
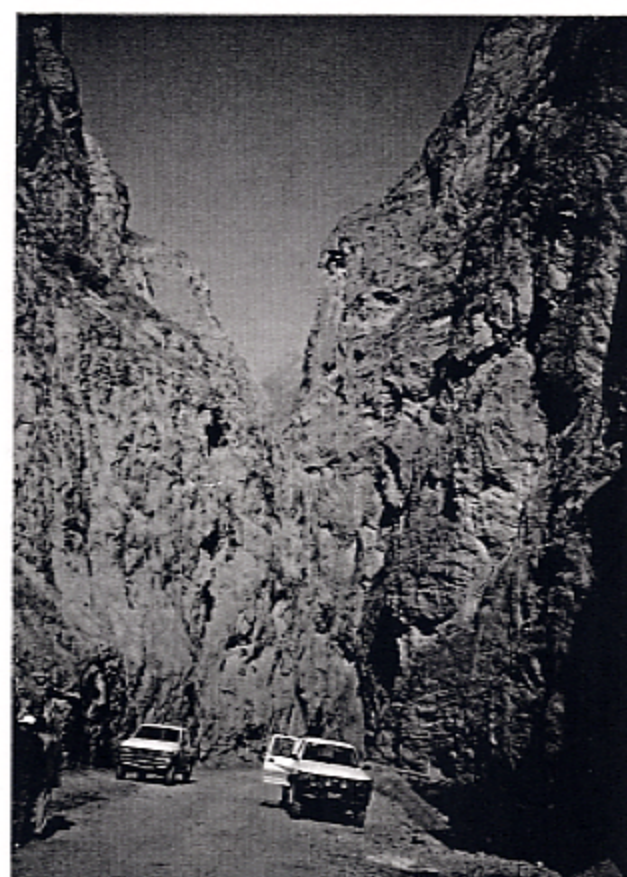


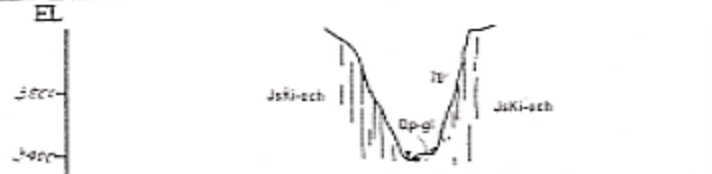

Table S.2.4.1.3 General Characteristics of Proposed Dam and Intake Site (14/18)

Site	Morro de Arica	Department : Lima	Province : Yauyos	District : Yauyos	River : Cañete				
Topography	Riverbed width	Approximately 20 meters				Dam site	a. Topography of the dam site is excellent due to very narrow gouge. b. Lithology of bedrocks is hard and massive.		
	Characters	Narrow gorge between semi-vertical rocky walls ranging in angle from 60 to 70° from horizon.							
Schematic section	EL					Reservoir	Basement rock covered by the thin soft sediments less than 5 m thick.		
		Qh-pf: Present fluvial deposit Ki-g: Goyllarisquiza Group (JsKi-och: Oyon-Chimu Formation) (Ki-sa: Santa Formation)							
								Eval.	Detailed study has been started on 1999 such as drilling works, excavation of lateral galleries and in-situ tests by Cementos Lima S.A.
								Issues	The dam height should not exceed the contact with limestone of the Santa Formation. It's necessary to grasp exactly the distribution of the Santa Formation, karstic features and groundwater cycle.
Geology	Geology of Basement		Left bank	River bed	Right bank	Site photo			
			Lower Cretaceous	Lower Cretaceous	Lower Cretaceous				
			Goyllarisquiza Group(JsKi-och, Ki-sa) Siliceous sandstone, quartzite alternating with layers of siliceous shale and limestone	Goyllarisquiza Group(JsKi-och) Siliceous sandstone, quartzite alternating with layers of siliceous shale	Goyllarisquiza Group(JsKi-och) Siliceous sandstone, quartzite alternating with layers of siliceous shale				
	Condition of Basement	Fault	Notorious faults are not present	Notorious faults are not present	Notorious faults are not present				
		Fracture	Fractures in parallel with bedding. Strongly folded.	Fractures in parallel with bedding	Fractures in parallel with bedding. Strongly folded.				
		Alteration	No detect	No present	No present				
		Weathering	Slight rusty-weathering along the fracture	No present	Filmy cover of calcareous materials				
	Overlying Sediment		No present	Small fluvial deposit	Thin fluvial deposit consisting of pebble and sand.				
	Landslide and/or Failure		No present	No present	No present				
	Remarks		Cavernous features are shown along the fracture and bedding fissility. Limestone of the Santa Formation overlays on the Oyon-Chimu Formation attaining higher than 3,000-3,060 m.a.s.l. Spring water is distributed in left abutment between 230 and 265 meters downward from the dam axis.						

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Table S.2.4.1.3 General Characteristics of Proposed Dam and Intake Site (15/18)

Site	Vitis	Department : Lima	Province : Yauyos	District : Vitis	River : Cañete		
Topography	Riverbed width	Approximately 100 meters including glacial deposits and talus depo				Dam site	
	Characters	U-shaped valley between semi-vertical rocky slopes generally 60° in angle from horizontal. Bottle neck is located in the outlet of the Piquicocha lake with rapids.					
Schematic section					Reservoir		
	Qh-id: Talus deposit Qp-gl: Glacial deposit Ki-g: Goyllarisquiza Group (JsKi-och: Oyon-Chimu Formation)						
Geology	Geology of Basement		Left bank	River bed	Right bank	Issues	
			Lower Cretaceous	Lower Cretaceous	Lower Cretaceous		
			Goyllarisquiza Group(JsKi-och) Siliceous sandstone, quartzite alternating with layers of siliceous shale	Goyllarisquiza Group(JsKi-och) Siliceous sandstone, quartzite alternating with layers of siliceous shale	Goyllarisquiza Group(JsKi-och) Siliceous sandstone, quartzite alternating with layers of siliceous shale		
	Condition of Basement	Fault	No major fault is present	No major fault is present			
		Fracture	Fractures in parallel to stratification with strike N27°W and semi-vertical dip.	Fractures in parallel to bedding	Fractures in parallel to bedding		
		Alteration	Crystallization of pyrite and calcite along the fracture.	No detected	Crystallization of pyrite and calcite along the fracture.		
		Weathering	Slight rusty-weathering along the fracture.	No detected	Slight rusty-weathering along the fracture.		
	Overlying Sediment		No present	Glacial deposit and colluvial blocks	No present		
	Landslide and/or Failure		Rock failure	No present	Rock failure		
	Remarks		There are large accumulation of fallen blocks a maximum diameter of 5 meters and glacial deposit, which show a heterogeneous composition.				

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