddy sandstone,coal etc.)
Tra	purplish gray, dark green	medium	dendritic	low	medium		partly bedded	partly sparse	–	Fine to medium-grained sedimentary rocks (Triassic:Continental tuffaceous sandstone,black mudstone,conglomerate etc.)

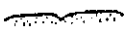
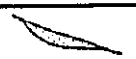
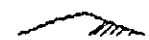
Characteristics of Photogeologic Units

Chilecito Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
P	yellowish brown, light yellowish gray	coarse	pinnate, sub-trellis	medium	medium to high		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Permian:Continental quartzose sandstone,conglomerate etc.)
Cav	dark brown	medium	trellis	medium	medium to high		partly bedded	–	–	Volcanic rocks (Upper Carboniferous:Porphyry,agglomerate,volcanic breccia,andesite lava etc.)
Csv	light pinkish gray	coarse	trellis	medium	medium to high		bedded	–	–	Medium-grained sedimentary rocks (Upper Carboniferous:Sandstone,mudstone,volcanic breccia etc.)
Ci	light brown	coarse	trellis	medium	medium		bedded	–	–	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)
DC	purplish brown	fine	dendritic	low	medium to high		partly bedded	partly sparse	–	Coarse-grained sedimentary rocks (Devonian to Carboniferous:Sandstone,mudstone,conglomerate etc.)
Ds	purplish brown, dark bluish brown	medium	trellis, parallel	medium	medium to high		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Upper Devonian:Sandstone,mudstone etc.)
Os	purplish brown	coarse	trellis	high	high		almost massive	partly sparse	–	Fine-grained sedimentary rocks (Upper Ordovician:Sandstone,mudstone etc.)
Oim	purplish brown, light pinkish gray	coarse	dendritic	high	medium to high		almost massive	partly sparse	–	Fine-grained massive sedimentary to metamorphic rocks (Lower to Middle Ordovician:Meta sedimentary rocks,volcanic rocks)
Oiv	purplish brown	coarse	dendritic	medium	medium to high		almost massive	–	–	Fine to medium-grained sedimentary rocks (Lower Ordovician:Meta sedimentary rocks,volcanic rocks)
Oi	light pinkish gray	fine	trellis	medium	very high		almost massive	–	–	Medium-grained sedimentary rocks (Lower Ordovician:Phyllite,schist,limestone etc.)
PRm	purplish brown	coarse	dendritic, rectangular	high	very high		massive	partly sparse	–	Medium-grained meta sedimentary rocks (Proterozoic:Gneiss,schist etc.)
γm	light brownish gray	medium	dendritic	medium	high		–	–	–	Felsic igneous rocks (Permian/Triassic:Undivided granitic rocks)
γp	grayish brown, light greenish brown	coarse	dendritic, rectangular	high	very high		–	partly sparse	–	Felsic igneous rocks (Silurian/Devonian:Undivided granitic rocks)
γpr	purplish brown, light greenish brown	coarse	dendritic, trellis	high	very high		–	partly sparse	–	Felsic igneous rocks (Proterozoic:Undivided granitic rocks)
	light brownish gray white	medium	trellis	medium	medium		massive	–	–	Alteration zone

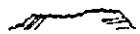
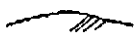
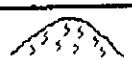
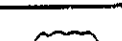
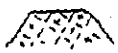
Characteristics of Photogeologic Units

San Jose Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, grayish white	fine	meandering	very low	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Recent alluvial deposits)
Qf	light purple, yellowish brown	fine	distributary	medium to high	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand etc. (Quaternary:Composite fan deposits)
Qe	white, grayish white	fine	meandering	very low	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qd	yellow	medium	–	–	very low		–	–	–	Unconsolidated sediments composed mainly of sand (Quaternary:Eolian deposits)
Pls	light purple	medium	pinnate	high	low		bedded	–	–	Fine to medium-grained brittle sedimentary rocks (Upper Pliocene:Conglomerate,sandstone,mudstone etc.)
Pli	light gray, light purple	coarse	pinnate	high	low		densely bedded	–	–	Fine to medium-grained brittle sedimentary rocks (Lower Pliocene:Sandstone,mudstone etc.)
Mis	gray, light purple	fine	pinnate, trellis	high	low to medium		bedded	–	–	Fine to medium-grained sedimentary rocks (Upper Miocene:Conglomerate,tuffaceous sandstone,mudstone etc.)
Mim	gray	fine	pinnate, trellis	high	low to medium		bedded	–	–	Fine to medium-grained sedimentary rocks (Middle Miocene:Sandstone,conglomerate,mudstone)
Ol	dark green	fine	pinnate, trellis	high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Oligocene:Sandstone,conglomerate,mudstone,andesitic volcanic breccia etc.)
K	light green, dark green	medium	dendritic	high	medium		bedded	–	–	Medium to coarse-grained sedimentary rocks (Cretaceous:Sandstone,conglomerate,mudstone etc.)
Trd	light yellowish brown	coarse	pinnate, trellis	high	high		densely bedded	–	–	Fine to medium-grained sedimentary rocks (Triassic:Continental sandstone,mudstone etc.)
Trc	grayish white	fine	trellis	medium	low		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Triassic:Continental sandstone,mudstone etc.)
Trb	light purplish gray	medium	dendritic	medium	medium		bedded	–	–	Medium to coarse-grained sedimentary rocks (Triassic:Continental sandstone,muddy sandstone,coal etc.)
Tra	purplish gray, green	medium	dendritic	high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Triassic:Continental tuffaceous sandstone,black mudstone,conglomerate etc.)

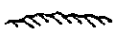
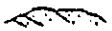
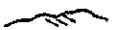
Characteristics of Photogeologic Units

San Jose Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
P	yellowish brown, light yellowish gray	coarse	pinnate, trellis	high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Permian:Continental quartzose sandstone,conglomerate etc.)
CP	dark gray, light yellowish gray	coarse	trellis	high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Carboniferous to Permian:Sandstone,limestone etc.)
Cs	purplish gray, purplish brown	fine	trellis	medium	medium to high		partly bedded	partly sparse	–	Medium-grained sedimentary rocks (Upper Carboniferous:Sandstone,mudstone,volcanic breccia etc.)
Ci	yellowish brown	coarse	trellis	high	medium		almost massive	–	–	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)
DC	purplish brown	fine	dendritic	low	medium		partly bedded	–	–	Coarse-grained sedimentary rocks (Devonian to Carboniferous:Sandstone,mudstone,conglomerate etc.)
Ds	purplish brown, yellowish brown	medium	trellis, parallel	high	high		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Upper Devonian:Sandstone,mudstone etc.)
Di	dark purple	fine	trellis	medium	high		partly bedded	partly sparse	–	Medium-grained sedimentary rocks (Lower Devonian:Mudstone,sandstone etc.)
S	light purplish brown	coarse	pinnate	high	low		partly bedded	–	–	Fine-grained sedimentary rocks (Silurian:Mudstone etc.)
Os	purplish brown	coarse	trellis	high	high		densely bedded	partly sparse	–	Fine-grained sedimentary rocks (Upper Ordovician:Sandstone,mudstone etc.)
Oi	light pinkish gray	fine	trellis	high	very high		partly bedded	partly sparse	–	Hard compact carbonate rocks (Lower Ordovician:Limestone)
PRm	greenish brown	coarse	trellis, dendritic	high	very high		massive	sparse	–	Sheared metamorphic rocks (Proterozoic:Gneiss,schist etc.)
βm	dark purple	coarse	parallel	medium	medium		massive	–	–	Mafic igneous rocks (Triassic:Basalt)
γp	greenish brown	coarse	rectangular, dendritic	high	very high		massive	partly sparse	–	Somewhat felsic igneous rocks (Ordovician:Granodiorite)
	light yellowish brown	medium	parallel	high	high		massive	–	–	Alteration zone

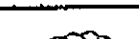
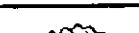
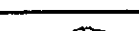
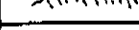
Characteristics of Photogeologic Units

San Juan Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, grayish white, brownish gray	fine	meandering	very low	very low		—	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Recent alluvial deposits)
Qf	light purple, yellowish brown	fine	distributary	medium to high	very low		—	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand etc. (Quaternary:Composite fan deposits)
Qe	gray, grayish white	fine	meandering	very low	very low		—	—	—	Unconsolidated evaporated sediments (Quaternary:Marshy sediments)
Qd	yellow, yellowish gray	medium	—	—	very low		—	—	—	Unconsolidated sediments composed mainly of sand (Quaternary:Eolian deposits)
Plu	light purple, purple	medium	pinnate	high	low		bedded	—	—	Medium to fine-grained sedimentary rocks (Upper Pliocene:Conglomerate,sandstone,mudstone etc.)
Pli	light gray, light blue, green	fine	pinnate	high	low		densely bedded	—	—	Fine to medium-grained sedimentary rocks (Lower Pliocene:Sandstone,mudstone etc.)
Mia	gray, light blue	fine	pinnate, trellis	high	low to medium		bedded	—	—	Fine to medium-grained sedimentary rocks (Upper Miocene:Sandstone,tuff,mudstone etc.)
Mim	gray, light bluish green	fine to medium	pinnate, trellis	high	medium		bedded	—	—	Fine to medium-grained sedimentary rocks (Middle Miocene:Sandstone,conglomerate,mudstone)
Mimv	gray, light brownish gray, light bluish gray	medium	dendritic	medium	high		—	—	—	Volcanic rocks (Middle Miocene:Andesite,dacite etc.)
Mii	gray, light purple	fine	pinnate, trellis	high	low to medium		densely bedded	—	—	Fine to medium-grained sedimentary rocks (Middle to Lower Miocene:Sandstone,conglomerate,mudstone etc.)
Ol	gray, light bluish gray	fine	pinnate, trellis	high	medium		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Oligocene:Sandstone,conglomerate,mudstone,etc.)
Tre	grayish white, light brownish gray	fine	trellis	medium	low		partly bedded	—	—	Fine to medium-grained sedimentary rocks (Upper Triassic:Continental sandstone,mudstone,intermediate tuff etc.)
Trv	yellowish gray, gray	medium	dendritic	medium	medium		partly bedded	—	—	Intermediate volcanic rocks (Upper Triassic:Volcanic rocks)
Tri	yellowish gray white, groenish gray	medium	dendritic	high	medium		bedded	—	—	Fine to medium-grained sedimentary rocks (Lower Triassic:Continental sandstone,conglomerate,acidic tuff etc.)

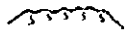
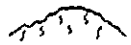
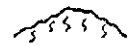
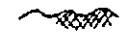
Characteristics of Photogeologic Units

San Juan Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Tra	brownish gray, green	medium	dendritic	high	medium		bedded	–	–	Fine to medium-grained sedimentary rocks (Lower Triassic:Continental tuffaceous sandstone,black mudstone,conglomerate etc.)
Pav	green, yellowish green	coarse	pinnate, trellis	high	medium		–	–	–	Volcanic rocks (Upper Permian:Acidic to intermediate volcanic rocks etc.)
Ps	brown	medium	trellis	high	medium		partly bedded	–	–	Medium-grained sedimentary rocks (Permian:Conglomerate,sandstone,mudstone etc.)
Cp	brown, bluish brown	coarse	trellis	high	medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Carboniferous to Permian:Sandstone,conglomerate,limestone etc.)
Cs	bluish gray, gravish white	medium	trellis	medium to high	medium to high		partly bedded	–	–	Medium-grained sedimentary rocks (Upper Carboniferous:Sandstone,mudstone,volcanic breccia etc.)
Ci	dark bluish gray	coarse	parallel	medium	high		partly bedded	–	–	Medium to coarse-grained sedimentary rocks (Lower Carboniferous:Conglomerate,sandstone etc.)
Ds	purplish brown, light brown	medium	trellis, parallel	high	high		partly bedded	–	–	Medium-grained sedimentary rocks (Upper Devonian:Sandstone,mudstone,volcanic breccia etc.)
Di	dark purple	fine	trellis	medium	high		partly bedded	partly bedded	–	Medium-grained sedimentary rocks (Lower Devonian:Conglomerate,sandstone,mudstone etc.)
SD	purplish brown, light brown	medium	trellis	high	high		partly bedded	–	–	Fine-grained sedimentary rocks (Silurian to Devonian:Sandstone,conglomerate etc.)
S	brown, brownish gray	coarse	pinnate	high	medium to low		densely bedded	–	–	Fine-grained sedimentary rocks (Silurian:Mudstone etc.)
Os	purplish brown, bluish gray	coarse	dendritic	high	high		densely bedded	partly bedded	–	Fine-grained sedimentary rocks (Upper Ordovician:Sandstone,mudstone etc.)
Osc	gravish white	medium	pinnate	medium	medium		partly bedded	–	–	Fine-grained sedimentary rocks (Olistolith within Upper Ordovician:Limestone?)
Oi	brown, light pinkish gray	medium to fine	parallel, dendritic	high	very high to high		partly bedded	–	–	Hard compact carbonate rocks (Lower Ordovician:Limestone?)
Cu	grayish white, light brownish gray	medium	pinnate, trellis	high	high		–	–	–	Medium to coarse-grained sedimentary rocks (Upper Cambrian:Limestone,dolomite,chert etc.)

Characteristics of Photogeologic Units

San Juan Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
PRs	bluish gray, grayish white	coarse	dendritic	high	high		–	–	–	Sheared metamorphic rocks (Proterozoic:Quartzite,calcareous etc.)
PRm	greenish brown	coarse	trellis, dendritic	high	very high		–	–	–	Sheared metamorphic rocks (Proterozoic:Gneiss,schist etc.)
PR	brown, greenish brown,purple	coarse	dendritic	high	high		–	–	–	Sheared metamorphic rocks (Proterozoic:Gneiss,schist etc.)
TP	bluish gray, grayish white	coarse	dendritic	high	very high		–	–	–	Felsic igneous rocks (Permian:Granite,granodiorite)
	light yellowish gray	coarse	–	–	medium		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

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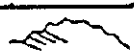
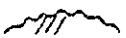
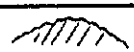
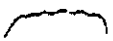
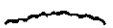
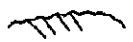
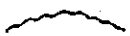
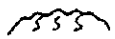
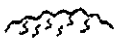
Mendoza Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qe	gray, purplish red	fine	meandering	very low	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Recent alluvial deposits)
Qf	purplish red	fine	distributary	medium to high	very low		–	partly dense	partly intense	Unconsolidated sediments composed of gravel, sand, silt and clay (Quaternary:Composite fan deposits)
Qd	yellow, purple	medium	–	–	very low		–	–	–	Unconsolidated sediments composed of sand (Quaternary:Marshy sediments)
Qg	blue	fine	–	–	very low		–	–	–	Glacial deposits (Quaternary:Eolian deposits)
Pt	reddish brown	fine	parallel	very low	very low		–	–	–	Unconsolidated sediments composed of laterized gravel,sand,silt (Pleistocene:Talus deposits)
Plv	dark brown	coarse	radial, sub-dendritic	medium	high		massive	–	–	Andesitic volcanic rocks (Pliocene:Andesite,pyroclastic flow edposits etc.)
Mim	green, greenish brown	coarse	pinnate	high	low to medium		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Middle Miocene:Sandstone,conglomerate,mudstone)
Mil	gray, light brown	coarse	dendritic, pinnate	medium to high	medium to low		partly bedded	–	–	Fine to medium-grained sedimentary rocks (Lower Miocene:Sandstone,conglomerate,mudstone etc.)
Miv	pink to reddish brown	coarse	pinnate	high	medium to low		–	–	–	Volcanic rocks (Lower Miocene:Andesite etc.)
Ol	white to greenish white	fine	parallel	low	low		–	dense	partly intense	Fine to medium-grained sedimentary rocks (Oligocene:Conglomerate,sandstone,mudstone etc.)
Ks	light brown	medium	dendritic, pinnate	medium to high	medium to high		partly bedded	partly dense	–	Medium to coarse-grained sedimentary rocks (Cretaceous:Conglomerate,sandstone,mudstone etc.)
K	dark brown, light brown	coarse	dendritic, sub-parallel	medium	medium to high		partly bedded	partly dense	–	Medium to coarse-grained sedimentary rocks (Cretaceous:Conglomerate,sandstone,volcanic breccia etc.)
Js	dark brown, brown	coarse	dendritic, sub-parallel	medium	medium to high		partly bedded	sparse	–	Medium to coarse-grained sedimentary rocks (Upper Jurassic:Conglomerate,sandstone,andesitic volcanic breccia etc.)
Trm	blue, dark blue, yellowish white	coarse	parallel, dendritic	high	low to medium		partly bedded	partly sparse	partly rare	Medium to coarse-grained sedimentary rocks (Middle Triassic:Continental sandstone,conglomerate,intermediate tuff etc.)
Tri	white, yellowish brown,blue	medium	dendritic	medium to high	medium		partly bedded	partly dense	–	Fine to medium-grained sedimentary rocks (Lower Triassic:Continental sandstone,conglomerate,acidic tuff etc.)

Characteristics of Photogeologic Units

Mendoza Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Ps	purplish brown	fine	dendritic	medium	high		–	–	–	Tuff (Upper Permian:Volcanic rocks,tuff)
Psv	greenish brown, yellowish brown	fine	pinnate	medium	high		partly bedded	dense	–	Volcanic rocks (Upper Permian:Dacite,rhyolite)
Psv	reddish brown, dark green	coarse	dendritic	high	medium		partly bedded	partly sparse	–	Intermediate volcanic rocks (Middle Permian:Andesite,Dacite)
P	yellowish brown, light yellowish gray	coarse	pinnate, trellis	high	medium to low		–	dense	–	Fine to medium-grained sedimentary rocks (Permian:Pyroclastic rocks)
Cs	purplish brown, dark green	fine	pinnate, dendritic	medium	medium		partly bedded	partly dense	–	Fine to medium-grained sedimentary rocks (Upper Carboniferous:Marine sandstone,mudstone etc.)
D	purplish brown	coarse	dendritic	medium	medium		–	–	–	Medium to coarse-grained sedimentary rocks (Devonian:Marine sediments)
S	purplish brown	coarse	pinnate	high	high to medium		–	partly sparse	–	Fine-grained sedimentary rocks (Silurian:Marine sediments)
O	gray to white	medium	–	high	medium		–	–	–	Fine-grained sedimentary rocks (Ordovician:Marine sediments)
Ci	purplish brown, yellowish brown	medium	dendritic, pinnate	medium	medium to high		–	–	–	Fine to medium-grained sedimentary rocks (Upper Cambrian:Metamorphic rocks,phyllite etc)
PRs	greenish brown	coarse	trellis, dendritic	high	high		–	partly dense	–	metamorphic rocks (Upper Proterozoic:Metamorphic rocks,amphibolite,schist etc.)
γm	white, yellowish white	fine	dendritic	medium	high		–	partly sparse	–	Felsic igneous rocks (Mesozoic:Granite)
γp	yellowish brown	coarse	dendritic	high	high		–	–	–	Felsic igneous rocks (Paleozoic:Tonalite)
σPb	light green, purplish brown	coarse	pinnate	high	medium		–	–	–	Somewhat mafic igneous rocks (Paleozoic:Gabbro,diorite)
σPa	bluish gray	fine	pinnate	medium	high		–	–	–	Mafic igneous rocks forming annular structure (Paleozoic:Peridotite,serpentinite)
	light pinkish gray	fine	dendritic	medium	medium		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

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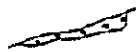
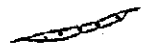
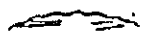
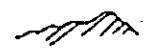
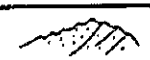
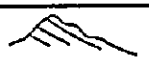
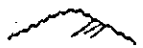
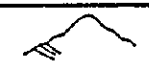
Tarija Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, brown	fine	meandering	very low	very low		–	dense	partly intense	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Unconsolidated alluvial deposits)
Qf	light yellowish brown	fine, coarse	distributary, dendritic	medium	very low		–	partly sparse	partly rare	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Gravel,sand,silt,clay-alluvial deposits)
Qe	light bluish gray	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Recent unconsolidated sediments)
Qd	light yellowish gray	coarse	–	–	very low		–	–	–	Unconsolidated sediments composed mainly of sand (Quaternary:Recent eolian deposits)
Qg	light yellowish brown	fine	parallel	low	low		–	–	–	Semi-consolidated glacial sediments composed of gravel,sand etc.,glaciar (Quaternary:Recent glacial sediments)
Pt	light grayish brown	fine	parallel	very low	low		–	partly dense	–	Coarse-grained brittle semi-consolidated sediments (Quaternary:Semi-consolidated sediments composed of gravel, sand and clay etc.)
Pl	light brown	coarse	dendritic	high	medium		almost massive	–	–	Fine to medium-grained sedimentary rocks (partly brittle) (Miocene to Pliocene:Muddy sandstone,mudstone etc.)
Mi	light yellowish gray	fine	trellis, dendritic	high	medium		bedded	dense	–	Fine to medium-grained compact sedimentary rocks (Miocene:Sandstone,siltstone,conglomerate)
Eos	light greenish gray	medium	trellis	medium	low		bedded	partly sparse	–	Medium-grained sedimentary rocks (Eocene:Red sandstone,siltstone,conglomerate)
Eoi	light yellowish brown	medium	trellis	medium	medium to high		bedded	–	–	Medium-grained sedimentary rocks (Eocene:Red sandstone,siltstone,conglomerate)
Pa	brown	coarse	parallel	medium	medium		bedded	–	–	Medium-grained sedimentary rocks (Red sandstone)
K	light gray	fine	parallel	low	very high		bedded	–	–	Hard compact carbonate rocks (Upper Cretaceous:calcareous sandstone,limestone,marl etc.)
J	light brown	medium	trellis	high	medium to high		bedded	dense	–	Fine to medium-grained compact sedimentary rocks (Middle Jurassic:Quartzose sandstone)
P	light brown	medium	trellis	high	medium		bedded	dense	–	Fine to medium-grained compact sedimentary rocks (Permian to Triassic:Sandstone,siliceous limestone,siltstone etc.)

Characteristics of Photogeologic Units

Tarija Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
C	light brown	medium	dendritic	high	high		bedded	dense	–	Fine to medium-grained hard compact sedimentary rocks (Carboniferous:Sandstone,conglomerate,mudstone etc.)
Ci	light brown	fine	parallel	low	high		bedded	–	–	Medium to coarse-grained hard compact sedimentary rocks (Lower Carboniferous:Sandstone,conglomerate)
Dm	yellowish brown	medium	trellis, dendritic	high	high		bedded	partly dense	–	Fine to medium-grained hard compact sedimentary rocks (Middle Devonian:Arkose sandstone,micaceous mudstone etc.)
Di	yellowish brown	medium	trellis, dendritic	high	high		bedded	partly moderate	–	Fine to medium-grained hard compact sedimentary rocks (Lower Devonian:Sandstone)
S	yellowish brown	fine	trellis	high	medium		partly bedded	partly moderate	–	Fine to medium-grained compact sedimentary rocks (Silurian:Alternative beds of mudstone,sandstone and muddy sandstone)
Os	dark purplish gray, light brown	coarse	trellis, dendritic	high	very high		partly bedded	–	–	Fine-grained hard compact sedimentary rocks (Upper Ordovician:Mudstone)
Oi	brown, dark purplish gray	coarse	trellis	high	very high		partly bedded	partly moderate	–	Fine-grained hard compact sedimentary rocks (Lower Ordovician:Mudstone)
Cu	light yellowish brown	fine	trellis, dendritic	low	high		partly bedded	–	–	Mainly coarse-grained hard compact sedimentary rocks (Upper Cambrian:Quartzite,sandstone etc.)
PRm	light yellowish brown	coarse	trellis	medium	high		partly bedded	–	–	Medium-grained hard compact meta sedimentary rocks (Proterozoic:Phyllite,schist,quartzite)
γPr	light pinkish brown	medium	dendritic	high	very high		massive	–	–	Felsic igneous rocks (Proterozoic:Meta granodiorite)

Characteristics of Photogeologic Units

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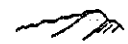
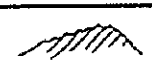
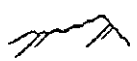
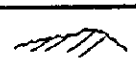
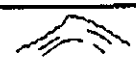
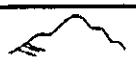
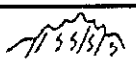
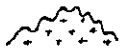
San Ramon Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Qa	gray, brown	fine	meandering	very low	very low		–	mostly dense	generally intense	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Unconsolidated alluvial deposits)
Qf	light purple, gray	fine	distributary	medium	very low		–	partly dense	partly rare	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Gravel,sand,silt,clay-alluvial deposits)
Qe	light bluish gray	fine	distributary, parallel	low	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Evaporated sediments)
Qd	light gray	coarse	–	–	very low		–	–	–	Unconsolidated sediments composed mainly of sand (Quaternary:Recent eolian deposits)
Pt	light grayish brown	fine	distributary, parallel	very low, medium	low		–	partly dense	–	Coarse-grained brittle semi-consolidated sediments (Quaternary:Semi-consolidated sediments composed of gravel, sand and clay etc.)
Pl	light brown	coarse	dendritic	medium	low		almost massive	partly dense	–	Medium to coarse-grained sedimentary rocks (partly brittle) (Quaternary:Recent deposits of gravel and sand)
Mi	light brown	coarse	trellis, dendritic	high	medium		bedded	mostly dense	–	Fine to medium-grained compact sedimentary rocks (Miocene to Pliocene:Sedimentary rocks including volcanic products)
Eo	yellowish brown, brown	coarse	trellis	high	high		bedded	mostly dense	–	Fine to medium-grained hard compact sedimentary rocks (Eocene:Subgrupo Santa Barbara)
Ks	light grayish yellow	fine	dendritic	low	high		bedded	partly dense	–	Hard compact carbonate rocks (Upper Cretaceous to Paleocene:Subgrupo Balbuena)
Ki	yellow, light grayish green	coarse	trellis, dendritic	high	high		bedded	partly dense	–	Fine to medium-grained compact sedimentary rocks (Lower Cretaceous:Subgrupo Pirgua)
J	light brown	medium	trellis	high	medium to high		bedded	dense	–	Fine to medium-grained compact sedimentary rocks (Middle Jurassic:Quartzose andstone)
P	light brown	medium	trellis	high	medium		bedded	dense	–	Fine to medium-grained compact sedimentary rocks (Permian to Triassic:Sandstone,siliceous limestone,siltstone etc.)
C	light brown	medium	dendritic	high	high		bedded	dense	–	Fine to medium-grained hard compact sedimentary rocks (Carboniferous:Sandstone,conglomerate,mudstone etc.)
Dm	yellowish brown	medium	trellis, dendritic	high	high		bedded	dense	–	Fine to medium-grained hard compact sedimentary rocks (Middle Devonian:Arkose sandstone,micaceous mudstone etc.)

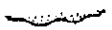
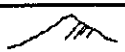
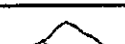
Characteristics of Photogeologic Units

San Ramon Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Di	yellowish brown	medium	trellis, dendritic	high	high		bedded	dense	–	Fine to medium-grained hard compact sedimentary rocks (Lower Devonian:Sandstone)
D	yellowish brown	medium	dendritic	high	high		partly bedded	mostly dense	–	Fine to medium-grained hard compact sedimentary rocks (Devonian:Pescado F.etc)
S	yellowish brown	medium	trellis	high	high		partly bedded	mostly dense	–	Fine to medium-grained compact sedimentary rocks (Silurian:Lipeon F.)
Ov	brown, yellowish brown	coarse	dendritic	low	medium		almost massive	–	–	Intermediate volcanic rocks,pyroclastic rocks (Ordovician: volcanic rocks)
Oi	brown, dark gray	coarse	trellis	medium to high	very high		bedded	partly dense	–	Fine-grained hard compact sedimentary rocks (Lower Ordovician:Santa Victoria G.etc.)
C	light yellowish brown	fine	trellis, dendritic	low	high		partly bedded	–	–	Fine-grained hard compact sedimentary rocks (cambrian:Meson G.)
PRm	light yellowish brown	coarse	trellis	high	very high		partly bedded	–	–	Medium-grained hard compact meta sedimentary rocks (Proterozoic:Puncoviscana F.)
γm	light yellowish brown	coarse	dendritic	high	high		massive	–	–	Felsic igneous rocks (Jurassic to Early Cretaceous:Granitic rocks)

Characteristics of Photogeologic Units

San Ramon Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, brown	fine	meandering	very low	very low		–	dense	partly intense	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Unconsolidated alluvial deposits)
Qf	light brown, light yellow	fine, coarse	distributary	medium	very low		–	partly moderate	partly intense	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Gravel,sand,silt,clay-alluvial deposits)
Qe	light blue	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Recent unconsolidated sediments)
Pt	purplish brown	fine	parallel	medium	very low		–	–	–	Coarse-grained brittle semi-consolidated sediments (Quaternary:Semi-consolidated sediments composed of gravel, sand and clay etc.)
Pl	purplish brown	medium, coarse	parallel	medium	low		–	–	–	Fine to medium-grained sedimentary rocks (partly brittle) (Miocene to Pliocene:Muddy sandstone,mudstone etc.)
Mi	purplish brown, grayish brown	fine to medium	dendritic, parallel	high	medium		bedded	partly dense	partly rare	Fine to medium-grained compact sedimentary rocks (Miocene:Sandstone,siltstone,conglomerate)
Miv	yellowish brown, dark gray	coarse	dendritic	medium	medium		massive	–	–	Eroded volcanic products-including plateau of ignimbrite (Miocene:Andesite,dacitic lava,ignimbrite etc.)
Eo	yellowish brown	medium	parallel	medium	low to medium		bedded	partly sparse		Fine to medium-grained sedimentary rocks (Eocene:Sandstone,mudstone)
Ks	light brown	medium	parallel	medium	medium		bedded	–	–	Hard compact carbonate rocks (Upper Cretaceous:Subgrupo Balbuena etc.)
Ki	greenish gray	medium to coarse	parallel	medium	medium to high		bedded	partly moderate	–	Medium-grained sedimentary rocks (Lower Cretaceous:Subgrupo Pirgua etc.)
D	greenish gray	medium	dendritic	high	medium to high		partly bedded	partly moderate	–	Fine to medium-grained compact sedimentary rocks (Devonian:Sandstone,mudstone)
S	brown	fine to medium	dendritic, trellis	high	medium		partly bedded	partly moderate	–	Fine to medium-grained compact sedimentary rocks (Silurian:Alternative beds of mudstone,muddy sandstone,sandstone etc.)
Oi	brown, dark brownish gray	medium to coarse	dendritic, trellis	high	high		partly bedded	partly moderate	–	Fine-grained hard compact sedimentary rocks (Lower Ordovician:Mudstone)
Ꞓ	light yellow	coarse	dendritic, trellis	medium	high		partly bedded	–	–	Mainly coarse-grained hard sedimentary rocks (Cambrian to Lower Ordovician:Quartzite,sandstone etc.)

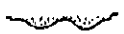
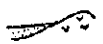
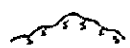
Characteristics of Photogeologic Units

San Ramon Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
PRm	dark brown, light brown	coarse	trellis	medium	high		partly bedded	–	–	Medium-grained hard compact meta sedimentary rocks (Proterozoic to Cambrian:Phyllite,schist,quartzite etc.)
γD	brown	coarse	trellis	medium	very high		massive	–	–	Felsic igneous rocks (Late Ordovician:Undivided granitic rocks)
	light yellowish brown	coarse	dendritic	low	medium		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

Rosario Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology (Correlation with Available Geologic Map)
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	
Qa	gray, brown	fine	meandering	very low	very low		–	dense	partly intense	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Unconsolidated alluvial deposits)
Qe	light blue	fine	–	–	very low		–	–	–	Unconsolidated evaporated sediments (Quaternary:Recent unconsolidated sediments)
Qf	light brown, light yellow	fine, coarse	distributary	medium	very low		–	partly moderate	partly intense	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Gravel,sand,silt,clay-alluvial deposits)
Qv	brownish gray	coarse	radial	low	high		–	–	–	Recent volcanic products (Pliocene to Holocene:Andesite lava,ignimbrite etc.)
Pt	purplish brown	fine	parallel	medium	very low		–	–	–	Coarse-grained brittle semi-consolidated sediments (Quaternary:Semi-consolidated sediments composed of gravel, sand and clay etc.)
Pl	purplish brown	medium, coarse	parallel	medium	low		–	–	–	Fine to medium-grained sedimentary rocks (partly brittle) (Miocene to Pliocene:Muddy sandstone,mudstone etc.)
Plv	dark gray, brownish gray	coarse	radial	medium	medium		–	–	–	Relatively young lavas (Pliocene to Pleistocene:Andesite to basaltic lava,pyroclastic rocks)
Mi	purplish brown, grayish brown	fine to medium	dendritic, parallel	high	medium		bedded	dense	partly rare	Fine to medium-grained compact sedimentary rocks (Miocene:Sandstone,siltstone,conglomerate)
Miv	yellowish brown, dark gray	coarse	dendritic	medium	medium		massive	–	–	Eroded volcanic products-including plateau of ignimbrite (Miocene:Andesite to dacitic lava,ignimbrite etc.)
Eo	yellowish brown	medium	parallel	medium	low to medium		bedded	partly sparse	–	Fine to medium-grained sedimentary rocks (Eocene:Sandstone,mudstone)
Ks	light brown	medium	parallel	medium	medium		bedded	–	–	Hard compact carbonate rocks (Upper Cretaceous:Subgrupo Balbuena etc.)
Ki	greenish gray	medium to coarse	parallel	medium	medium to high		bedded	partly sparse	–	Medium-grained sedimentary rocks (Lower Cretaceous:Subgrupo Pirgua etc.)
Oim	grayish brown	coarse	parallel	medium to high	medium		partly bedded	–	–	Fine-grained sedimentary rocks to metamorphic rocks (Lower to Middle Ordovician:Las Vicunas F.etc)
PRm	light yellowish brown	coarse	trellis	medium	high		partly bedded	partly sparse	–	Medium-grained hard compact meta sedimentary rocks (Proterozoic:Phyllite,schist,quartzite)

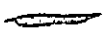
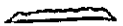
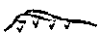
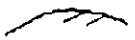
Characteristics of Photogeologic Units

Rosario Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
γp	brown	coarse	trellis	medium	high		massive	–	–	Felsic igneous rocks (Ordovician:Poutonic rocks)
	light yellowish brown	coarse	dendritic	medium	medium		massive	–	–	Alteration zone

Characteristics of Photogeologic Units

Tucuman Area

Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Qa	gray, grayish white	fine	meander	very low	very low		-	partly dense	intense	Unconsolidated recent alluvial deposits composed of gravel, sand, silt and clay (Quaternary:Recent unconsolidated sediments)
Qf	light purple, gray	fine	distributary	medium to high	very low		-	partly dense	partly intense	Unconsolidated composite fan deposits composed gravel,sand etc. (Quaternary:Recent unconsolidated sediments)
Qe	white, bluish white	fine	meander	very low	very low		-	-	-	Unconsolidated evaporated sediments (Quaternary:Evaporated sediments)
Qd	light gray	medium	meander	very low	very low		-	-	-	Eolian deposits composed mainly of sand (Quaternary:Recent unconsolidated sediments)
Pt	light gray, purplish brown	fine	parallel	low to medium	low		-	partly sparse	partly rare	Medium to coarse-grained brittle semi-consolidated sediments (Quaternary:Recent unconsolidated sediments)
Pl	light purple, gray	fine	pinnate	high	low to medium		almost massive	-	-	Fine to medium-grained brittle sedimentary rocks (Quaternary:Unconsolidated sediments)
Plv	bluish gray, brownish gray	coarse	parallel	low	medium		partly bedded	-	-	Relatively young lavas (Pliocene:Stratovolcanos composed of andesite and basalt)
Mib	light purplish gray	fine	pinnate	high	low		partly bedded	partly sparse	-	Fine-grained somewhat brittle sedimentary rocks (Miocene:Mainly continental sedimentary rocks)
Mia	light purplish gray	fine	pinnate, trellis	high	low to medium		partly bedded	-	-	Fine to medium-grained sedimentary rocks (Miocene:Mainly continental sedimentary rocks)
Miv	light purplish gray, blue	fine	pinnate, parallel	high	medium		almost massive	-	-	Eroded volcanic products (Miocene:Andesite,dacite,basalt,pyroclastic rocks)
Mi	light purplish gray, brown	fine	trellis	high	medium		partly bedded	dense	-	Fine to medium-grained compact sedimentary rocks (Miocene:Mainly continental sedimentary rocks)
Ki	green	medium	parallel, trellis	medium	medium		almost massive	dense	-	Medium-grained sedimentary rocks (Lower Cretaceous:Subgrupo Pirgua etc.)
Os	light brown	medium	dendritic	medium	high		almost massive	-	-	Medium-grained compact sedimentary rocks (Upper Ordovician:Mylonite)
Oiv	grayish brown	coarse	trellis	medium	medium		almost massive	-	-	Fine to medium-grained sedimentary rocks (Lower Ordovician:Meta sedimentary rocks,meat volcanic rocks)

Characteristics of Photogeologic Units

Tucuman Area

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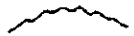
Unit	Photo-characteristics		Morphologic Expression					Superficial Cover		Probable Lithology
	Tone	Texture	Drainage Pattern	Drainage Density	Rock Resistance	Section	Bedding	Vegetation	Cultivation	(Correlation with Available Geologic Map)
Oi	grayish brown	fine	dendritic	medium	medium to high		almost massive	-	-	Medium-grained sedimentary rocks (Lower Ordovician:Phyllite,schist,limestone etc.)
~~Cb~~	light grayish brown	coarse	parallel	low to medium	medium		-	-	-	Medium to coarse-grained sedimentary rocks (Cambrian:Amphibolite,gneiss,meta volcanic rocks,meta carbonate)
PRm	light brown, purplish brown	coarse	parallel, dendritic	high	very high		almost massive	partly dense	-	Medium-grained meta sedimentary rocks (Proterozoic:gneiss,schist etc.)
γ~~m~~	light yellowish brown	coarse	dendritic	medium	high		massive	-	-	Felsic igneous rocks (Cretaceous:Undivided granitic rocks)
γp	light pink, light yellowish brown	coarse	dendritic, trellis	high	very high		massive	partly sparse	-	Felsic igneous rocks (Late Ordovician,Carboniferous:Undivided granitic rocks)
	light pinkish gray	coarse	dendritic	medium	medium		massive	-	-	Alteration zone