

Example sheet 4

Micro-level analysis of the Widan el Faras basalt quarries (Old Kingdom)

Widan el Faras basalt quarries (Old Kingdom production)		FEATURES/DATA	INTERPRETATION
Resource	Rock	Basalt	Used exclusively for construction of the temple floors, importance of black stone for this purpose.
	Consumption	Pyramid fields (mortuary temple floors)	
	Commodity	Ornamental stone	
	Landscape	Layered deposit	The basalt caps the hilltops in the area as one single layer. The basalt is severely weathered since the Old Kingdom .
	Secondary resources	Dolerite and metagabbro tools (imported); local sandstone and mudstone for road construction	Stone tools were imported from upper Egypt
Production	Quarry morphology	Open cast along escarpment	Open cast quarrying along the escarpment, mainly extracting irregular blocks of varying size which were not further treated. Such blocks were the end product from the quarries.
	Extraction	Levering along natural fractures	
	Block reduction	Minor	
	Semi-finishing	None	
	Finishing	None	
Logistics	Internal	Slipways, paved road, stockpile of blocks	Irregular blocks were stockpiled and transported on a paved road to an ancient harbor. From there the blocks were taken on the waterway to the pyramid fields, where they were further worked.
	Overland	11 km paved road down to the ancient Lake Moeris	
	Waterways	Quay features by the ancient shore of Lake Moeris. Water transport from there to the pyramid fields	
Social infrastructure	Stone built features	Camp with 6 stone structures and hearths	Small temporary settlement that could have sustained approximately 20-25 people.
	Domestic artifacts	Scatters of ceramics	
	Epigraphic	Not observed	
Time depth	Direct dating	Ceramics early 4th and 5th Dynasties	Correspondence between evidence from consumption and ceramics in the encampment indicate exclusive quarrying for four temple floors (Khufu, Userkaf, Sahura and Niyusera) in the 4 th and 5 th Dynasties (2590 – 2420 BCE)
	Consumption	Pyramid temple floors 4th and 5th Dynasties	
	Technology	No evidence except stone tool production (pre-iron)	
	Relative timing	Assumed younging of quarries from east to west	
Summary	The basalt quarries were sporadically exploited within a period of 170 years exclusively for making the temple floors at four pyramid complexes. The quarrying took place in parts of the basalt layer where the block size was sufficiently large, and involved predominantly extraction of blocks of irregular shape using natural fractures in the deposit. The blocks were brought from the quarries to a stockpile, from where they were transported overland 11 km to a harbour area, where they were loaded onto ships for the final transport to the place of use. The material culture in the quarry area indicates a small number of people involved in the quarrying and transport. Stone tools were imported from upper Egypt, and may indicate a connection between Old Kingdom quarry landscapes.		