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Ethiopian Institute of Architecture Building Construction and City
Development (EiABC)

Addis Ababa University

Chair of Conservation of Urban and Architectural Heritage

Title:

**A STUDY OF THE CONSERVATION STATUS OF ABREHA
AND ATSBEHA ROCK-HEWN CHURCH, TIGRAY,
NORTHERN ETHIOPIA**

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Ethiopian Institute of Architecture, Building Construction and City
Development (EiABC)

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Church, Tigray, Northern Ethiopia

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Abstract

In Ethiopia, there are more than one hundred forty rock hewn churches. Almost all rock cut churches have similar conservation problems. They all are deteriorating due to lack of regular care, maintenance and conservation. Abreha and Atsbeha is one of the rock hewn churches in Ethiopia, which is believed to be constructed in the fourth century AD-. It is a beautifully carved rock cut church that is found in Tigray Regional State in the northern part of Ethiopia. It is situated not far from Wukro town at the foot of the hill facing towards the Hawzen plain. The church stands out on three sides free from the parent rock from which it was carved and it is often described as a semi-monolithic rock cut church. The white double- arched portico at the front is a later construction covered with corrugated iron sheet. The exquisitely carved, decorated and painted rock cut architecture of Abreha and Atsbeha demonstrate the skills and knowledge of the Ethiopians in the past.

Nevertheless, this historical rock-cut church is subject to natural and man-made threats; Structural defects; (vertical, horizontal and diagonal cracks,) black crusts, rock detachment, rock fracture, rock erosion, paint loss and fading deteriorations, as well as rain, wind, incense smoke, congregation activities, dusts, termite damage, improper installation of electric wires and curtains, vegetation invasion, absence of management plan and poor conservation practices are the major deteriorating factors of the rock hewn church and its wall paintings identified during the study. The research has identified and documented the structural and architectural parts of the rock hewn structure, including the mural and the cotton cloth wall paintings. The study also identified and analyzed the deterioration phenomena affecting the rock hewn church and its wall paintings as well as the conservation status of the rock-hewn church. The study draws on international and national conservation guidelines for monuments and wall painting, painting analyses, and graphic documentation. The results of the study are intended to be used for assessing the condition of both local and regional historical rock cut architecture and wall paintings.

Key words: *conservation, rock hewn, wall painting, semi monolithic, church, Abreha and Atsbeha, deterioration, deteriorating factors.*

CHAPTER ONE

1. Introduction

Hewing churches from the rock is a long-established tradition in Ethiopia. There are over a hundred churches found in numerous sites in Ethiopia carved out over several centuries. The churches of Ethiopia can be classified into three main groups: built-up cave churches, rock-hewn cave churches and rock-hewn monolithic churches.

The roots of the rock-cut churches in Ethiopia are essentially Axumite, relating to place architecture of wood and stone construction, and the early Christian basilica (Phillipson, 2009). The practice of rock-hewn church construction extends from the zenith of the Axumite period (fourth to fifth centuries), up to the height of the Zagwe period (late twelfth and early thirteenth centuries) demonstrating the indigenous origin and development of the rock-cut churches in Ethiopia (Buxton 1970, p. 45–6).

However, most of the Axumite period built-up architecture are turned into ruins that are poorly preserved or inadequately recorded. Some, like St Mary Tseyon Church, are obscured by subsequent replacement or large-scale modification. In fact, no Axumite period rock-hewn monolithic churches survive. Nevertheless, there are a number of other types of Axumite rock-hewn structures, particularly, tombs that exhibit the techniques required for the creation of monolithic rock-hewn church.

In the highlands of eastern Tigray, significant numbers of rock-hewn churches survive. According to Phillipson (2009), the earliest rock cut churches in Eastern Tigray were apparently of Late Axumite age and were initially funerary monuments. He also argues that unlike early Axumite churches, mural paintings are largely restricted to the rock cut churches in eastern Tigray. The church of Abreha and Atsbeha is one of the rock -hewn churches with mural paintings in eastern Tigray that is believed to be the burial place of two Axumite rulers.

Nevertheless, over the years, like similar rock-hewn churches in Ethiopia, the church of Abreha and Atsbeha have been exposed to wind, rain, and environmental changes as well as to human activities. This has resulted in a severe degradation of the church, which is now considered to be in critical condition. Thus, this study is aiming at to identifying and documenting the various

causes and factors of deteriorations of the church and to assess and evaluate the degree of damages both on the building and mural paintings of the church and to recommend conservation-restoration solutions.

1.1. Background

An historical monument may be defined by its architectural function and by its setting (urban or rural) in which evidence of a particular culture, significant creation or historical event is found. Great works of art, but modest works of the past that with the passing of time have gained cultural importance (Venice charted 1964). According to (NPC – AMASR 2014)' ancient Monument is meant any structure, erection or monument, tumulus or place of interment, or cave, rock sculpture, inscription or monolith of historical, archeological or artistic interest that has existed for. "Monuments" include a wide range of human-built buildings, whether standing or underground or still buried. Monuments include archeological sites and mounds, caves and rock shelters, rock-cut temples, monoliths, sculptures and panels of bas-relief, underground structures and architectural heritage representing different categories such as religious, secular, defensive, funerary, landscapes, etc.

On the other hand, cultural heritage is defined by the UNESCO, 1972 as Monuments: architectural works, monumental sculpture and painting works, archeological elements or structures, inscriptions, cave dwellings and combinations of features of exceptional universal value from a historical, artistic or scientific point of view;

Building groups: groups of separate or related buildings of exceptional universal value from the point of view of culture, art or science, due to their architecture, homogeneity or position in the landscape;

Sites: works of man or a mixture of works of nature and man, and areas like archeological sites of great historical, architectural, ethnological and anthropological interest (UNESCO, 1972).

Conservation has been defined as “the action taken to dynamically prevent decline and manage change” (Feilden, 2003). It is an activity focused on humanistic and scientific studies and comprehensive study based on cultural, artistic, and technological and craft practice. It includes all activities that prolong the life of our cultural and natural heritage, with the intention of

displaying the artistic and human messages that such buildings possess to those who use and look at historic buildings with wonder. It also involves clarifying its artistic and historical messages without losing authenticity and meaning (ICOMOS, 2010). The conservation of cultural heritage is rooted in the values attributed to the heritage in all its forms and historical periods (the Nara document, 1994) our ability to understand these values depends partly on how credible or truthful the sources of information about these values can be. Knowledge and understanding of these sources of information in relation to and meaning of the cultural heritage's original and subsequent characteristics is a necessary basis for evaluating all aspects of authenticity. Authenticity, thus considered and confirmed in the Venice Charter (1964), tends to be the critical value-related qualifying factor. Authenticity understanding plays a fundamental role in all cultural heritage scientific studies, in the planning of conservation and restoration, as well as in the inscription procedures used for the World Heritage Convention and other inventories of cultural heritage (the Nara document, 1994).

According to (NPC – AMASR, 2014), monument preservation should use sufficient scientific technology and equipment to promote study and understanding of its physical nature, the examination of its materials and construction technology, and that of its current state. Regarding reporting purposes, the use of appropriate technology should also be required.

Preventive preservation aims at establishing favorable conditions mitigating deterioration and avoiding unnecessary remedial treatments, thereby extending the life span of wall paintings (ICOMOS, 2003). Appropriate monitoring and environmental control are both important preventive preservation elements. Unfavorable climatic conditions and problems with humidity can lead to degradation and biological attacks

The general concept of restoration involves different types of treatments intended to preserve structures, places and historic cities, including care, reconstruction, expansion, and reinforcement (Lotfi Khaled Hassan, 2016). Throughout history, many concepts and principles related to the way of protecting heritage have been developed, thereby influencing the development of modern methodologies of protection. In the nineteenth century, the Frenchman Eugene Emmanuel Viollet-le-Duc (1814–1879) The Englishman John Ruskin (1819–1900) was leading figures in the theory of architectural monument preservation and restoration. (Helena KALČIĆ, 2014) There are also

heritage conservation activities of recommendation, charter, declaration and treaties provided by the UNESCO, ICOMOS, with the objective of heritage protections.

Ethiopia is known throughout the world for its ancient rock-hewn churches (Asrat, 2002) situated in the central and eastern part of Tigray (Phillipson, 2009). They are distributed from the north part of Ethiopia to the south: in central and eastern Tigray, Lalibela and around, Yeka Mikael and Adadi Mariam in central Shewa are some examples. They emulate built-up structures, which have their own characterization and construction materials.

The roots of Ethiopian architecture can be found in temple of Yeha in Tigray, which is one of the oldest dressed stone structures in Ethiopia (Lindehanl, 1970) This area is rich in ancient human history and the human settlement started from the oldest civilization in the Da'mat dynasty's capital city of Yeha and this was considered as the first human settlement (urban area) in the Tigray region and the country in general (Bekele, 2019). The wall construction is smooth with long, well-cut blocks and close architectural joints; showing the pre-Axumite architecture.

The obelisks of Axum are unique structure consisting of 10 to 12 story characterized by 'monkey head' decoration echoing construction techniques adhering to "equal- equal" Proportion Principles. Almost all the early Axumite built up church architecture were demolished because of wars, but there are some, like the church of Debre Damo, Yimrhane Kirstos and Zarema Georgis, which survive as they were not accessible to the invaders, and these demonstrate similar Axumite architectural features (Phillipson, 2009; Munro-Hay, 1991).

The rock hewn churches of the eastern Tigray also survived till this day. Carved out in imitation of the built-up structures, most rock cut churches dated to the medieval age with the exception of some which goes back to Axumite period. It is not exactly known, where and when rock excavation started or who initiated it; but some legends say it was started by Abreha and Atsbeha in the fourth century. Some scholars, however, associate the rock excavation with the coming of the nine Saints from Syria, Rome and Armenia (Phillipson, 2009; Hableslassie, 1972; Munro-Hay, 1991).

There are different types of rock hewn construction classifications. Lindehanel (1970) classifies the medieval rock church into three main types: type one; build up cave churches, which are built

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under natural caves. Type two: rock hewn churches which are hewn laterally in to the cliff face. In some case only the sanctuary is hewn and the rest is built up. The classification can extend further, also to semi-monolithic and mixed (that is half rock hewn and half built up structures (Lindehanel, 1970. In the Ethiopian Orthodox Tewahido church, there are two kinds of construction forms: one, the rectangular and the other, circular. The rectangular form is found in almost all early Axumite architecture; while the circular form is dominant in the central Ethiopian but not much in the northern Ethiopia. It is not known when the circular form developed but some scholars believe that it was in the sixteenth century (Phillipson, 2009; Hableselassie1972). In both the rectangular and circular churches, however, the external and interior design and layout are the same: the *Qine-mahilet*, the *Qidest* and the *Meqides*. The outside ambulatory of the three constrict part is called *Qine-mahilet* where hymns are sung is the *debteras* stand; the second is called the *Qidst*, which is reserved for priests and it is also where the congregations receive the Eucharist. The third is the *meqides*: this is where the *Tabot* or the ark of covenant rests. Only senior priests and kings are permitted to enter.

There are more than 100 rock-hewn churches, of different ages, sizes and with their own history in and around Atsbi, Hawzen-Ger'alta, Sinkata-Adigrat and Tembien (Asrat, 2002). These rock-hewn churches are made by carving into the rocks or by converting naturally formed caves. Some of these rock hewn churches are by tradition closely connected with the twin kings known as Abreha and Atsbeha (also known as king Ezana and Shizana), and are believed to have been constructed in 4th century AD. Abreha and Atsbeha is a semi monolithic church, carved about 1600 years ago into sand stone which belongs either to Entcho or Adigrat sandstone. It is believed that the original structure was intended to function as a tomb, but now it is serving both as a church and tombs. In the compound there are about 325 excavated graves (see Asrat, 2002; Phillipson, 2009).

The church of Abreha and Atsbeha stands out on three sides free from the rock from which it was carved. It is described as a semi-monolithic rock-cut church, and has at the entrance a modern white-painted double arch portico covered with corrugated iron sheeting. This portico was built by the Italians in an apparent effort to cover the damaged front part of the church. The internal part of the *qine-Mahilet* is decorated with paintings of different saints. Unlike in other churches, spiritual and secular paintings are included on the wall. The paintings are two types: one, the mural

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painting painted directly on the dry wall and the second is painted on cotton cloths. The mural painting is located on the northern upper part of the wall in the *Qidst*. Only four colors are used in execution the painting; such as the earthy brown, blue green, black and white. The painting is categorized under the first Gondarian painting styles. And the cotton cloth paintings are located mainly on the wall of *Qine-mahilet* and this cotton cloth wall painting is categorized under the second Gondarian wall paintings. It is much more similar with the paintings of Debre Birhan Silassie in Gondar; further, the ceiling of the *Qidst* and *Meqides* is carved with geometric designs based on variations of the cross motif, which may have been engraved during excavation. The painters of the church are not known; this is because of Christian humility. Ethiopian painters do not put their signature or write their names. Because do not want fame. While creating work of art for the glory God, it is prohibited to write one's own name on something which is primarily the work of God (Heldman, 2010).

Through the ages, intervention activities have been made at different times by different actors: during the reign of king Yohannes the fourth, the *Qine-mahilet* was added and painted with cotton cloth wall paintings; again in 1940s during the Italian occupation; the porch in front of the *Qine-mahilet* was added and to blend it with the rock they painted it with white color which now dominates the whole structure, In 2005 (1997G.C) a restoration intervention was made on the wall painting and on the roof by a group of conservators from the ARCCH; again, in 2006 (1998EC), an intervention on the wall painting in the *Qidst* was made (ARCCH Archive, 1997; 1998 EC)

However, since then, there has been no documented conservation activities conducted on the church although the church is suffering from natural and man-made deteriorating agents. Some parts of the paintings have been lost due to body contact while other areas of the paintings have become covered by dust. Not only the painting the structural and architectural part of the rock cut is also damaged and degraded due to lack of appropriate and regular conservation activities made on neither on the church building nor on the wall paintings. Hence, urgent Conservation and restoration intervention are necessary.

Therefore, the aim of this research is to support the sustainable development of Abreha and Atsbeha while also preserving its tangible and intangible values by providing a more robust, evidence-based foundation for decision-making to identify, and document the structural and

architectural aspects of the church and its painting, examine the deterioration phenomena and identify their causes of deteriorations and recommend appropriate conservation-restoration solutions.

1.2. Problem Statement

Cultural heritage enrichment communities often provide a profound and inspiring sense of connection to the past and lived experiences with the environment and landscape (The Burra charter 1999). The rock cut church of Abreha and Atsbeha is one of the earliest historical rock cut churches in Ethiopia. According to oral accounts, the origin of the rock cut church of Abreha and Atsbeha goes back to the 4th century AD. It is claimed to be constructed by the two kings, Abreha and Atsbeha, who had converted to Christianity in the fourth century AD. Nevertheless, scholars, such as, Philipson (1996) argued that the church of Abreha and Atsbeha might be constructed in the 7th century AD on the 4th century tombs of the two kings.

Abreha and Atsbeha is a semi-monolithic rock cut church, excavated for the purposes of church dedicated to St Marry. The church is most important pilgrimage site in northern Ethiopia; which is visited every year on October the twelfth by many pilgrims from different parts of the country. The church's unique architectural elements, wall paintings and carved interlaced patterns are still a source of pride and identity. Due to this outstanding value Abreha and Atsbeha rock-hewn church become one of the most significant sites that are included within the sacred landscape of Gheralta on the UNESCO Tentative lists.

Despite its cultural, spiritual, aesthetical and historical significance, however, most parts of the church are poorly protected and preserved. There are a number of factors contributing to the deterioration of the historical rock hewn church and its wall paintings: Such includes: age, erosion, water infiltrations, biological phenomena, termite damaging, human activities, structural defects, poor interventions, poor electrical and curtain installations.

In response to these problems, this study has conducted to investigate the conservation status of the rock hewn and its mural paintings. The study has identified and documented the deteriorating factors and has recommended appropriate conservation intervention solutions relating to the rock cut and wall paintings of the churches as well as to its settings. The study also put forward recommendations regarding to the intangible dimensions, which contribute to Abreha and Atsbeha

additional values to the church as a living heritage in the context of economic development through tourism.

Sustainable heritage management plan should be applied to ensure local participation in decisions making concerning the heritage site and in turn benefiting from tourism related activities, including traditional handicraft development.

Research questions

- Have there been any documentations and conservation interventions at the site to date?
- What are the history and cultural traditions related to the site?
- What are the styles? Motifs and way of construction of the rock cut structure and its wall paintings?
- What is the condition of the rock cut church of Abreha and Atsbeha and its wall paintings?
- What are the factors contributing to deterioration of the rock cut architecture and its wall paintings?
- What is the current intervention practice to rock cut architecture and wall paintings?
- Are there sustainable heritage management alternatives to apply on this site?

1.3.1. General Objective

The general objective of this research is to study the conservation status of Abreha and Atsbeha. Rock-hewn church and its wall paintings and recommend sustainable conservation intervention solutions

1.3.2. Specific objectives

- To identify and document the architectural, structural and wall paintings of the rock cut church of Abreha and Atsbeha.
- To make investigation on the rock cut architecture and painting patterns and styles of the wall paintings and ceiling decoration.
- To study the current condition of the rock cut architecture and the wall paintings.

- To investigate the deteriorating factors to the rock cut architecture and wall paintings
- To review current practices on conservation of architectural and wall painting of rock cut architecture.

1.4. Significance of the Study

This research has identified deterioration factors that are observed on the church building and its wall paintings and recommended possible conservation-restoration solutions. Thus, the finding of the study is expected to bring the following benefits:

- Identify challenging factors in the conservation process of historical rock hewn structures and wall paintings.
- Identify how to include stake holders in the conservation process of the rock hewn structure and the wall paintings.
- It will motivate others to study further investigations on rock hewn structure and wall paintings.
- It may apply to the conservation of other architectural and wall paintings of rock cut found in Ethiopia.
- It will bring good lessons on how to identify, document, examine material and develop good conservation practices on architectural and wall painting of rock cut buildings.

1.5. Scope and limitations

The study is carried out on the rock hewn church of Abreha and Atsbeha (found around Wukro, Tigray Region, in northern Ethiopia.) The research is limited to the study of the conservation status of the rock hewn and its wall paintings.

- The research was carried out by identifying and documenting the deteriorating factors and recommended appropriate conservation interventions.

The main limitations of this study were:

- Documentation: there was lacks of primary and secondary sources and documentation on the rock hewn churches of Ethiopia in general and the church of Abreha and Atsbeha in particular. In spite of all the challenges, the researcher had conducted the study diligently.

1.6. Methodology

Generally, this thesis has been managed based on qualitative research methods.

Approach

This research topic was selected in consultation with the Authority I am working in, ARCCH, a Federal Authority for Research and Conservation of the Cultural Heritage of the country. Prior to the fieldwork, literatures related to the study site and its environs have been collected and reviewed. The necessary permission letters have been obtained from ARCCH, Tigray Culture and Tourism Bureau and Wukro Woreda Culture and Tourism Office as well as from Abreha and Atsbeha Church Administration Office.

Data was collected by respecting the church traditions and dogmas. People were selected for interviews based on their knowledge about the church and church traditions.

1.6.1. Data collection Methods

Both primary and secondary data collection methods have been used.

1.6.2. Interviews and Oral Traditions

Semi structured interviews have been conducted with the priests, deacons and tour guides of the church of Abreha and Atsbeha and the surrounding heritage sites as well as with heritage conservation experts working at the ARCCH, especially with those who had previous experience in the conservation and restoration of the rock cut churches in Tigray including Abreha and Atsbeha church. Oral traditions were collected by conducting key informant interviews with church administrators their history, culture and knowledge of the heritage site used to understand and analyse the historic structure and its significance. Interviews with ARCCH experts helped to understand the aims and extents of the past restorations.

1.6.3. Literature Review

Written secondary sources, such as, published books, journals and articles were collected and reviewed. Current practice in conservation and restoration as reported by UNESCO and other

advisory bodies were assessed; Charters, conventions, declarations and recommendations of conservation were analyzed. Different guidelines and techniques of preventive methods in the area of architectural rock hewn and wall painting heritages were assessed. These documents help to understand the history and culture of the rock hewn church tradition in Ethiopia in general and the study region in particular as well as the theory and practice of heritage stone conservation.

1.6.4. Physical Survey and Observation

Physical survey and inventory were conducted on the rock hewn church and its environs. All tangible and moveable heritages of the church and the surrounding natural and cultural landscape were documented. The existing conditions of the church and its compound were recorded by observation, measurements, photographic documentations and sketches.

Tools: to document and analyze the present condition and the deteriorations of the rock hewn and the wall paintings the following tool were used:

- Measurements were taken with light meters and tape measures.
- To draw the painting ink pen along with sketch book was used.
- Digital camera with twenty mega pixels was used to take photos of the wall paintings of the rock hewn and the surrounding areas.
- Voice recorder was used to record descriptions of the church as well as interviews

Data Analysis

Literature reviews and interviews have been analyzed by descriptive methods. Data collected from measurements have been analyzed with different software and maps, on-built plans, detail maps of deterioration and illustration of the ceiling decorations and wall paintings. The following tools were used to analyze the data.

- To identify the termite, the termite tube and the type of soil a microscope was used.
- mapping deterioration, illustrating the ceilings of the decoration patterns and presenting the surrounding areas with adobe Photoshop interchangeably with adobe illustrator was used,
- To draw the ground plan and elevations as well as to render the conservation procedure AutoCAD in combination with 3d max was used,

1.6.5. Thesis structure

Table 1: Thesis structure

| No | Chapter | Content title with the sub title |
|----|-------------------------------|---|
| | Introduction | Introduction to the research study, back ground to the research study under this statement of the problem, research questions, objective of the study, significance of the study, scope, limitations and methodology are placed under this chapter. |
| | Literature review | Concepts and definition of cultural heritages, Heritage Conservation in Theory and Practice, conservation standards and ethics, rock curving tradition in the world, the origin and development of architecture in Ethiopia, the foundation of rock hewn architecture in Ethiopia, architectural arrangement of the Ethiopian church, wall painting in the Ethiopian church, first Gondar Ian and second Gondar Ian style, damage and deterioration of heritage building and mural painting are presented in this chapter |
| | Back ground to the study area | Physical settings, site locations, geology, topography, cultural setting, ancient church in the study area and rock cut church in the study area are assessed. |
| | Findings and result | General description of the rock hewn church of Abreha and Atsbeha, the church compound and the surrounding area, architectural description of the church and its surrounding, wall painting engraved ceilings and decorations, canvas and wall |

| | | |
|--|--|---|
| | | <p>painting of the church, excavation technics, technic of wall painting, the intangible heritage of the church, movable heritage of the church and heritage value and significance of the church are discussed.</p> |
| | Analyses and interpretations | <p>Past restoration and conservation efforts, deterioration analyses on the conservation status of the church, deterioration analyses on the wall painting, on the interior wall, on the pillar, damage analyses on the ceiling of the church, analyses on degree of damage, SWOT analyses, conservation and protection, proper management, visitor and tourism management, community participation and benefits are analyzed and interpreted</p> |
| | Proposal for heritage conservation and management interventions, | <p>Conservation principles and approaches, conservation intervention proposals; like consolidation, grouting, cleaning, removal of biological accretions, repair of cavities, termite control and replacement of parts are proposed.</p> |
| | Conclusion and recommendation | |
| | Bibliography/reference | |
| | Appendix | |

CHAPTER TWO

2. Literature Review

2.1. Concept and Definition of Cultural Heritage

Heritage has a wider variety of meanings. Traditionally, heritage is used to describe any relict survival from the human past whether physical artifacts, such as assembled in museum collections, designated buildings, structures and ensembles, as well as 'intangible' survivals of customs, crafts, skills and languages (Mead 1934, Hall 1996, and Jenkins 2004). However, it is also used to refer to all accumulated cultural and artistic productivity, whether produced now or previously. This can be extended to include “almost any aspect of community life that’s effective functioning, or contribution to the preferred image of the collective character or identity, renders it worthy of note, preservation and transmission to future generations” (Buckland, 2013).

Heritage sites and their surroundings have the potential to become important symbols in society. They can serve diverse meanings for their custodians as well as visitors. They can also offer a sense of identity for their owners, be it individual or community. People make these connections in any number of ways, and for some, heritage sites also become important possessions for communities by emanating a sense of ownership towards them (see also Crouch 2000). According to Crouch (2000), another core element to forming identity is a sense of place. Place can be understood as "something through which and with which lives are lived and identity and myth made". Heritage can be represented through place, imagined and real. Crouch (2000) states that people can "develop a sense of ownership in places that is not legal or financial but developed in terms of feeling, empowerment, attachment and value".

UNESCO adopted a Convention concerning the protection of the World Cultural and Natural Heritage in Paris in 1972 and tried to define 'cultural heritage' as monuments, group of building¹ and sites. Monument includes architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or

¹ Groups of buildings are groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science and sites: works of man or the combined works of nature and of man, and areas including archaeological site are which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view. UNESCO Convention, 1972).

science. This heritage definition, however, did not satisfy all groups of the world society. This is well illustrated by the ongoing pursuit of an appropriate definition and theoretical foundation of heritage. This debate has crossed the decades since the adoption of the World Heritage Convention (Harrison 2012).

In a review of the scope and definition of heritage by different organizations, Ahmad (2006) concludes that whilst the general scope of heritage is making some progress towards achieving wider agreement, there is no uniformity as to the 'finer terminology of heritage' which remains neither 'streamlined' nor 'standardized' between countries. Ethiopian definition of heritage was considered as one of the progressive definitions of the time. The Ethiopian Proclamation of 209/2000 defines 'Cultural Heritage as anything tangible or intangible which is the product of creativity and labor of man, in either pre-historic or historic times, that describes and witnesses to the evolution of nature and which has a major value in its scientific, historical, cultural, artistic and handicraft contents. According to this Proclamation, Cultural Heritage is divided into tangible and intangible and tangible heritage further classifies into immovable and movable cultural heritage. Tangible Heritage defines as: "cultural heritage that can be seen and felt and includes immovable or moveable historical and manmade cultural heritage" (ARCCH 2009, 2000). The proclamation defines Immovable Cultural Heritage as: "cultural heritage attached to the ground with a foundation and which can be moved only by dismantling and shall include: sites where cultural heritage have been discovered, paleontological historic and pre-historic archaeological places; buildings, memorial places, monuments and palaces; remains of ancient towns, burial places, cave paintings, and inscriptions as well as church, monastery, mosque or any other places of worship" (ARCCH 209/2000).

As other progressive cultural heritage definitions, the Ethiopian heritage proclamation identify heritage by its values and significance. But this is not enough alone. Carter and Bramley (2002), suggest that 'the values and significance of heritage resources are often acknowledged but not integrated into the management processes. This highlights that the idealistic efforts to understand heritage and the value it may be seen by heritage practitioners as a superficial that may not translate into the decisions or processes necessary to effectively manage the heritages. In spite of this, Donaghey (2001) maintains that a 'clear strategy for assessing the significance of heritage is a prerequisite for effective cultural heritage conservation and management', emphasizing the need

to establish not only the value of a heritage site, but to have a predetermined framework from which this understanding is gained.

The problem here is that different scholars, disciplines and perspectives ‘impose quite different sets of values on the same piece of heritage’ (Howard 2007). This brought the very concept of ‘authenticity, which, has now been shown to be immutable or intrinsic.

Thus, the present and future challenges of the conservation field is stalk not only from the heritage objects and sites themselves but from the contexts in which society embeds them. These includes “the values people draw from them, the functions heritage objects serve for society, the uses to which heritage is put, which are the real source of the meaning of heritage, and the reasons for conservation in all senses” (See also Avrami et al. 2000).

2.2. Heritage Conservation in Theory and Practice

Conservation is the action taken to dynamically prevent decline and manage change (Feilden, 2003). It includes all activities that prolong the life of our cultural and natural heritage, with the intention of displaying the artistic and human messages that such buildings possess to those who use and look at historic buildings with wonder. Conservation began when it became clear that the views, approaches and skills needed are established. Methods and approaches to treat a painting is, for example, differed from those needed to treat the walls of a common farmhouse; or when it became apparent that cleaning a Neolithic axis required a different attitude and knowledge to clean a household lamp (Konsa, 2017).

In the mid-19th century, Eugene Viollet-le-Duc, a French architect, renounced the renovation of a historic building because he felt there was not enough talent at the time. Since then, the development of modern conservation theory and practices has been supported and sustained by education and training (Jokilehto, 2007). Throughout France, the reconstruction of historic buildings was known from the mid-19th century on the basis of building archeology and was viewed as a scientific practice. The aim was to "exactly determine the age and character of each part – to form a kind of trustworthy record specification, either by written description or by graphic representation" (Viollet-le-Duc, 1854-68, VIII: 22f). This mentality characterized the approach of Viollet-le-Duc, and it also laid the foundations for subsequent restoration practice, although it was

often criticized for "correcting" history and for exaggerating the restoration of lost architectural forms.

Gradually, the different approaches have begun to converge over the past four decades, and the ideals of preservation and protection of the built heritage have been granted international support through UNESCO recommendations and the theory promoted within ICOMOS membership. The 1972 World Heritage Convention recommends: 'The States Parties to this Convention shall strive to enhance their peoples' appreciation and respect for cultural and natural heritage by all appropriate means, in particular by educational and information programmes' (Art. 27). The Amsterdam Declaration, which ended the European Architectural Heritage Year of the Council of Europe in the autumn of 1975, emphasizes: "The architectural heritage will only survive if it is valued by the public and the younger generation in general. ICOMOS adopted Guidelines on Education and Training in the Protection of Monuments, Ensembles and Sites in 1993, including a general outline of the scope of training and education programs. The document states: "Based on cultural pluralism and diversity, we need to establish a holistic approach to our heritage, valued by practitioners, craftsmen and administrators.

2.2.1. Conservation Standards and Ethics

According to Feilden, (2003) the following standard is observed in conservation work:

- The building's condition must be reported before any action.
- It is not necessary to destroy, falsify or remove historical evidence.
- Any action has to be minimal
- Respect for the esthetic historical and cultural property integrities in any action.
- Records of all methods and materials used during care.

Every intervention should be reversible, not bias, not impede, maintain all existing material, be harmonious, and untrained person should not interfere with it. It should be remembered that architecture and art vary; the aims and process are the same. Architecture interferes in a state where weathering is covered, while architecture interferes in an open space. The effect of time and weather must be taken into account in architectural preservation. The architectural preservation activity is much broader and the different conservation roles include variety people such as technician, craftsman, due to complexity and scale, whereas it is possible to do art conservation

alone. Comprehension of goals, communication and oversight are therefore the most important part of conservation. The architectural fabric must provide a comfortable environment and must be protected from hazardous fire or vandalism (see also Feilden, 2003).

Conservation-preservation practice involves making inventories of the country's cultural heritage (Feilden, 2003). It involves categorizing and documenting cultural heritage both graphically and descriptively, the first thing is to examine and study the part of the building methodically, the current condition of the building must be registered. Before, after and during the intervention, full documentation is necessary. All repair works, maintenance digging must be reported at all times. It is important to document every stage of conservation. During the course, the document described must be available to the public.

2.3. Rock Carving Tradition in the world

The rock carving tradition is a continuation of an ancient tradition found inside and outside of Ethiopia. Rock-cut architecture bears witness to human ambition in constructing the most structure by sculpting and cutting entire hills (Khan, 2015).

Rock cut temples in India presents a different viewpoint on past generation building powers that the earlier rock cut occurs in the shape of a cave curved from hills. Baravara cave situated in contemporary Bihar dates back to 3rd century BCE is regarded as the oldest example of rock cut architecture. These caves with arched opening and two chambers are linked to Buddhism.

Ancient Petra is found in Southwest Jordan's Shera Mountains, a mountain ridge east of the Wadi Araba River (Heinrichs, 2008). The Nabataeans carved more than 800 monuments, including tombs, sanctuaries and places of worship, from sedimentary rock about 2000 years ago. It is inscribed as World Heritage as ' a masterpiece of human creative genius, bearing a unique testimony to a disappeared civilization and an outstanding example of an architectural ensemble that illustrates a significant stage in human history.

The Abu Simbel Temples were created by King Ramesses II during the 12th Century B.C., in Lower Nubia, some 280 kilometers south of the first cataract of the Nile (at Aswan) They were hewn out in the rock proper, consisting of sandstone, on the western bank of the Nile, below the desert (El-Enany, 2010).

Capadocia City is located in Turkey's Anatolian region. In this area there are caves, cave houses, churches and entire underground settlements that still exist and are currently being used. The underground cities were long-stay settlements, built to withstand attacks and support long-term numbers of people and their domestic animals. In imitation of Byzantine architecture, the structural elements of the rock-cut buildings are carved. But there's a big difference. Most of the architectural features in rock-cut buildings are pure non-structural adornments. For example, interior columns do not support roofs; they simply exist as decorations (Parlak, 2012)

All the above-mentioned rock hewn testifies to an enduring ancient and medieval global presence of the technique, with varied results in decoration, scale and complexity.

2.4.The Origin and Development of Architecture in Ethiopia

The ancient architectural history of Ethiopia can be traced back to around the 8th century BC when some kind of connection between Ethiopia and South Arabia seems to have been established (Munro-Hay, 1991; Asrat, 2009). According to Munro-Hay (1991), it seems that the pre-Axumite society on the Tigray plateau, centered in the Axum/Yeha region but extending further north and south had achieved state level during the sixth or fifth century BC (Phillipson, 1998), D'MT (Da'mat) came to be called the major entity or state / kingdom at that time. The temple ruins and the associated buildings and tombs at Yeha are considered the evidence of this empire. Although there is no direct determination of age, architectural and epigraphic comparisons show that the temple was probably built around 800 BC or shortly thereafter (Robin and de Maigret, 1998 via Phillipson, 1998). Yeha is famous for the impressive temple known as the Temple of the Moon, Grat Beal Gebri located about 200 meters north-east of the Temple site, uncovered a series of massive square sectioned monolithic columns, which the Deutsche Axum-Expedition investigated in 1906 as one of the well-known Pre Axumite houses.

The next stage is Axumite architecture, it is not easy to date the Axumite civilization, but estimate ranges between 150 BC to AD 850 at Axum itself. The nucleus of the settlement moved from the top of Bete Georgis to the valley site of the modern city (Fattovich, bard, 1996, 1997). In and around Axum, huge elaborate buildings were built. Excavated tombs, chance finds, surviving temples and written records in Ethiopia, Greece and Arabic all suggest the size and scope of the local and imported asset, as well as the technical skills available to the Axumite elites (Munro-

Hey, 1991 via Phillipson, 1998). Axumite settlements have not been thoroughly excavated as little data about the overall organization layout is available. Settlements and individual buildings differed considerably in size and appearance. From the single farm to the metropolis of the capital and other urban centers (Michels, 2005 via Phillipson, 1998). For religious or elite classes, elaborate large buildings may have worked. According to Phillipson, they also include industrial zones and burial areas. Dressed stone ashlar functioned to keep large, tall buildings stable. Light-fired brick was used for the production of arches or vaults in the funerary monuments. With bricks and surface rendering, stone bounded with mud and lime mortar was used. Timber was used for consolidation in large numbers in conjunction with dressed corners of stone. Horizontal ties extending through the thickness of the wall and extending either on both sides or on the exterior alone are characteristics of Axumite architecture and are sometimes called monkey heads (Boxton and Matthew, 1974 via Phillipson, 1998). Their use is copied to show multi-story buildings on the solid stone stele curved. The thickness of the walls decreased with height. Architecture of Axumite dating from the 3rd to 7th centuries AD, the buildings follow the same pattern (Manzo, 1997 via Anfrey, 2012). All domestic and religious constructions are concerned with this design. All domestic building is rectangular in plan. The main building was constructed surrounded by an external building and a variety of buildings are placed in the middle. According to Anfrey the main building could be raised on a substructure made of tiers 44 to 50 cm high and between 6 and 7 cm wide at their apex (Anfray, 2012) Wood was used to build Axumite buildings for floor execution, door frames and other openings, as well as for beams and joists that were sometimes embedded in the walls. The Axumite builders created rock hewn hypogea, most of which had a funerary function. Some examples of the earliest rock hewn churches in Axum are the undated rock hewn structure by Bazen and the unfinished so-called rock tomb.

After the fall of Axum, Ethiopian churches split the most between these conventionally built buildings and those hewn from strong rocks. The mostly indestructible rock hewn structure is preserved more frequently. Nevertheless, in the northern and eastern highlands, there are a number of built-up churches still in use, which claim the Zagwe era or earlier foundation (Phillipson, 1998). Debre Damo is known to be the oldest church in use in Ethiopia in the northern Tigray. The church is dedicated to Abune Aregawi. The church shows the architectural decoration design of Axumite architectures.

Some of built-up ancient churches survive north-east of Mekelle around Atsibi. They are remarkable in the refinement of their workmanship due to their small size and range. They must have served small localized communities. Some of this period's established churches are Mikael Debre Selam, Cherkos Agebo, and Zarema Georgis. Ahmed Giragn destroyed most of the churches of this era and some are replaced by churches that were not destroyed at the time, mostly inaccessible such as Debre Damo or in a cave like the Ymrhanekirstos (Phillipson, 1998) the building shows a strong continuity in architecture from the Axumite era to the post-Axumite period and also in the later period. Evidence provided by the rock hewn structure is taken in to account.

2.4.1. The Foundation of Rock Hewn Architecture in Ethiopia

A high portion of Ethiopia's remaining ancient churches are not traditional built structures, but have been hewn from solid rock. Most of them are concentrated in Ethiopia's northern regions. Hypogea is not built up, or erected by excavation. Building reveals successive houses, but hypogeously it is destroyed by the chisel of the worker. According to Phillipson, some writers used the term rock-cut churches to include both traditional built structures constructed in cave, and those that were hewn from the rock. In contrast to these buildings, all rock hewn is taken as hypogea. Rock cut graphic distribution depends on cultural and geological factors. Most architectural features of the hypogea are copied from the built-up structures, but some of them have no distinctive features (Phillipson, 2009)

Tigray has a larger number of rock-hewn churches than any other part of Ethiopia. There are about 120 churches hewn from stone in the area of Tigray. According to Phillipson (1998) the area has played a key role in the growth of architecture hypogea. Even, by updating and creating new ones, beyond Tigray has continued up to the present time. The rock hewn in Tigray is distributed depending on the rock's geological character. Most of the rock hewn is thick sandstone named after the Adigrat or Enticho site (Asrat, 2002). It is evident that the early examples apparently funerary in original function excavated in the plains of Hawzen were next to the much larger and more elaborate Tigray cross in square churches of later, the later church is common in various forms (Phillipson, 2009).

The cross in square churches: there are three far larger churches just 13 km east of the Hawzen plain in a restricted highland area. In plan and style, they closely resemble each other (Buxton,

1972 via Phillipson, 1998) and retain features indicative of funerary or reliquary uses. They are differentiated by being exposed to both external and internal potential rocks on the west, curving the eastern part of the stone. (Buxton, 1972, via Phillipson, 1998) call them cross in square church. The ground Plan's dimensions are approximately square. The rock-cut church of Abreha and Atsbeha is one of such churches in Eastern Tigray with mural paintings.

2.4.2. Architectural Space Arrangement of the Ethiopian Church

In theory, the key features of the Ethiopian churches can be divided into circular in plan and rectangular in shape. In the central and southern Ethiopia, round churches were abundant, but scattered in the north. Rock hewn churches, however, usually follow the rectangular shape of the basilica as Axumite structures. Over the past six hundred years, nevertheless, the majority of constructed churches have been rectangular conical roofed buildings (Phillipson, 1998). All type of Ethiopian churches are similar in having three concentrated zones, which make the different from the Hebrew temples (Ullendorf, 1968 via Friedlander, 2007).

Whether the church is circular or rectangular, it contains the three parts. The rectangular *Meqdes* is placed in the center and is sometimes decorated with religious paintings where the *Tabot* is also housed. The *Meqdes* is surrounded by an outer circular wall, that is, *Qidst*. The *Qine-mahilet* has the roof that stretches beyond the *Qidst*. The different gates to the *Qine-mahilet* are three that priests use these on the north, by male on the south and by female congregation members on the west.

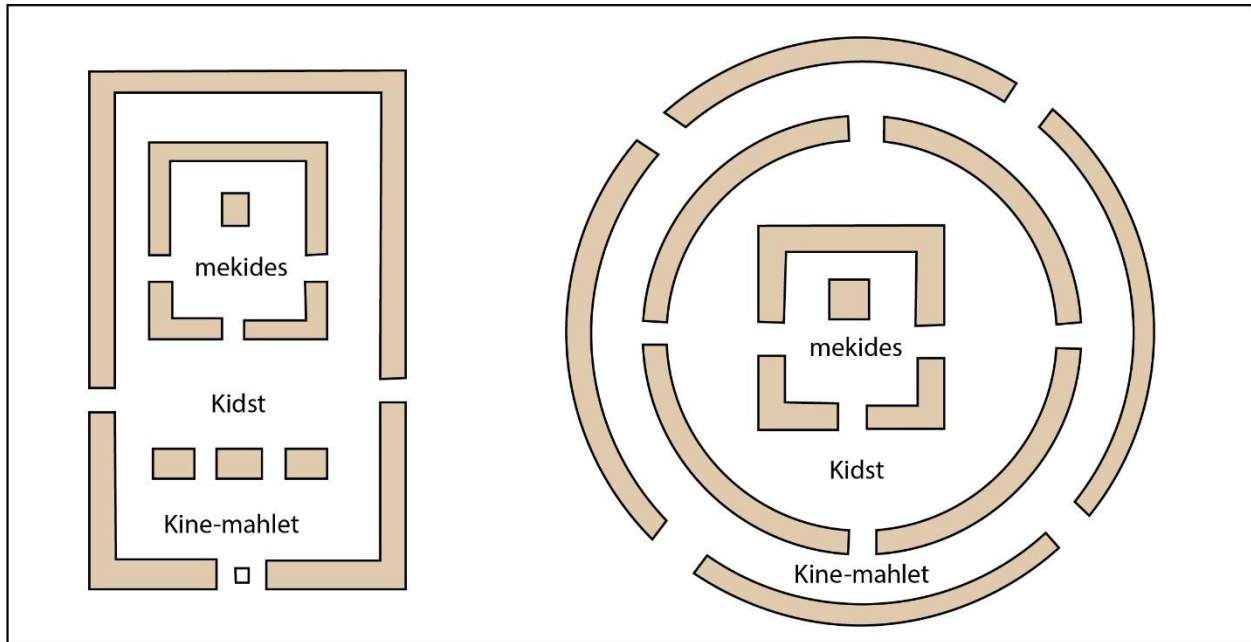


Figure 1: Rectangular and circular arrangement of Church floor plan.

The rectangular churches display more variations, but almost always the same three zones are noticeable (Phillipson, 1998) “The rectangular plane follows three main forms of a rectangular plane with a single aisle, a basilica with a tripartite apse and a hypostyle” that, according to Friedlander, (2007), was the most common design until the 7th century. In particular, basilica churches mimic their circular equivalent with three outer windows (See Friedlander, 2007).

2.4.3. Wall paintings in the Ethiopian Church

The evidence for wall painting in Ethiopia comes from Islamic sources. Tabari's exile of a group of Muslims in Ethiopia in one passage he speaks of a woman who made remarks about the painting she had loved while in exile at Mariam Tseyon Cathedral in Axum after her return to Mecca (Phillipson, 2009) It is an indication that the early paintings of Ethiopia were known. Nevertheless, there is no awareness of the subjects and styles of the wall paintings of that period. They are perished with the destruction of the first cathedral which was built by Abreha and Atsbeha. There is a lack of middle-aged mural evidence extending from the time of conversion to the early sixteenth century. A lot of churches were destroyed during the advent of Ahmed Gragn and the practice of the arts vanished with it. As can be seen from the background of the conquest of Ethiopia written by the chronicler of the Imam, this war is bringing with it some improvements in the cultural enrichment of Portuguese art and architecture. They have maintained contact with

Europe for nearly a century, and this peaceful relationship has had an effect on stylistic revolution in painting. Even before the aggressions, contact with the western countries existed. People visiting and craftsmen like the Italian tourists came to Ethiopia (Heldman, 2010). Among them were artists nominated by the Nigus, but they were few in number who remained for a short time unless the Nigus stopped them from returning. Some of the artists' names enter history such as Brancaloneo, but no work is comparable to Italy's contemporary works. Although none of these works are of any importance, they at least provide some idea of how the union of two schools of art has been achieved (Heldman, 2010).

After Ahmed Gragn's death in 1543, paintings were made. The reconstruction was followed by the construction of new churches in the political and social spheres. The war had devastated the country and its church. The north has been designed with new churches keeping the basilica plan while others have taken a circular shape such as that of indigenous dwelling. According to Gerster (1970), round church existed—even before, but it was from the seventeenth century that they gained more popularity and became the Christian hall mark in Ethiopia.

First Gondarian Painting Style

Most wall paintings were painted directly on the earthen or gypsum support up to the mid-seventeenth century. More often the artist starts painting on stuff, which was then stuck on the church wall. The first painting in Gondarian style was fully developed in 1665 and continued until the early eighteenth century, when the court was settled in Gondar (Friedlander and Friedlandr, 2015). They were both inspired by European engravings in style and subject matter. Style-wise, although the stagnant pattern of medieval art continues to be followed, some new idea penetrated. The first Gondarian painters formed an independent school, according to Gerster from the synthesis of elements of western art and the ancient Ethiopian tradition. The noble figures in colorful garment, the elegant narrow faces with almond eyes, wavy hairs and carefully kept beard characterize it. The cloth is represented by a line that follows the body's contour and is filled with patterns of geometry. No indication of light sources, shadows or three-dimensional relationships, despite the realism of the accessories. In the church of Debre Sina Maryam in Gorgora, the best example of the first Gondarian style is found (Gerster, 1970).

Two political events affect the painting of this period: one is the widespread Muslim destruction of the churches and manuscripts, which ends in 1543, and the second was the arrival of the mid-sixteenth-century Jesuit missionaries. The Jesuit carried drawings and devotional engravings with them. The printing of the virgin with the child from the church of Santa Maria Maggiore in Rome was one of the influences (Gerster, 1970).

Second Gondarian Painting Style

A new style of painting was developed at the beginning of the eighteenth century, similar to the western model. It is associated with the patronage of Empress Mentewab, the regent, and her brother Emperor Iyasu II (1730-55). This attempts to incorporate light and shade, modeling and perspective, but the light source is not apparent as the head is rounded. The figure also reflected the fashion at the royal court in a round and full hair style. Previously the emperor was portrayed as a donor with his family, but this time it becomes popular for the nobility to appear in the church as donors. The landscape is colored with beautiful colors without paying attention to the dazzling effect arising from the juxtaposition of heavy green and yellow shades (Gerster, 1970).

2.5. Damage and Deterioration of Heritage Buildings and Mural Paintings

There are different factors which contribute to rock deterioration, According to Steel (2016) Stone degradation is the product of mechanical, physical, chemical and biological processes. Sometimes different processes are at work simultaneously or in some type of sequence (steel, 2016) "degradation" can be defined as "decline in state, performance, or functional ability"(steel, 2016) "cause may be *“Moisture absorption and desorption, earthquake, fire, flooding, crime, vandalism, negligence, tourism, previous treatments, wind, rain, frost, temperature fluctuations, chemical attacks, salt production, pollution, bio-deterioration, intrinsic causes, etc.”*(Steel, 2016). In addition, rock –cut churches are deteriorating because of old age and the geological nature of the parent rock they have been made of.

The rock cut churches of Eastern Tigray, including the study church have become vulnerable to deteriorating agents due to the nature of the parent rock, that is, Adigrat sandstone, which is causing for spalling, pitting and discoloration on the rock. The different types of mural paintings are also susceptible to different types of deteriorations, one of the most common of which is moisture in variety degree.

CHAPTER THREE

3. Background to the Study Area

3.1. Physical Setting

3.1.1. Site Location

The rock hewn church of Abreha and Atsbeha is located in the northern part of Ethiopia, 15 kilometers west of Wukro town, 45 km north of Tigray Regions capital, Mekelle. The church is placed at the foot of steep mountain hills facing Hawzeien plain, a 45-minute drive from Wukro (Phillipson, 2009). It is carved into either Adigrat or Enticho sandstone (Asrat, 2002). The Kebele is found under Kilde Awla'elo Wereda. It is named after the ancient stone cut church of Abreha and Atsbeha, which was built in the fourth century AD by the two king brothers, Abreha and Atsbeha, whose name means Abreha who 'he illuminated' and Atsbeha 'he brought the dawn'.

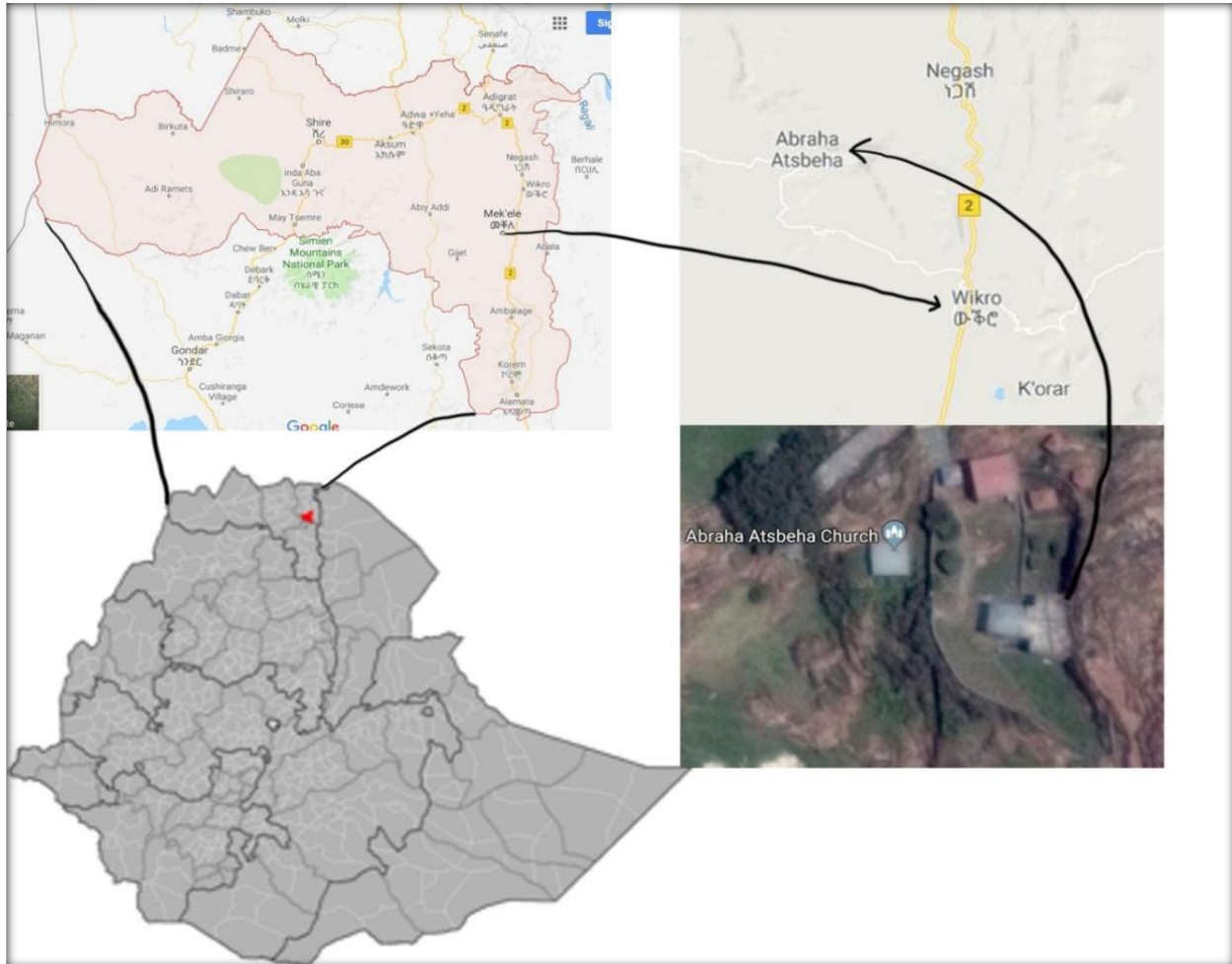


Figure 2: the study area (source; Google map)

3.1.2. Geology

The main geological units observed in and around the study area in eastern Tigray embrace the low-grade basement rocks followed by Edaga-Arbi Tillite, Enticho Sandstone of Paleozoic; and Adigrat Sandstone, Antalo Limestone, and Agulae Shale of Mesozoic age (Asmelash Abay et al, 2017; Asrat et al, 2009; Asrat, 2002).

In Tigray region the rock-hewn churches are carved into either Adigrat sandstone or Enticho sandstone. The rock-hewn churches at Abreha and Atsbeha – Wukro (Kirkos/Cherkos church) are carved into Mesozoic Adigrat sandstone (Asmelash Abay et al, 2017; Asrat et al, 2009; Asrat, 2002).

Asmelash et al, 2017 argue based on petrographic and geomechanical analysis that both Adigrat and Enticho sandstones have nearly similar behaviors which is suitable for manual excavation of the rock-hewn churches. However, they have minor differences in the nature of the cementing material, structure and nature of discontinuities. Adigrat sandstone is characterized by the presence of alternating bands of iron and silica-rich cementing material and intercalated thin layers of iron-rich and silicified siltstone. Though this type of rock is easily shaped and curved, it is causing for spalling, pitting and discoloration on the rock. The deterioration of the rocks in the church of Abreha and Atsbeha is partly the results of the nature of the rock (See Asrat, 2002, Asrat et al, 2009; Asmelash et al, 2017).

3.1.3. Topography

The church of Abreha and Atsbeha is located on the hill steps surrounded by rugged red sandstone cliffs. It is situated between a sandstone ridge on the west and a basalt ridge on the east in a long valley running roughly south to north. Most of the soil is very sandy in the area, with low water-holding capacity. Clustered houses are increasing in the area. The area is surrounded by agricultural land.



Figure 3 Topographic view of the site (source; Google map)

3.2. Cultural Settings

3.2.1. The Advent of Christianity to the Study Area

Ethiopia was one of the first countries in the world to adopt Christianity (Fitzgerald, et al; 2017). Christianity was officially introduced to Ethiopia, according to legend during the reign of the two Brother Kings, Abreha and Atsbeha in the fourth century AD. The two brothers were born in Axum from their father Tether / Seifeared and their mother Sofya / Ahyewa. Their father was died in their early ages. The two brothers, before they became the rulers of Axum, were called Azgag, but during their coronation they were named Ezana and Shizana. They were also called Abreha and Atsbeha after their conversions to Christianity and were baptized (Fitzgerald, et al; 2017). After the death of their father, King Tather, they inherited the throne; however, since they were too young to administer the state, their mother Sophia administered as a reagent queen until they grew up (Hagos, 2018). The Syrian monk Furementius, who was hired by their father as a tutor, was

teaching them ethics and religion doctrines side by side (Hablesilassie, 1972). In his early years, he was teaching them also Christianity. Both were baptized by Furementius after he became a bishop in Egypt, Alexandria, having grown in morals and theology. His name was then changed to Abune Selama from Furemetius. He is the one who converted Ethiopia to Christianity and is claimed to be Ethiopia's first Bishop (See Hablesilassie, 1972; Munro-Hay, 1991)

Then the two kings are said to be the first Christian kings from all over the African continent (Hagos, 2018), and the only twin kings without any problem to administer both as kings at the same time. Their coin is a token of their conversion to Christianity from the moon god. To spread their faith to the whole of their country, they placed the sign of the cross on their coin. They are supposed to be the first from all over the world to have the cross sign on their coin. Such Christianity's declaration to their Kingdom paves a way for Ethiopia to become one of the world's oldest Christian kingdoms (See Hablesilassie, 1972; Munro-Hay, 1991)

The titles of Ezana indicate that he at least theoretically considered himself the ruler of very large areas of present-day Yemen, Ethiopia and Sudan. The kings are commemorated for the propagation of Christianity, the construction of built-up and rock-cut churches, the installation of stelae, the conquest of territories, the minting of coins and the carving of stone inscriptions ((See Hablesilassie, 1972; Munro-Hay, 1991).

Axum was considered one of the four powerful Kingdoms of the world during its zenith the four powerful empires at that time were China, Byzantine, Persia's and of course Axum. The Axumite was also famous for the construction of churches, including rock-hewn churches (See Hablesilassie, 1972; Munro-Hay, 1991)

3.2.2. Ancient Churches in the Study Area

According to the *Book of Axum* (Conti Rossini 1910: 3), the first church in Ethiopia was constructed during the reign of the twin brothers in the 4th Century AD. Abreha and Atsbeha are supposed to have constructed the cathedral at Axum on land which Christ miraculously dried up from a former lake for the purpose (See Munro-Hay, 1991). Archaeological excavations conducted by MM. de Contenson and Anfray at Axum in 1960's, unearthed two Axumite structures under the podium of the present Axum Tseyon Mariam Church (de Contenson 1959, 1963; Anfray 1965). These earlier buildings may have been associated with a pre-Christian temple

(Munro-Hay, 1991). The custom, to establish the church on an already sanctified site, was common in ancient and medieval periods in Ethiopia as elsewhere. The church of Abba Pantelewion, outside Axum, for example, seems to have been built on a site already in use in pre-Christian times (Munro-Hay, 1991).

The cathedral of Axum Maryam Tseyon was also known as Gabaza Axum. According to the Land charters, surviving only as later 'copies', detail lands purportedly given to the church by Abreha and Atsbeha, Gabra Masqal, and Anbessa Wedem (Huntingford 1965). The early descriptions of the church of Mariam Tseyon came from Umm Habiba and Umm Salama, the two wives of the prophet, both of whom had been in exile in Ethiopia in the 620s. The description mentions that the walls were covered with paintings, and, if so, is testimony to the early commencement of a type of decoration which later became standard for Ethiopian churches (Hablesilassie 1972,).

The cathedral was destroyed or damaged several times, the last but one before the present structure being a large five-aisled edifice, which was eventually destroyed by the Muslim armies under Ahmad Gragin in the 16th century. The only surviving and extremely valuable eye-witness description of the ancient church was come from the Portuguese Priest, Alvares' description just before the destruction of the church by Muslim army (Beckingham and Huntingford 1961).

The *Book of Axum* (Conti Rossini 1910), however, lists a number of the early Axumite churches in Ethiopia. The early churches of Ethiopia seem to have been rectangular basilicas, apparently following the plan customarily used in Syria (Anfray 1974). Nevertheless, it may have been also originated from the pre-Axumite and Pre - Christian temples and other structures.

3.2.3. Rock-cut churches in the Study Area

Most rock-cut churches may be earlier in date than the period when round churches became common in Ethiopia. The grandest surviving built church is that at the monastery of Dabra Damo which may even go back to the sixth century, and there are a few other old built churches surviving. Of the vast number of rock-hewn churches in Northern Ethiopia some may date to Axumite times, and certainly many have Axumite architectural features. Some of the Axumite peculiarities of design and structure are also apparent at the rock-cut churches of Lalibela, carved and completed in the 12th Century AD, and usually attributed to Zagwé times, long after the end of Axum (See Munro-Hay, 1991).

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The oldest rock-cut churches in eastern Tigray are apparently of the Late Axumite period, were originally funerary function (Hablesilassie, 1972; Munro-Hay, 1991; Phillipson, 1998).

Past Researches had shown that the eastern Tigray churches were divided into two basic groups: the earlier ones were relatively accessible, but the latter churches are mostly monastic and mostly appeared to be located in mountainous areas. The mural paintings are largely limited to the latter category, for which Tigray churches are fairly famous (see Hablesilassie, 1972; Munro-Hay, 1991).

The rock cut church that named after Abreha and Atsbeha is among the most outstanding rock cut churches in eastern Tigray with the two kings' mummified body in the sanctuary.

CHAPTER FOUR

4. Results and Findings

4.1. General Description of the Rock Hewn Church of Abreha and Atsbeha

4.1.1. The Church

Rock-hewn architecture is made by excavating solid rock where it occurs naturally, is the creation of structures, buildings and sculptures. Rock-hewn architecture is man-made and built from beginning to end.

Abreha and Atsbeha church is one of Ethiopia's oldest rock-cut churches. Henry Salt visited the church in 1805 and gave a description of the sole design of the church. According to Salt, Abreha and Atsbeha church is “a basilica in the form of a nave and two aisles and narthex with an external entrance and two iterance’s giving the main church. Two colonnades separated the nave from the aisles, each with four columns, and arches over the aisle are supported by pilasters on the side wall. Two rectangular piers on either side of the sanctuary separate the sanctuary from the nave; two small and square chapels are dedicated to arch angles Mikael and Gabriel's. Each of these chapels is linked by a gate and a window to the main church. There are domes above the nave's east end and the sanctuary as well”.

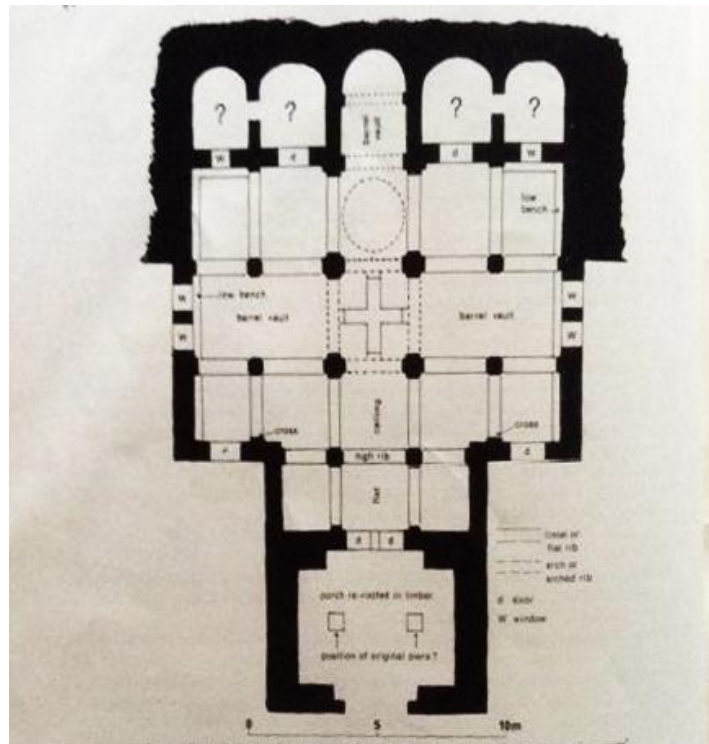


Figure 4: Ground plan of Abreha and Atsbeha. (Buxton, 1970)

Later, the Italians demolished the interesting old gathering house during their occupation and calamitously replaced it with "a new white-washed portico with corrugated iron roof" that covered the gap of the ancient façade (Pankhurst, 2014).

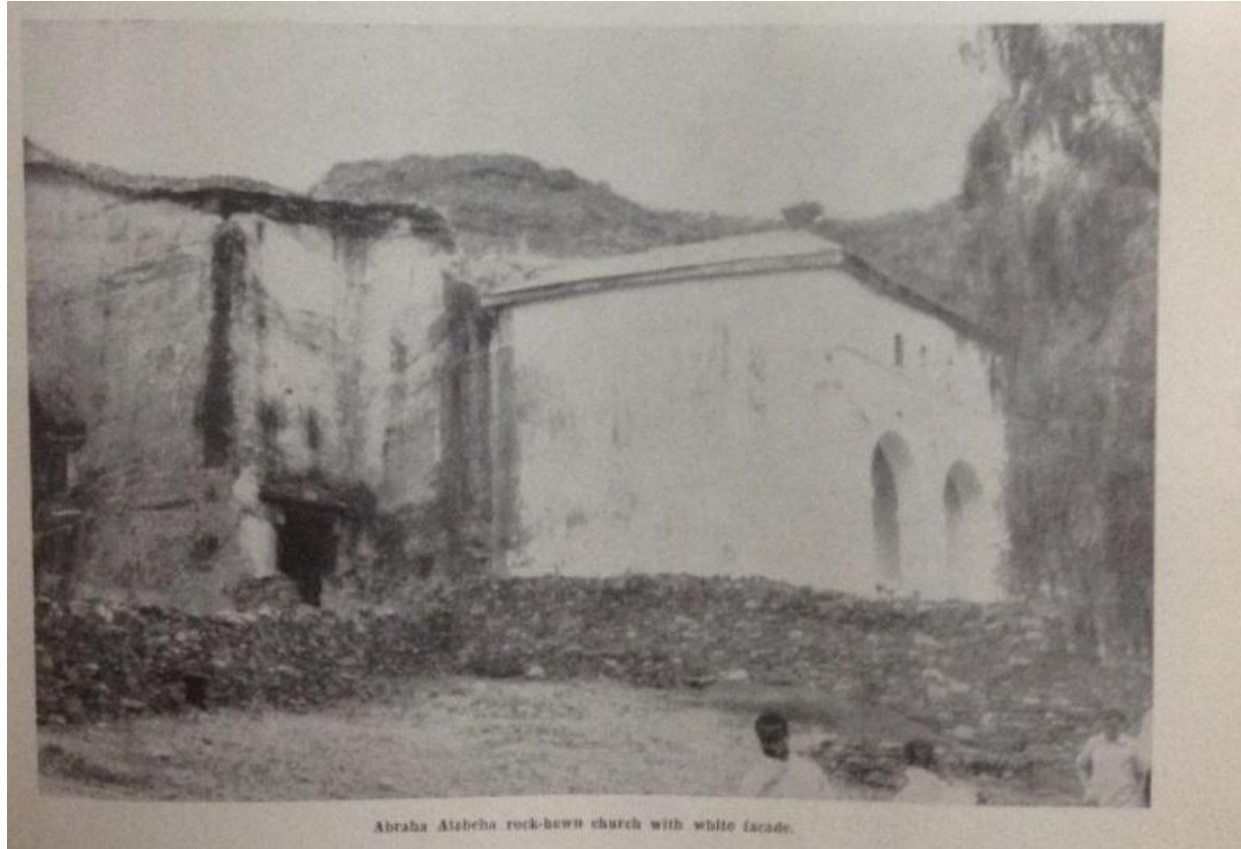


Figure 5: new white-washed portico added by the Italians. (Source, ive pearce)

The church has three architectural walls, the original stone cut, the porch and the portico. It is assumed that the original was established by Frumentius, who later became Abba Selama, considering the first archbishop of the Ethiopian Orthodox Tewahido Church (EOTC). (Fitzgerald, Marsden, Pavitt, Courbet, Mulinge, Beckwith and Fisher, 2017).

The church is considered to be among the most complete and most beautiful of Tigray's rock-cut churches including chamfered columns with stepped capitals supporting horizontal beams in imitation of Axumite post and lintel construction. It is free standing except at the eastern side, which is embedded in the rock (Ullendorff, 1960). It is cut from brown sandstone which is easily shaped and curved. The Church has three doors and two windows. The gates are situated one at the center in the front to the west side and the two are located from the right and left wing facing

to west. The south door is the women entrance. The north door is the men entrance whereas the door at the front is entrance for both women and men.

The church has three room sections: The Sancta sanctorum, *Meqdes*, *qidst* and the *Qine-mahilet*. The *Meqdes* is the main part of the churches where the arc of the covenant rest. There are three rooms in the *Meqdes* in a row. The room at the north is dedicated to the archangel Gabriel. This room has a square shape with a dome at the roof with intruded rectangle and arc at the rare end. The room at the middle is dedicated to St. Mary. This room is rectangular with Arch and small triangle excavated from behind. And the room at the right side is dedicated to Arch Angel Mikael. This room also has square form with dome at its roof. It is in this room where the mummified body of Abreha and Atsbeha have rested. The *Meqdes* has two doorways that communicate with each room.

Next to the *Meqdes* is the *Qidst*; this is the part where the clergy stand and the Eucharist is given to the congregation.

The *Qine-mahilet* is reserved for the chanters and congregations. The area of the *Qine-Mahilet* includes part of the rock hewn and the porch which was built during the reign of Emperor Yohannes IV by *Raesi Weldesilasie*. The porch, the pillars and some portion of the rock cut is covered by paintings. The painting illustrates biblical and secular events. The paintings are typically Gondarian styles with flat color back-ground and bold outline. The background is rendered with yellow with no perspective which is common to Ethiopian traditional paintings, but the for-ground painting has shading effects with naturalistic quality patterns.

4.1.2. The Church Compound and the Surrounding Areas

The church compound is found inside the excavated part of the church. It has four distinct functions; the church, the museum, the grave and the Bethlehem. The church occupies an area of 17 by 12 m. The next large space is reserved for the graves. The grave yards are further categorized into three parts: the priest's graves, the men graves and the women graves. In general, there are about 350 excavated grave holes in the church and it is believed that the grave holes are excavated parallel with the excavation of the church. Since then, all the residing congregations are buried in this holly holes till this day. It is deep and wide Nevertheless; no archaeological excavations did not verify it. Two of the grave sections are placed on the left side of the rock cut church and third

is placed on the right side of the church. The graves placed on the left upper side are reserved for the priests. Those on the lower north side are reserved for men's and the graves placed on the south side are reserved for the women. According to local informants previously the graves were occupied by family groups, but this day any one is allowed to be buried in any of the graves.

In this compound there is a museum which is located on the left side of the church, a few distances from the church. It is a ground+1 building. The ground floor is occupied by equipment used for the daily service of the church. It is filled with a number of tapers and other equipment of the church. Whereas the first floor is used as a museum and number of movable heritages items are displayed in it. Most of the items are documents on parchments, such as, Arganon, Tselot Adam, and Haimanote Abews. A pair of shoes believed to have belonged to one of the kings is displayed there, together with two Stamps of the kings.

While in constructed churches the Bethlehem is traditionally placed adjacent to the eastern side but, at Abreha and Atsbeha it has been placed adjacent to the south side of the church because the eastern end is concealed within the excavated rock.

Sand gathered from the surrounding sandstone rock is prepared in the compound for pilgrims who come every year. They use it as medicines for their animals; then, when their cow gives birth to a calf, they apply butter to the doors of the women's entrance in gratitude to Abreha and Atsbeha. In addition to the sand, Holy Water is also available a few distances away from the church to the south side. The holy water is connected with a legend concerning Abreha and Atsbeha. According to Nibured Hadush, a chief priest of the church, when both Abreha and Atsbeha had arrived and descended from the top of the hills. They first thought to excavate the church right side above where it is now, but changed their mind and moved a little further down near to the present church location. According to Nibured, during the excavation of the rock water came out from the ground. They named the spring "*maye rekebne*" which means, "We find water." It has been serving as holy waters to the congregation who come for pilgrim from distance since then.

Outside the compound of the excavated rock cut structure, one more compound cover about 200m. Outside the inner compound are spaces reserved for the congregations to gather around and learn the theological doctrines. They gathered here whenever there are celebrations, and it is here they also share secular information. This is only for daily prayers and learning. Below is a big tree under

which are stairs made for seating. During the yearly celebration of Abreha and Atsbeha in every October, a number of people are gathering for church services and it is usually under this tree the pilgrims are seated and listened the church teachings.

On the foot of the church, outside the second compound, there is mill house. This mill is owned by the church of Abreha and Atsbeha. It is providing full service for the society around. The profit earned from the Mill is given to the priests who serve in the church.

There are also locally designed and built check dams found in the surrounding area which are supply water for the community. The general market, which stands once a week, every Saturday, is near the church area. Not only is it in close proximity to the old villages that have been and would be evacuated, but many households had been winning their livelihood from activities related to the market, like petty trading. In this regard, the new resettlement location is too far from the general market to continue their previous activities and this has been considered in the livelihood restoration plan. For other consumers though, it may not be difficult to go once a week because others come to the weekly market from even further away.

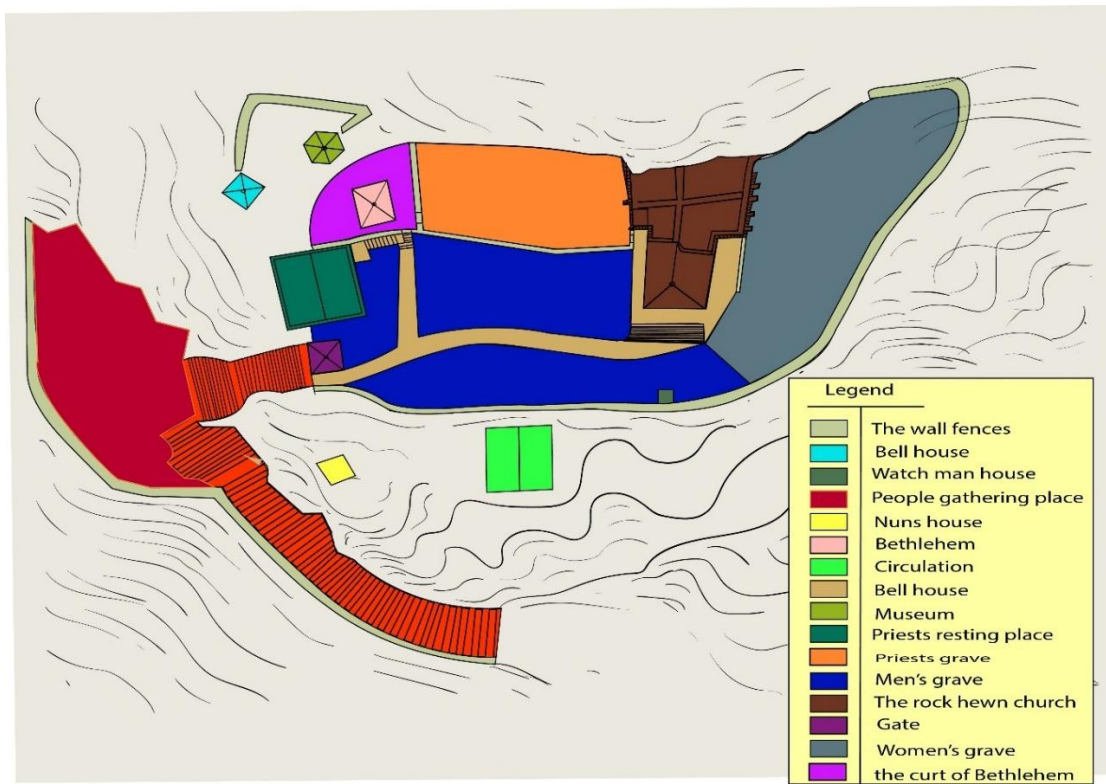


Figure 6: the first compound of the rock hewn church.

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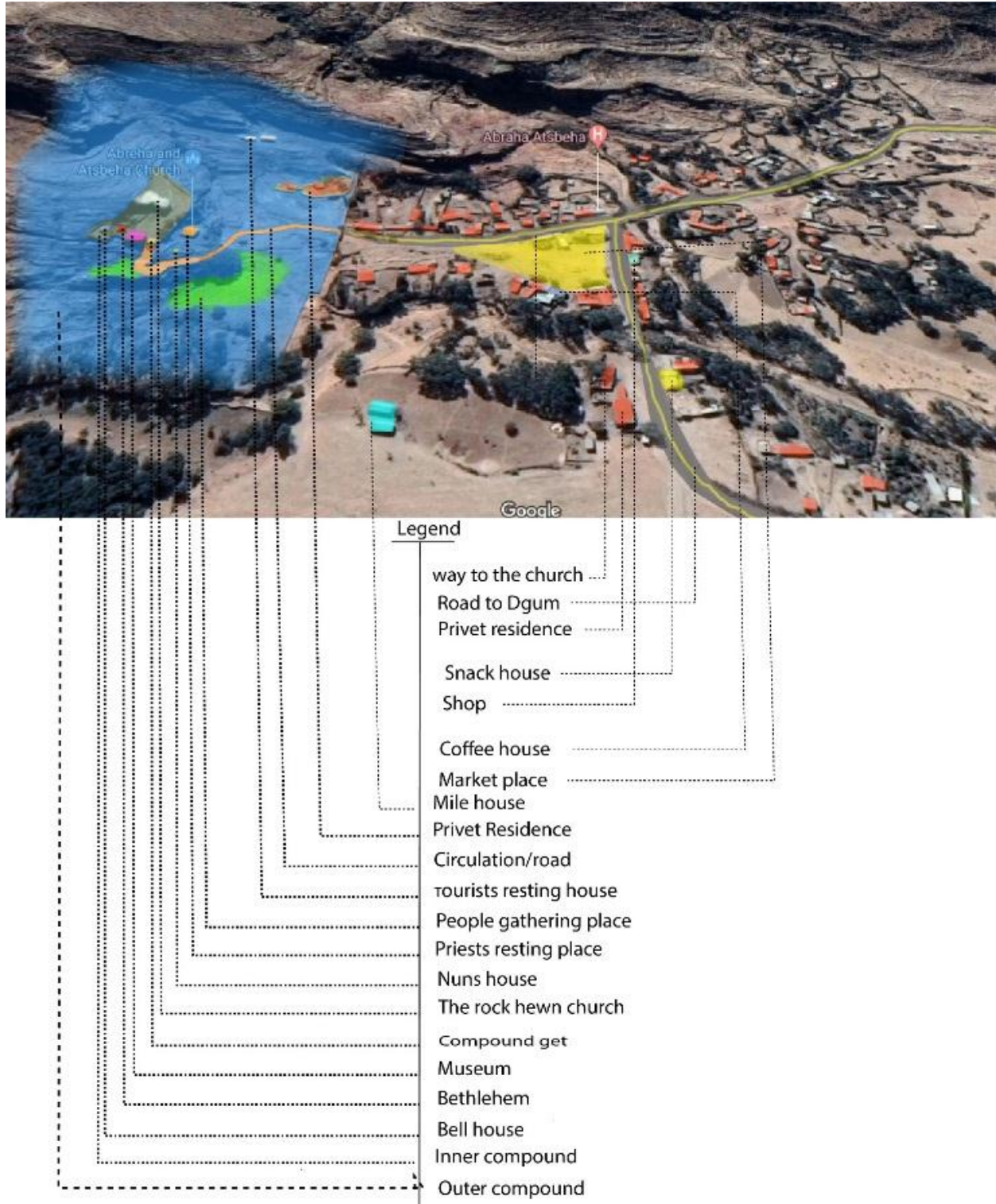


Figure 7: the compound and the surrounding area of the church.

4.2. Architectural Descriptions of the Church and its Surroundings

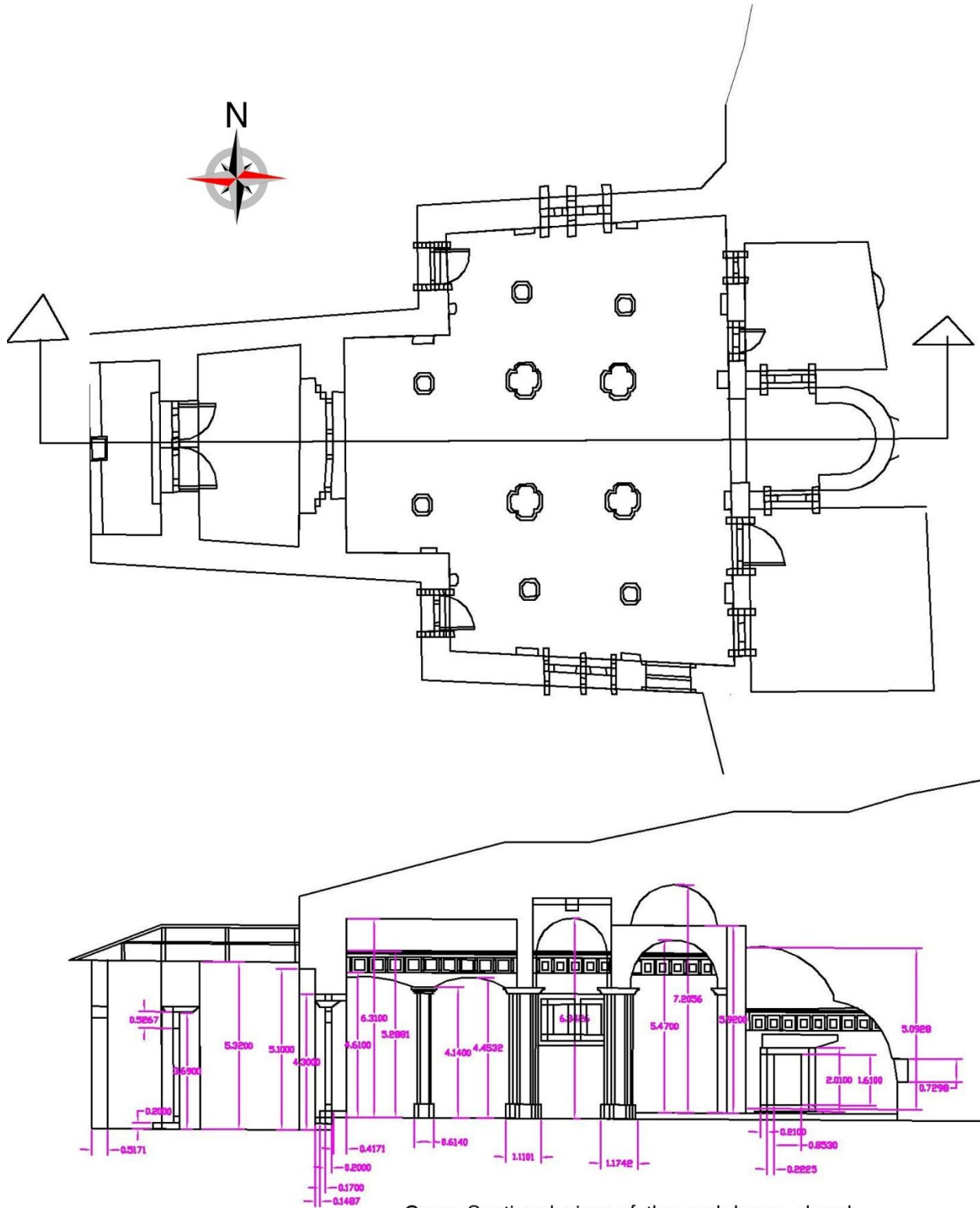
All the architectural parts are recorded using photographs, and drawings. Every detail of construction is recorded, including building shape technics, mortar application, doorway, windows. Recording architectural features can help us to understand how the buildings were constructed and the changes made over time. The function of the building and the relationship between its parts are determined. The purpose of this detail documentation is to record and analyses the architectural detail in order to answer specific research questions, and when a conservation intervention is planned, to recorded detailed information about the structure prior to intervention

Generally, Abreha and Atsbeha church was excavated from a foot shape rock in “T” shape. Detail descriptions of the church are the followings:

4.2.1. Cross sectional view and ground floor Plan

The ground - floor plan is rectangular and consists of double aisles and a nave. The ground floor has four parts: the porch, the narthex that is *Qine-mahlet*, the *Qidst* and *Meqdes*. The porch is situated at the west end of the church, which measures 5.54m by 2.25m on this part. One recent pillar is located at the center of the floor. On the right of this floor there is a hole excavated for burial, which is not in use. Next to the porch is the narthex or *Qine-mahlet*. This is a place where the hymns are sung. The *Qine-mahlet* is measured 3.27m by 5.88m. The third part is the *Qidst*. It is a place where the congregations receive communion. It has a `T` shape and measures 12m by 13.7m. On this floor, there are six single independent pillars, four double independent pillars and twelve dependent pillars. The last part is the *Meqdes* or the sanctuary: it has three parts the *Meqdes* of Mariam, Mikael and Gabriel. The *Meqdes*’ belonging to St Mariam is measured 4.66m by 2.65m, the *Meqdes* of Mikael is measured 3.88m by 4.01m. And the *Meqdes* of Gabriel is measured 5.75m by 5.79m.

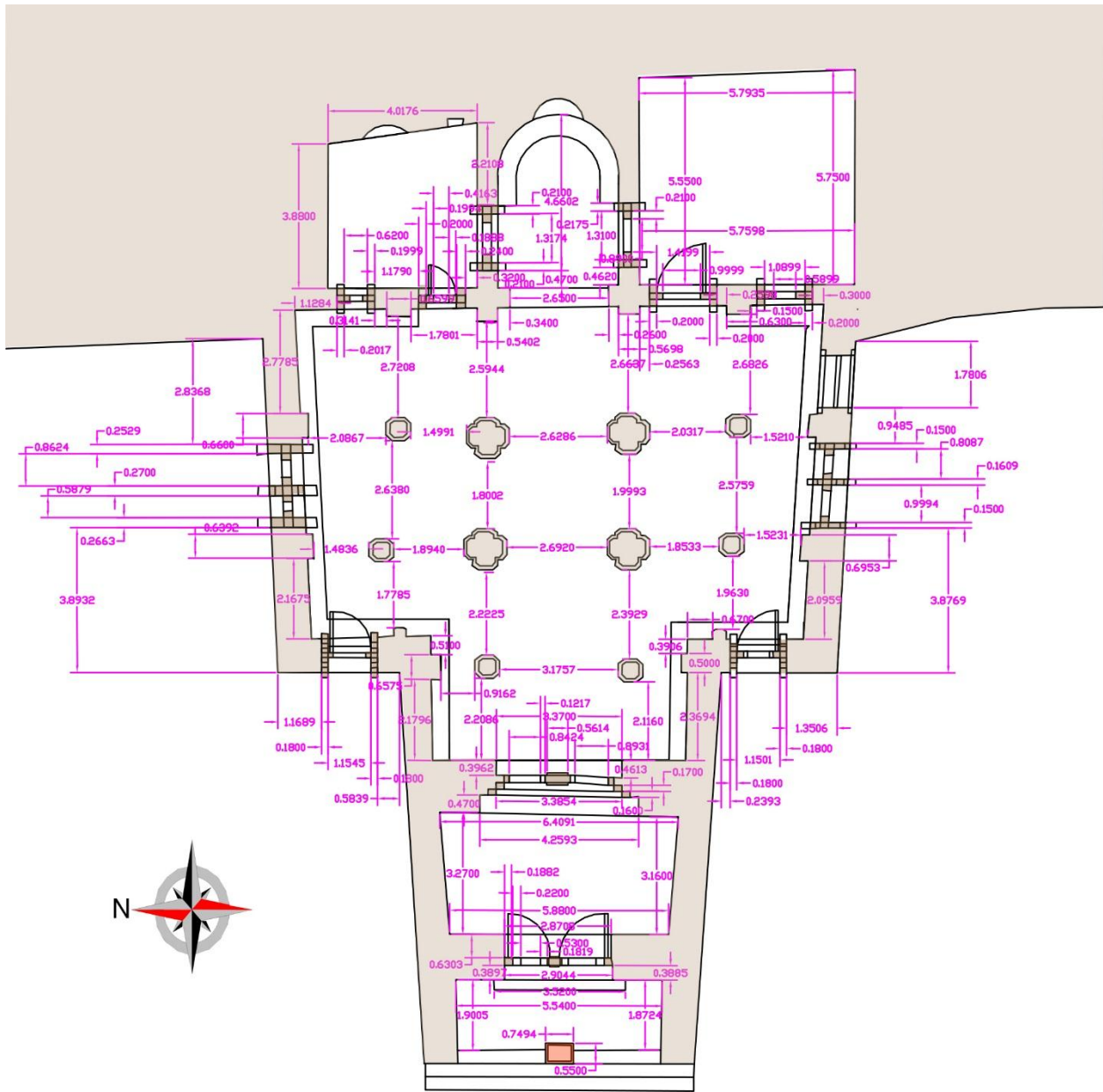
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Cross-Sectional view of the rock-hewn church

Figure 8: cross-sectional view of the rock-hewn church.

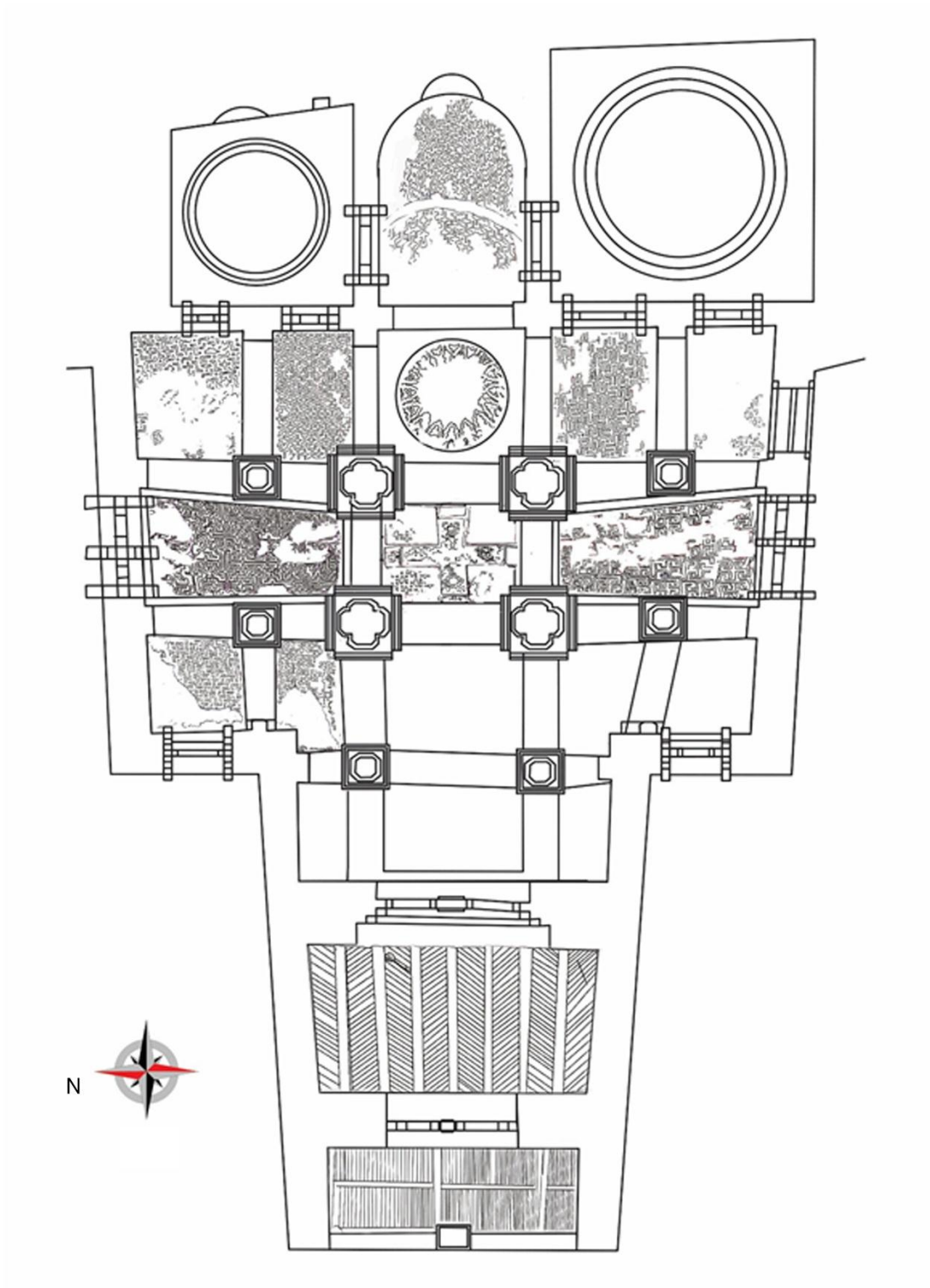
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Ground floor plan

Figure 9: ground floor plan of the rock hewn church.

4.2.2. Reflected Ceiling plan



plan of the reflected ceiling

Figure 10: plan of the reflected ceiling.

4.2.3. West Elevation

The western elevation has three parts. The portico is found at the front center, restored, and painted with white color during the Italian occupation period. The porch has one pillar at the middle and has three small windows above the penetrance. On the middle of these windows there is a microphone used during the masses. There are three oculi placed horizontally above the portico. This porch is dressed with corrugated iron sheet. This façade is an entrance to the rock hewn church for all; men, women and priest congregations. The left and right parts of the rock are intruded towards the east to form half cross. There is a single entrance gate at the façade of the left part. It is dedicated only for men congregations. On the other hand, gate at the right façade is dedicated for the women only. The gates are installed with woods as Acute, which is typical to Axumite style.

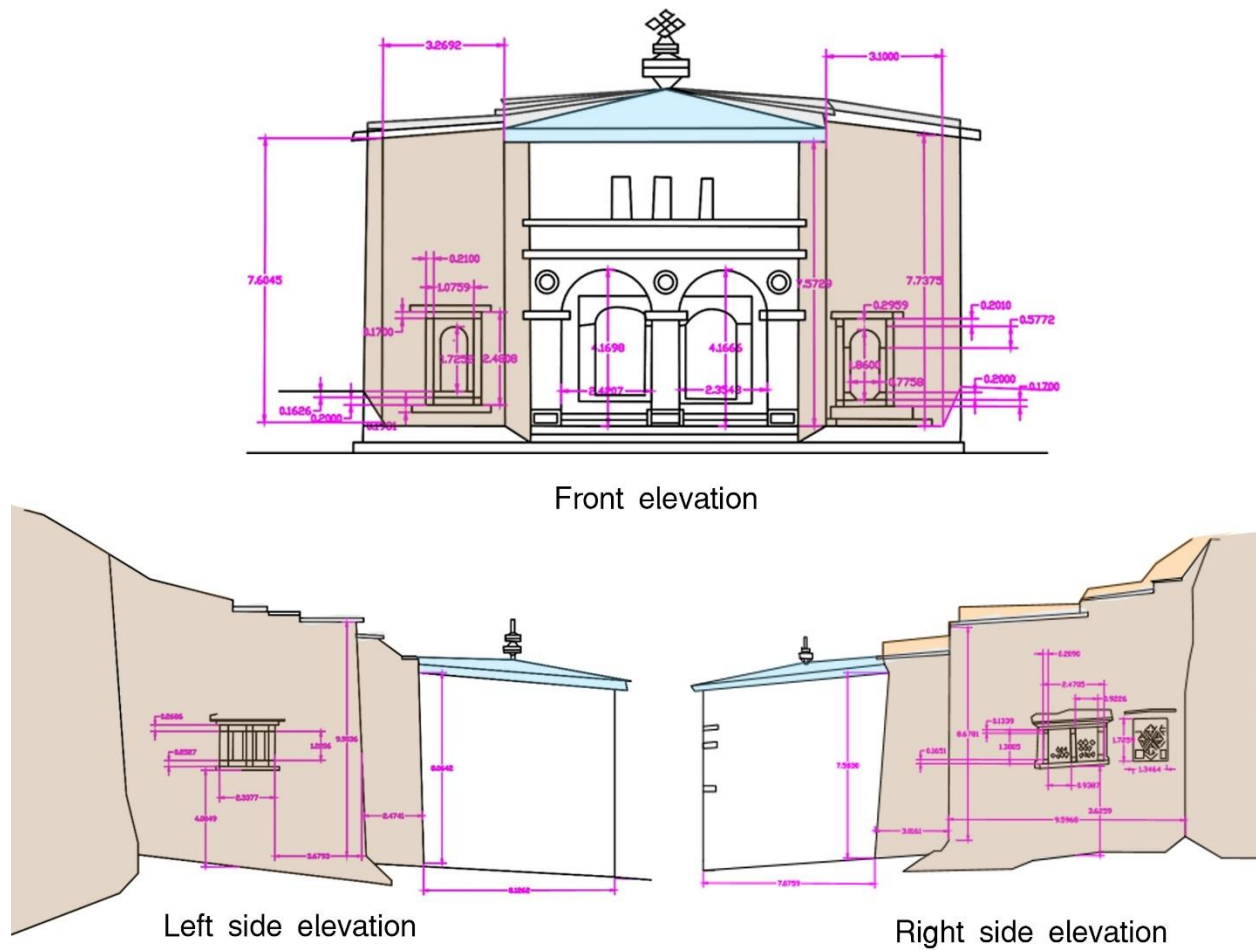


Figure 11: front elevation, left side elevation and right-side elevation.

4.2.4. North Elevation

The northern elevation has three parts: the porch at the right, the intruded rock-cut and the extruded rock-cut at the left. The rock-cut at the left has a single window and flat rocks at the top shading the rock cut.

4.2.5. South Elevation

The southern façade is the same as that of the northern façade. It has three parts; the half built up, which was built up during the Italy occupations. The intruded middle rock cut structure is smooth with no windows. The right part is also rock-cut. It is extruded. It has two windows installed with wood

4.2.6. Pillars

The rock hewn church of Abreha and Atsbeha have over 30 dependent and independent pillars. Of these ten are independent rock-cut pillars/Columns and 12 are dependent pillars. Among the pillars, two are wooden pillars and one is a concrete pillar.

Of the independent pillars, 14 are with capitals and friezes, which were typical to the Axumite architecture. The four pillars at the center are curved in the form of cross with the bracket capitals, but the rest six pillars are curved in square with the edge chamfered.

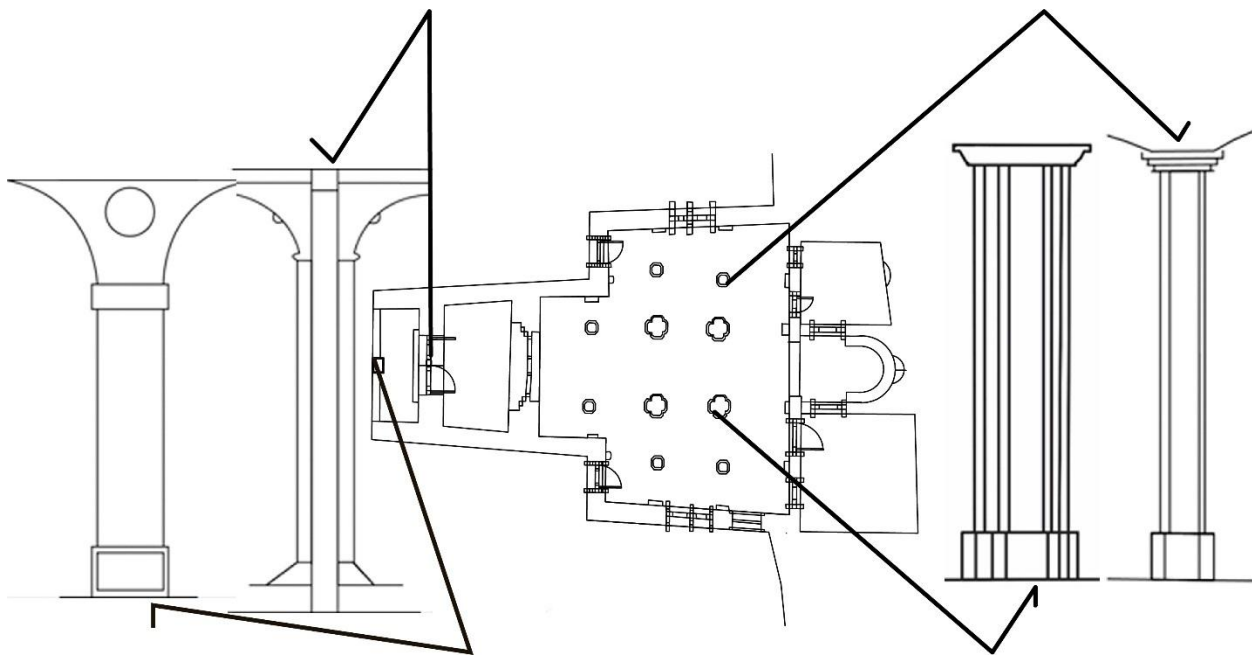


Figure 12: the different type of pillars in the church.

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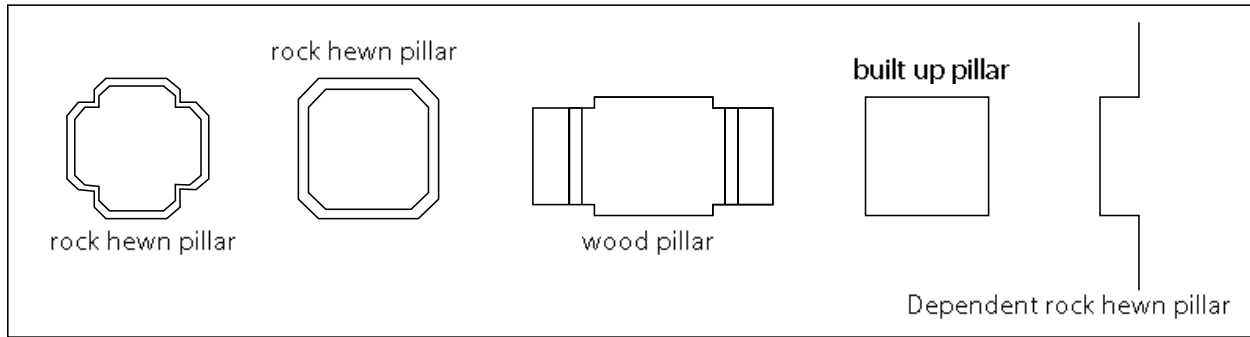


Figure 13: cross-sectional view of the pillars.

4.2.7. Ceiling

In the church of Abreha and Atsbeha there are observed seven types of ceilings. The first type is a flat ceiling. There are thirteen flat ceilings located at the *Qidst*. They are decorated with different kinds of curved crosses and the so-called *swastika* (misle-cherub) patterns. The second type is vaulted ceilings. It is located at the center of the right and the left naves of the *Qidst*. It is decorated with interlacing curved clockwise *swastika* (misle-cherub) and cross patterns. The third type is a pe ceiling. It is located at the central part of the ape of *Qidst*. It has square cross decorated with different kind of cross. The fourth one is a dome type, which are two kinds. The one with patterns are found at the *Qidst* front of the central sanctuary or *Meqdes*. The interior part of the dome is decorated with various kinds of patterns. The other is a dome type without pattern, which are located on the *Meqdes* of Gabriel and Mikael. Both domes have false doors, but they are not decorated with patterns as of the others. The fifth one is a corrugated iron sheet cover ceiling and this type are found at the porch. This ceiling is covered with corrugated iron sheets. The sixth one is a wooden truss it is found at the *Qine-mahilet*, which is said to be installed in 1988EC. It is put in zigzag patterns and installed nicely. And the last one is vaulted ceiling with anti-clockwise *swastika* (misle-cherub) patterns. It is found on the above of the central *Meqdes* of marry. It is decorated with different kind of cross and anticlockwise *swastikas* (misle cherub).

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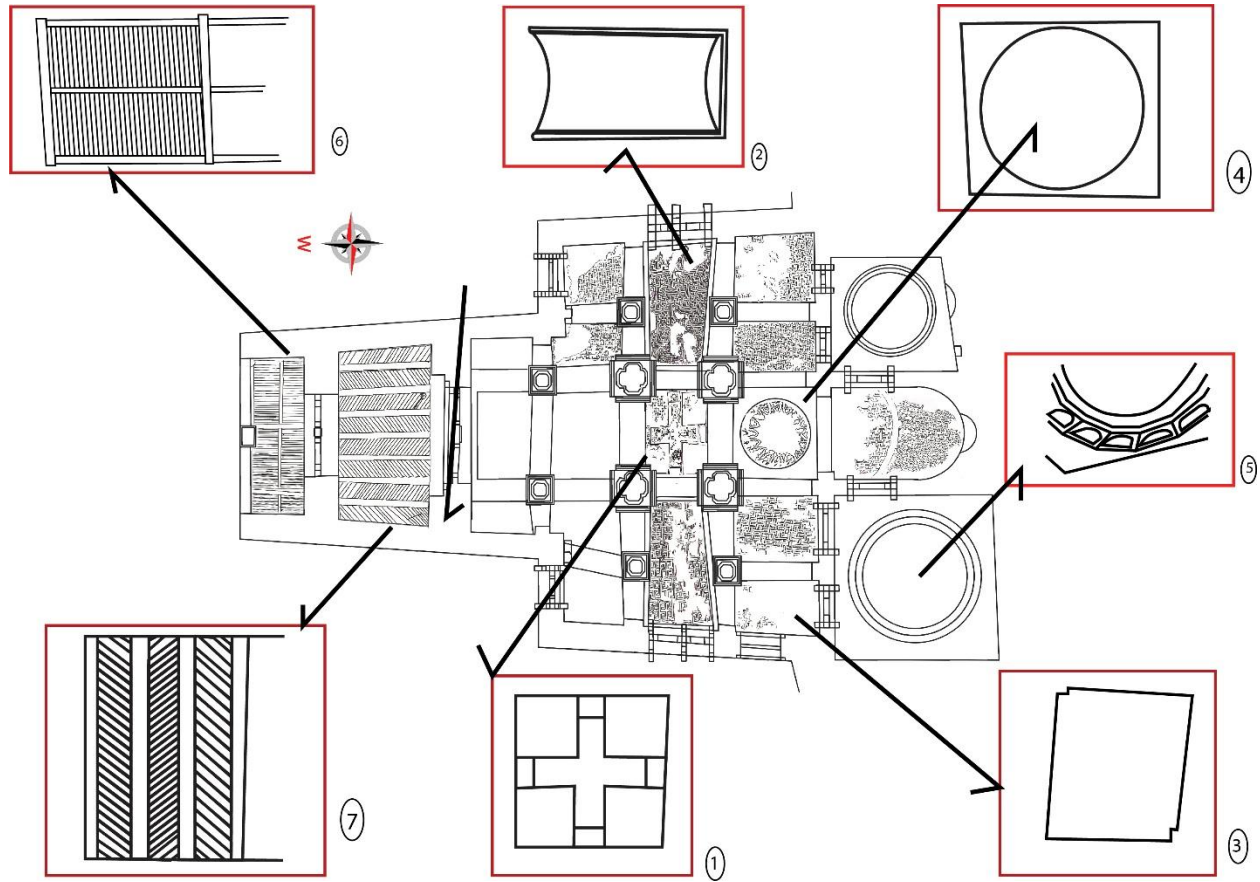


Figure 14: the different types of ceilings in the church.

4.2.8. Frieze

In this rock hewn church, a number of frieze false windows are found at the middle of the *Qidst*, above the capital forming the shape of cross. The number of the frieze false windows at the left are 27 and at the right are 23. There are also 18 towards the east and another 18 towards the west. They have formed the shape of a cross. In addition, there are 16 false windows rounding the sanctuary *Maqdes*. It is not exactly known whether this window is installed for light or for ornamental purposes. However, local legend told us that there were materials chaining in the night during the time of its excavations Even though there are no indications that show any material installations. These false windows are similar with the false windows at the stelae of Axum.

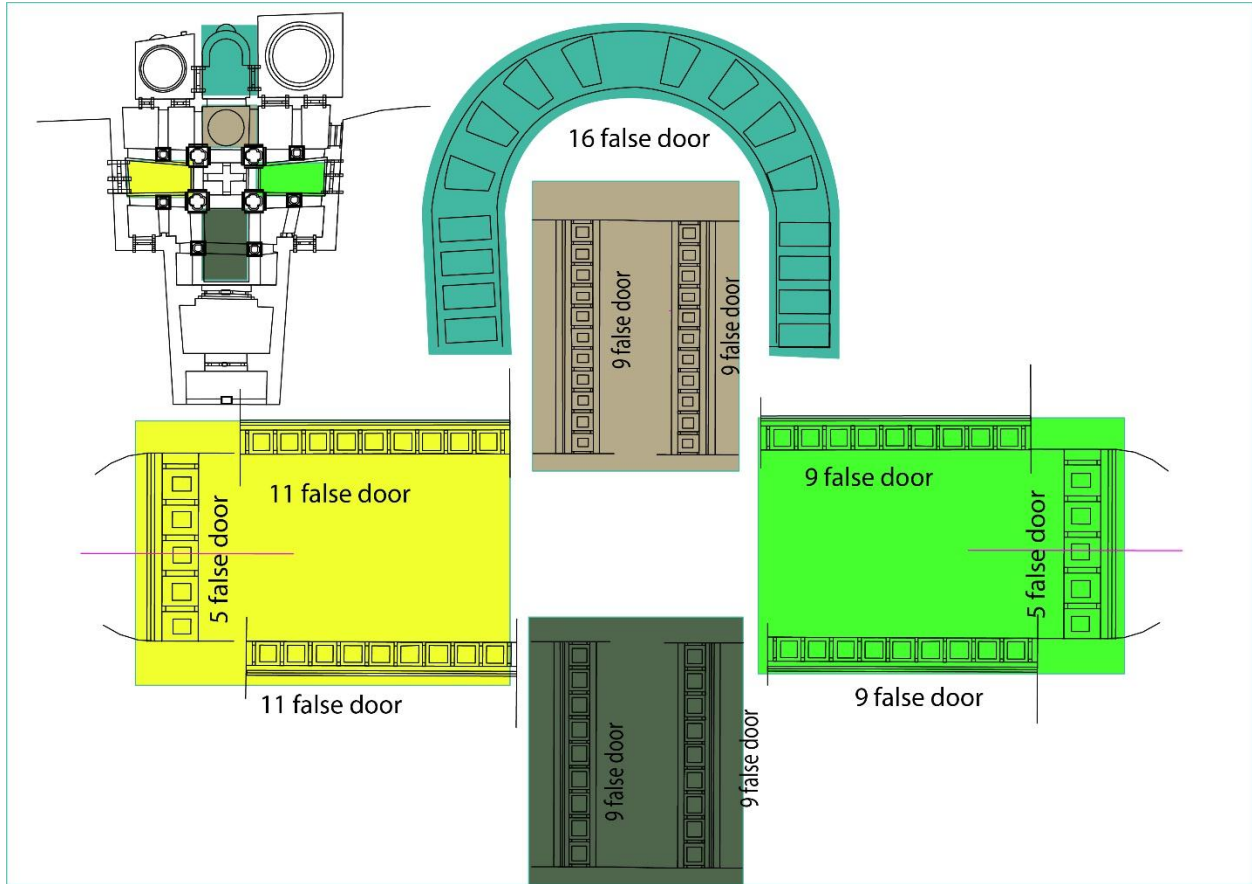


Figure 15: frieze of the church.

4.2.9. Roof

The roof has two parts: the corrugated iron and the flat stone roof. The corrugated iron roof is located at the front or to the west side of the building and the flat stone roof is located at the rear end to the east side. The corrugated iron roof was constructed during the Italian occupation, whereas experts of the ARCCH restored the flat stone roof in 1998 EC.



Figure 16: roof of the church.

4.2.10. The wall

The rock cut and the built-up porch of the wall are painted with spiritual paintings of angels, saints from the bible as well as with secular paintings like battle fields. The paintings are two types: painted directly on the wall and painted on cotton cloths; Those painted directly on the rock are different interims of painting styles. It is flat and linear with no perspectives, which is categorized among the first Gonderian painting styles. Whereas the paintings on cotton cloth, which are observed in the wall of the porch, that is the *Qine-Mahilet*, were relative painted recently- during the reign of emperor Yohannes IV (r.1872-1889) and this type of painting is categorized under the second Gondarian painting styles.

4.2.11. The Gates and the Doors

There are 8 gates, 7 of them with doors. One gate is found at the front west façade. This gate has pillar at the middle with an arch. There are also two gates at the left and right of the church at the west facade. Three of them have wooden doors. The door at the center and right facade is damaged. Five of the gates are found at the sanctuary and all of them are almost similar. Each gate has doors, except the gate to the sanctuary of Saint Marry, which is covered by curtain.

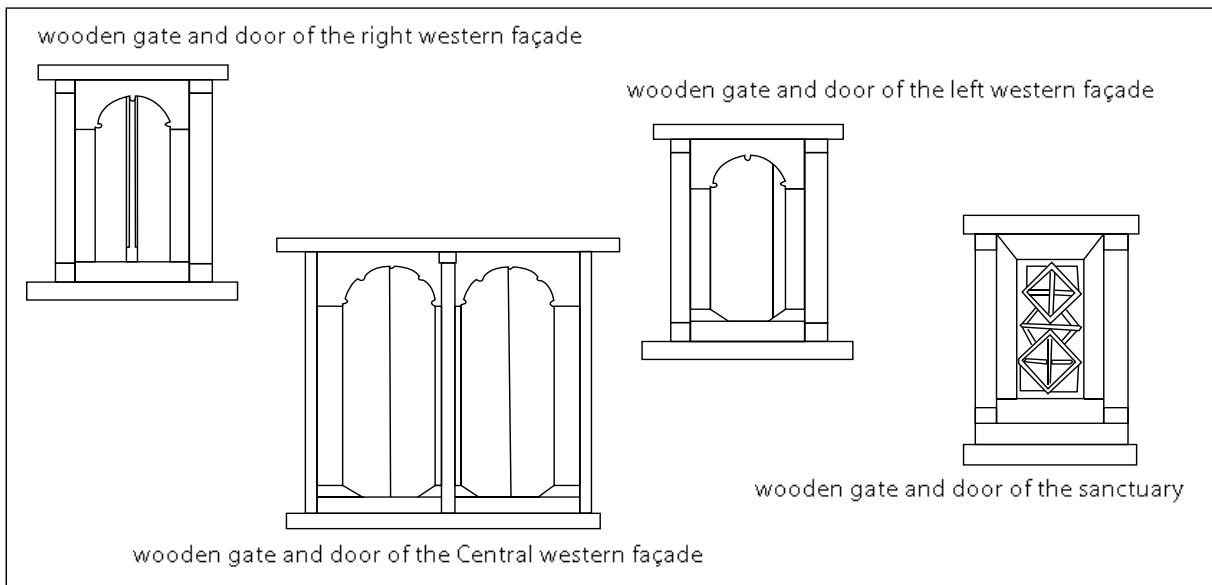


Figure 17: gates and doors of the church.

4.2.12. The Windows

This rock hewn church has no functional windows. There are only five windows, which are found at the northern and western facades and two of them are found at the right and left sanctuaries.

Two of the windows are found on the southern facades and the one is found on the northern façade. All are wooden windows, which were restored by the ARCCH in the early 2000.

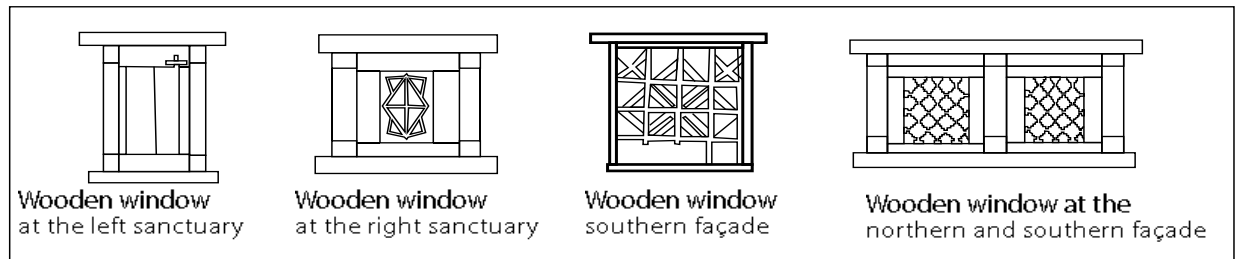


Figure 18: the different type Windows of the church.

4.3. Wall Paintings, Engraved Ceilings and Decorations

In compliance with the Venice Charter, a detailed system of documentation in the form of an objective and critical study, illustrated with drawings, copies, photos, mapping, etc. will accompany the conservation-restoration of wall paintings (ICOMOS, 2003). It is necessary to record the condition of the paintings, the technical and formal characteristics related to the creation process and the object's history.

4.3.1. Curved Decoration of the Ceiling

Symbols have been used for centuries to express ideas, relations and operations. Symbols in different parts of the world have different meanings. According to Sen (2016), they can be classified based on two parameters; scientific and cultural. One of them is the swastika symbol, which is common in different parts of the world; Likewise, In Ethiopia there is the symbol of the swastika which is known in geez as *Misle-cherub*. The symbols are found on the windows and ceilings of the earlier churches. In most parts of the church it is depicted in an anti-clock wise direction following the tradition of the Ethiopian orthodox tewahido church turning around the sanctuary during the liturgical service. The swastika on the window of bête Mariam in Lalibela is typical example of this rotation; whereas on the ceiling of the rock hewn church of Abrha and Atsibha it is depicted both in clock wise and anti-clock wise directions, which is unusual to any Ethiopian orthodox tewahido church turning traditions; thus, further study is required about why the swastikas on the church of Abrha and Atsibha follows both clock wise and anti-clock wise directions.



Figure 19: the engraved anti-clock-wise swastika in the church of Bete-Mariam, in Lalibela

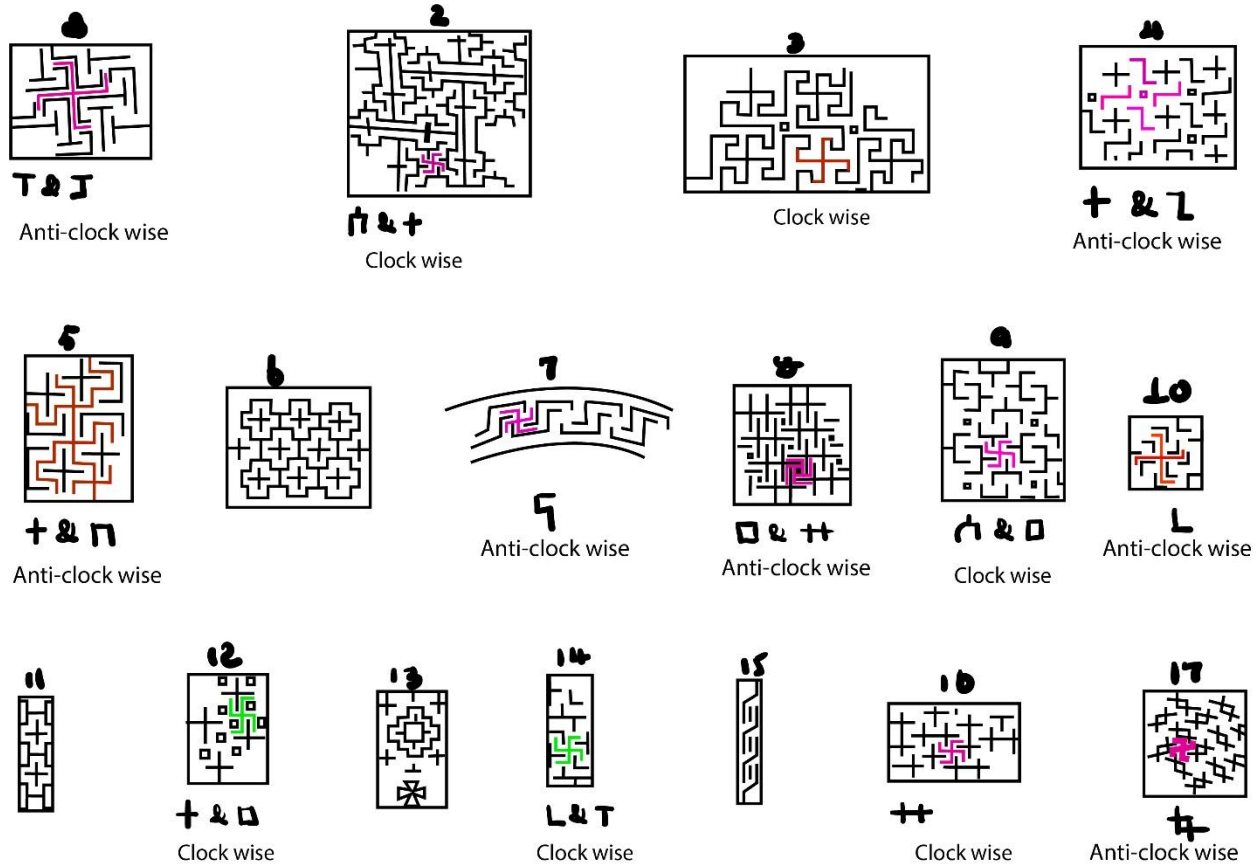


Figure 20: engraved decorations of the ceiling.

There are about seventeen swastika (*Misle cherub*) symbols depicted indifferent fashions with the alphabet of the ancient Ethiopian language “*geez.*” as it can be seen in figure: (20). They are listed from number one in a row to number seventeen. Number one is composed with the alphabet “T” and “J” to give the form of swastika. The rest from number two up to number seventeen are composed in similar ways to form the swastika and the cross. 2. “ጎ” and “ተ” 3. 4. “ተ” and “ጊ” 5. “ተ” and “ግ” 6. Number six is just a cross 7. “ኘ” 8. “ዐ” and “ተ” 9. “ሰ” and “ዐ” 10. “ጊ” 11. “ተ” 12. “ተ” and “ዐ” 13. 14. “ጊ” and “ተ” 15. “ኘ” 16. “ተ” 17. “ተ”

4.3.2. Mural Paintings of the Church

For this study, all the paintings on the northern, eastern, southern and the western elevations are of the rock hewn church of Abreha and Atsbeha are documented as follow clustering all paintings on northern elevation on one part and the other elevations also that way. Individual painting is given a number and the wall painting with in the number is described and documented as follows:

Wall paintings can be characterized as any design or composition that is purposely painted directly on a building's surfaces. Imitations of other materials (such as stone or wood) to more complex

figurative or even narrative schemes differ from simple decorative patterns. The wall paintings are called wall paintings or murals. It is called (buon fresco) if the painting is done otherwise it is called seco painting when pigment bound in media is applied on a dry wall. The wall painting Abreha and Atsbeha church has painting on cotton cloth and directly painted on the rock hewn wall.

Wall paintings are an important part of the fabric of buildings (English Heritage; 2005). Documentation is the aim that is much more modest in terms of form, but definitely much more ambitious in terms of the content of providing the necessary knowledge and self-discipline to conservators for their practical work.

4.3.2.1. Wall Painting of the Northern Elevation

There are twenty-three paintings in the northern elevation of the wall, which are designated from number one to twenty-three (See Detail descriptions of each painting in Annex I).

The paintings illustrate spiritual and secular events. Number one and two are painted on the porch to narthex entrance. Abune Samuael and other unknown Saints are depicted on lion back, respectively.

On the narthex wall, painting number three, four, six and seven are depicted equestrian saints on horseback. Each saint is throwing spear against the enemy of the church. captions in Geez script is also written on each painting, which read in sequence as, saint “Fikitor”. (ፈቅጦር), “holy Aboli”. (ቅዱስ አቦሊ), “St Tewodros”. (ቅዱስ ቴዎድሮስ), “St Georghis”. (ቅዱስ ጊዮርጊስ), respectively. The lower part of painting number- six and number- seven are damaged due to physical contact and dusts. However, number-three and four are in a good condition even though they need cleaning.

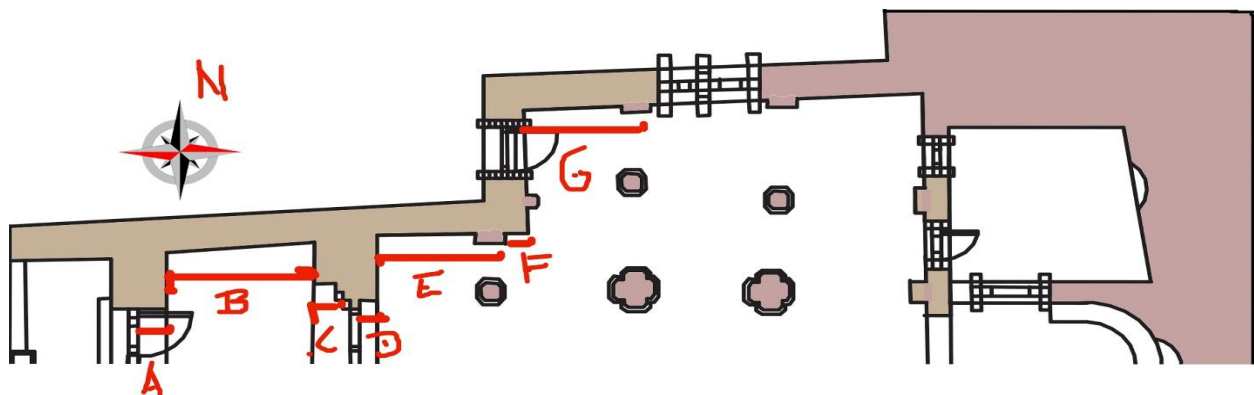


Figure 21: location of the wall-painting in the northern elevation

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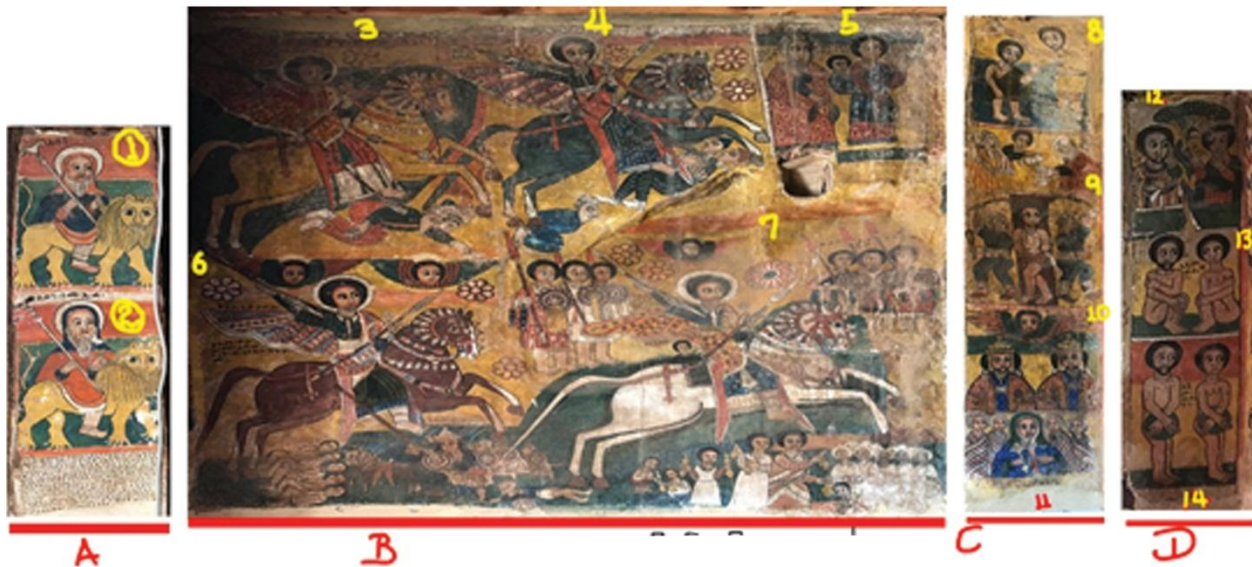


Figure 22: wall painting of the northern elevation.

Painting number- five shows Joachim and Ana are walking. captions written in geez script is placed on the upper part. But this painting is largely damaged by termites' attack that has migrated from the nearby graves.

Number - eight, nine, ten and eleven are located on the narthex to the *Qidst* entrance. Painting number - eight portrays the Baptism of Jesus and Pilate washing his hands; number- nine is depicted Jesus being flagellated; Number- ten illustrates the two king brothers, Abreha and Atsbeha and number - eleven has hold the depiction of Abune Selama Kesate Birhan, the first metropolitan bishop of Ethiopia.

All of the above paintings neither have nor hold any written caption as the other paintings. Upper part of number - eight and lower part of number - eleven are partially damaged. But all paintings are covered with dust accumulations and need urgent conservation intervention.

The painting number - twelve, thirteen and fourteen are located on the inner narthex to the *Qidst* entrance. The depictions from twelve up to fourteen are all about the story of Adam and Eve. There are captions written in Geez script on all paintings that tell us about the message of each painting. Nevertheless, there are no captions that hold information about the painter, the patronage and/or the years of paintings. All paintings in this category are found in good conditions, except number - twelve. This painting is partially faded.

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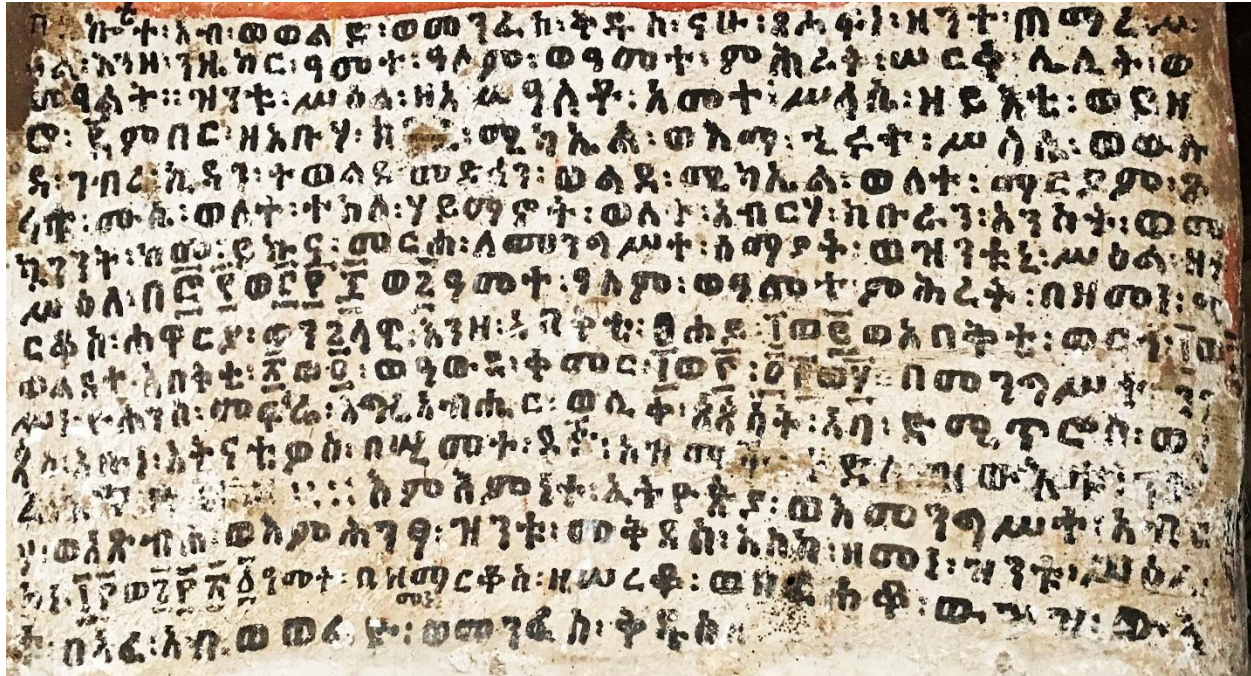


Figure 23: The Ge'ez Inscription.

The canvas painting number - fifteen, sixteen, seventeen and eighteen are located on the wall of the *Qidst*. This wall is largely covered by paintings with secular theme; such include Emperor Yohannes IV and his Generals. However, on the upper part of this wall and on the isolated pillar to the right, God the father, the Martyrs and Apostles are portrayed.

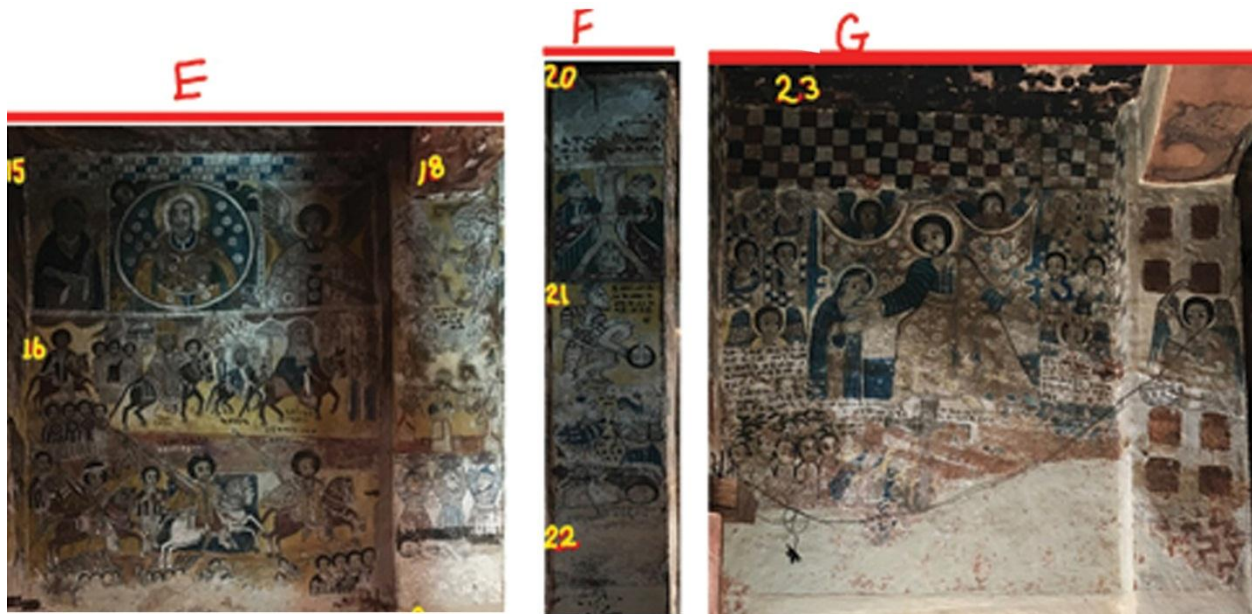


Figure 24: wall painting of the northern elevation.

No caption has on painting number-fifteenth, whereas number- sixteen, number - seventeenth, eighteenth and nineteenth have hold geez captions that tell us about the contents of the paintings. However, all have no captions that give information about the personalities of the painters and the donors as well as the age of the paintings.

Most paintings are found in deteriorating conditions, which result in loss of paint and canvas. In most, accumulation of dusts and fading are observed.

The painting number - twenty, twenty - one and twenty - two are located on the wall of the *Qidst*. On painting number - twenty Peter the Apostle is depicted crucified upside down. Painting number - twenty-one depicts Paul being beheaded by a man with sword and number - twenty-two illustrate Jacob being stoned by two men. All paintings have captions that tell us about the contents they hold about, but like the other paintings they do not hold any information about the painters and the painted dates.

The paintings in this category are also found in poor state of conservations. Plaster detachments, flickering, paint loss, accumulation of dusts and fading are observed on most paintings.

Painting number - twenty-three is also located on the wall of the *Qidst*. The content of the painting is all about the Last Judgment. It is painted directly on the wall and also hold inscription that tell us about the content, though most section of the caption are faded away. Like the other paintings, the names of the painters and the date of illustrations are unknown. This painting is badly damaged due to the detachment of the wall plaster, which result in painting loss and fading. In general, all the paintings on the northern elevation are in poor state of conservation

4.3.2.2. Wall Paintings of the Eastern Elevation

There are twelve paintings in the eastern elevation of the wall, which are designated from number - one to twenty-three (See Detail descriptions of each painting in Annex II). Out of the twelve paintings, three are found on the wall of the sanctuary. On the portrayal number - one God the Father is depicted. As the caption indicates, here also the Last Judgment is narrated, but it is

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unknown why Last Judgment is repeated here. It is unusual portraying the Last Judgment twice in a single church.



Figure 25: wall painting of the eastern elevation.

Most part of the caption is lost due to previous restoration intervention. Past restoration tried to strengthen the old painting with new textiles. However, it is still in a bad condition. Number- two is also badly faded away, which is even hard to identify. However, most probably saint George is illustrated on a horse back, though no visible captions. In number - three Angels are depicted on the right and left part of the window of the sanctuary. The style of this painting is different from the other paintings. It is found in good condition.

Paintings from number - four up to number - twelve are placed on the wall of the narthex. Number - four and five have spiritual content. The Birth of Christ and Saint George on horseback are depicted, respectively. Whereas the lower part of number-six depicts local warriors on horseback and galloping, which shows it contains a secular theme. Number - seven and eight illustrate the Trinity and Angels in a row, respectively. Both are located at the center of the wall but number - nine ten, eleven and twelve are placed on the right side of the wall. Here, Crucifixion of Jesus Christ, Jesus being nailed with chisel, Mary with her beloved Son and the Donor in Devotion are illustrated, respectively. All have inscriptions that give us information about the stories narrated. Like other paintings, no information about the painters and painting dates on these painting, except on number- eleven on which the name of the donor of the painting has mentioned.

Among the paintings in this category, number - four, six, seven, eight, nine, ten and twelve are found in poor conservation status. They are largely faded and Considerable part of the paintings have lost and covered with dust accumulations.

In general, most paintings of the eastern elevation are found in poor state of conservation.

4.3.2.3.Wall Paintings of the Southern Façade

On this elevation three faces of the wall are painted. The two parts are located at the entrance of the narthex to the “*Qidst*” and the rest is located at the interior of the southern façade of the “*Qine-mahilet*” To see the specific wall painting of this elevation, refer to figure: 26 and see Annex III for detail descriptions of each painting.

There are twenty-two canvas wall paintings on the southern elevation, which are designated from number - one to twenty-three (See Detail descriptions of each painting in Annex III).

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Figure 26: wall painting of the southern façade.

Painting number - one, two, three and four are located on the entrance from the *Qnine-mahilet* to the *Qidst* – narthex. Except on the upper part on which the two King Brothers, Abreha and Atsbeha, and the patronage of the painting are depicted, the rest are covered with religious paintings. On these paintings, the story of Jesus starting from the cross up to the grave are narrated. All paintings of this section have inscriptions that give us information about the contents. However, they do not hold information about the painters and date of the paintings; except in the painting of Abreha and Atsbeha on which the name of the donor of this painting is mentioned. Most paintings of this category are deteriorated, especially on their lower elevation.

Starting from the number- five up to number - eighteen unidentified local Saints, Saints from the Old and New Testaments are illustrated. Of these, four are without inscriptions, whereas ten of them hold inscriptions that tell the stories of the illustrations. Unlike the paintings in the other category, all fourteen paintings are found in good condition.

The paintings from number - nineteenth up to twenty-two are narrating about the Martyrs Gigar except the last one, which is about Herodias. All the paintings have inscriptions about the content, but no information about the painter and dates of painting. All are also found in good conditions.

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4.3.2.4. Wall Paintings of the Western Facade

This wall painting is located on the wall of western side of the interior porch. Most face of this wall is covered by the equestrian saints. In addition to the spiritual contents, secular content is also depicted on it. One of the doors in the western porch is painted with arch angels. Each of the painting is documented as it can be seen in the figure: 27 below and detail descriptions of each painting are attached in Annex IV.

On this elevation there are twenty-three paintings, which are designated from number one to twenty-three (See Detail descriptions of each painting in Annex IV).

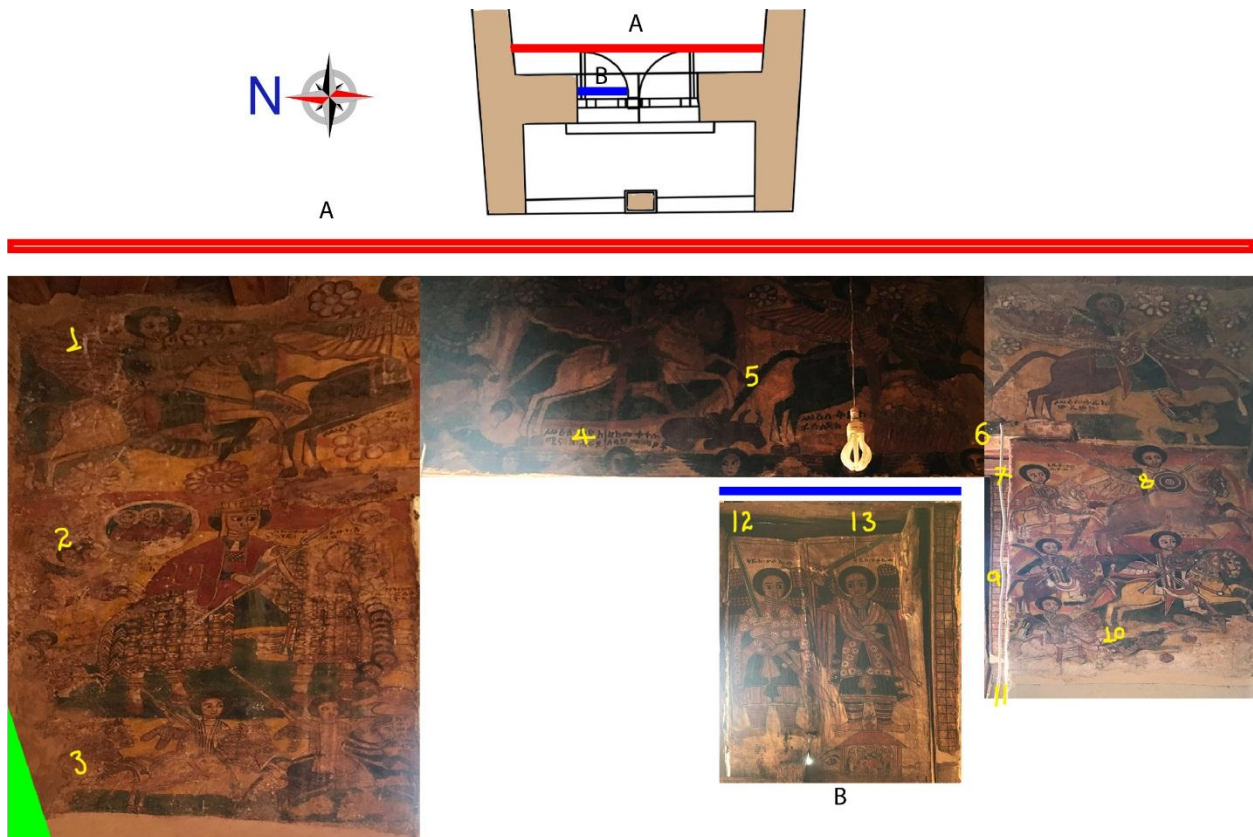


Figure 27: wall painting of the western elevation.

Of these twenty-three paintings, six of them, namely, number - one, two, four, five, six and twenty - three are illustrating equestrian Saints on horseback throwing spears. On this elevation local heroes are also depicted, especially on the lower part of the wall number - three, seven, eight, nine, ten and eleven. Local heroes are depicted seating on horsebacks – galloping- holding spears and circular shields with their hands.

The Arch Angeles Mikael and Rafael are depicted on the door of the entrance from the porch to the narthex. Conventionally, however, the two Angeles are supposed to be placed on the door of the sanctuary. This makes the church of Abreha and Atsbeha unique.

All the paintings hold inscriptions of the content, but no names of the painters and the donors as well as the dates of painting have mentioned. The caption on number - one is totally lost and the rest of the inscriptions are also badly damaged and degraded. When compare to others the paintings on number - four, five and six are in fair conditions, whereas the rest are badly deteriorated. Paint and canvas loss, fading, accumulation of dusts is observed.

4.3.2.5. Wall Painting of the western Façade of the *Qidst*

This western elevation is located on the upper right and left side of the central door in *Qidst* and on the upper part of the left door of the *Qidst*.

On this elevation there are twenty-two wall paintings and canvas paintings (See Annex IIV for detail descriptions). Of these, Painting number - one is painted directly on the wall whereas the rest are painted on cotton cloth. The paintings number - three, four, five, six and eighteen have secular contents of local leaders, noble families and warriors and the rest of them have spiritual contents. Number two, seven, eight, nine, thirteen, fourteen, fifteen, sixteen, seventeen and number - one is all illustrate the miracle of Mary. Number ten, eleven and twelve are depicted Angels with full length and from the neck up. Paintings from twenty up to twenty- two are depicted Martyrs.

All paintings hold inscriptions of the content, except number - twenty-one and twenty - two. All the paintings have commissioned from a woman named Amete Silassie with the exceptional of the secular paintings and the wall paintings.

Below the secular paintings Lady Kassa is depicted but there is no inscription that notify whether she was the patronage or not.

Overall, the mural paintings on this elevation are badly damaged except painting number- seven, eight and sixteen which are found in better conditions. However, the rest of the paintings are in bad conditions. For instance, the paintings from number-two up to number - six are thorn out badly due to vertical cracks; on the wall.

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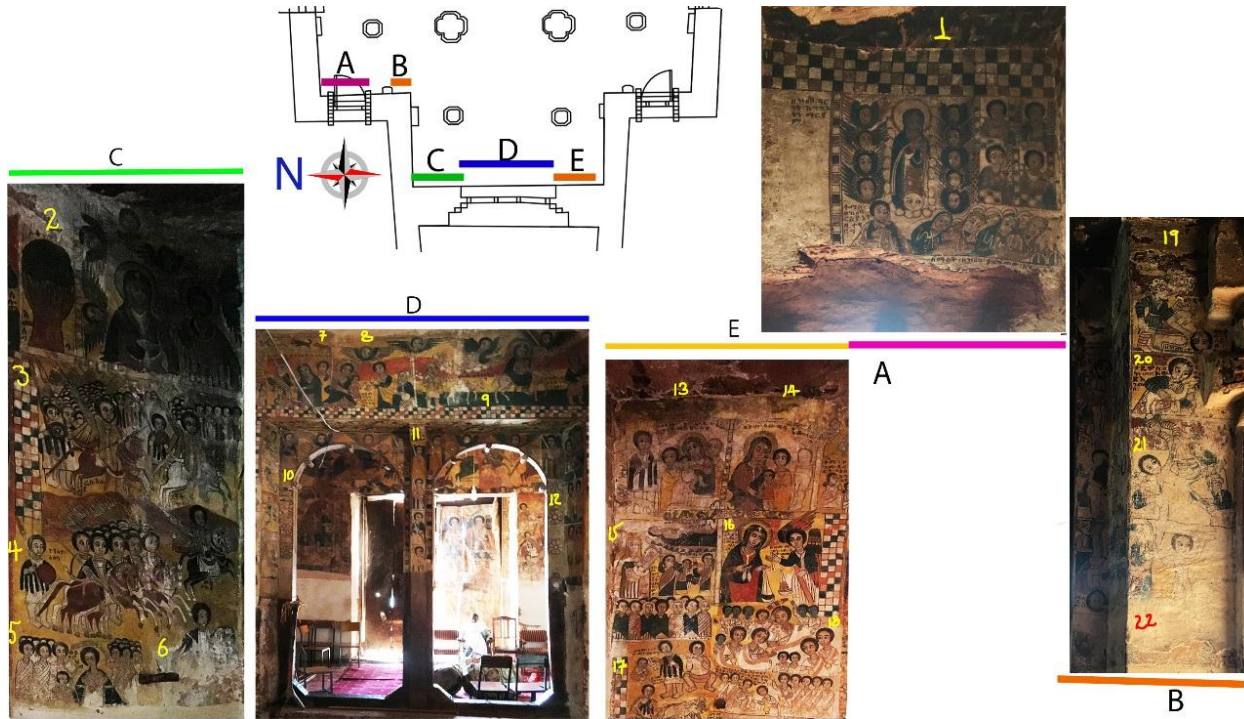


Figure 28: wall painting of the western elevation in the qidst.

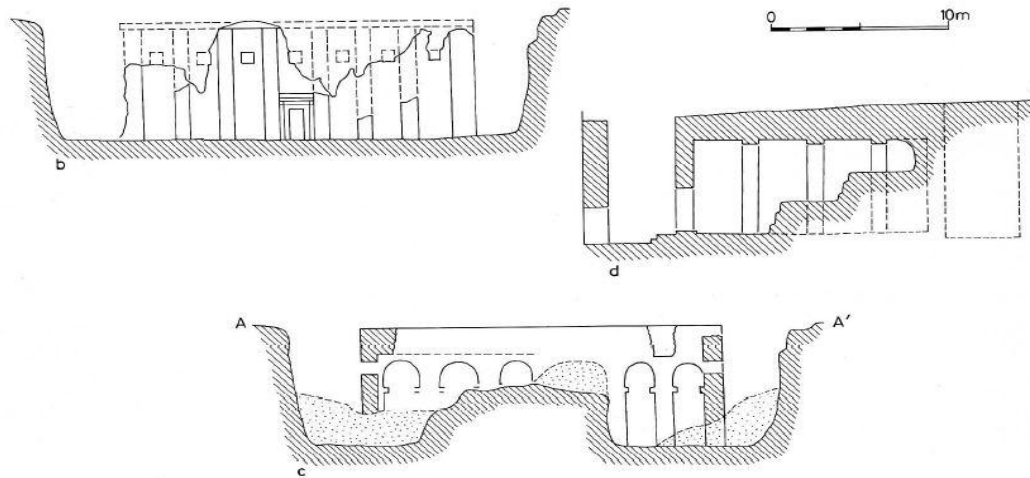
4.4. Techniques of excavation and wall painting

4.4.1. Excavation Technique

The church of Abreha and Atsbeha was hewn as semi monolithic from the natural sandstone. Each rock surface was then further chiseled out until the desired height and form was reached. Out of that doors and windows are formed. Through the door, the inner mass was sculpted - digging and chiseling from top down; through, the inner wall, pillars and roof were formed.

The unfinished rock hewn church of Yeka Mikael, which is located nearby Addis Ababa, is a typical example of how the rock hewn church of Abreha and Atsbeha was excavated from top to bottom. The ground plan is also similar to the Cross in Square rock hewn churches in Tigray (Phillipson, 2009)

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183 Yekka Mika'el, sketch plan, elevation and sections (after Sauter 1957): (a) – plan; (b) – west elevation; (c) – section; (d) – west-east section indicating sequence of excavation.

Figure 29: Yekka Mikael, sketch plan, elevation and section. (:Phillipson, 2009)

The interior section of the church is decorated and ornamented with different types of cross and swastika. The roof of the half freestanding semi monolithic church is curved in slope to promote drainage downward. Till recently the roof of the church was covered with mud and it was in filtering water when it rains, but since it was capped with flat stones by the ARCCH in the early 2000 the church has been existing in good condition, except the problem on the system. No visible spout system on the roof is observed; except an arched line curve in the northern part of the church.

No evidences have not been found on how and what materials the excavators of the church had utilized to excavate the natural rock. It can be hypothesized however; from the chiseling mark in the sanctuary as it can be seen from the fig, 30 below, they may have used iron made digging materials and chiseling for excavation and further refinement.

Except where geological formations forced alterations, the churches follow the Orthodox custom of placing doors and windows. Unlike the built-up churches of Ethiopia, mostly their gates are facing towards the north and south, all gates of the church of Abreha and Atsbeha are facing to the west. The floors of the churches are roughly hewn, varying in height to define the different sacred zones.

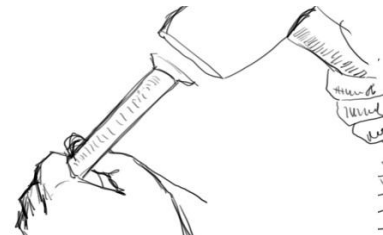


Figure 30: chisiling mark at the sanctuary of Gabriel.

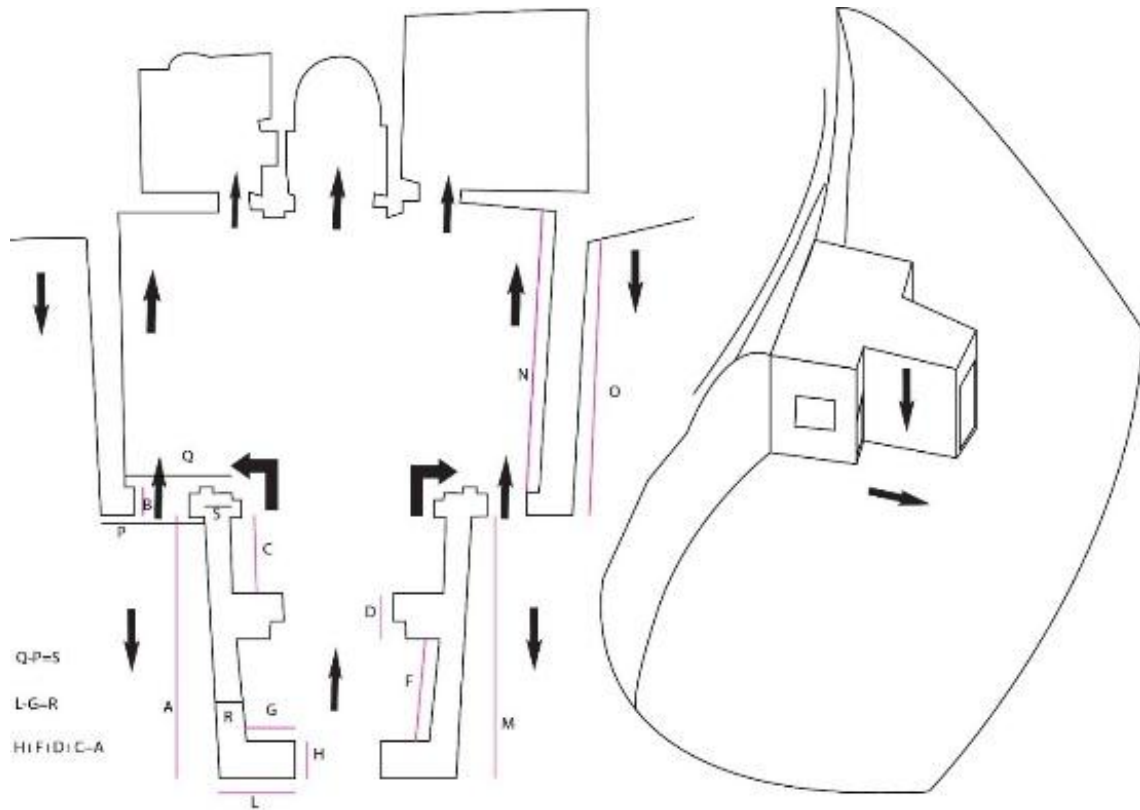


Figure 31:excavation technic.

In the outer part of the church there are about 325 graves prepared for the congregations living around the church. The grave yard and the graves are excavated parallels with the excavation of the rock hewn church itself and still functional. When someone dies the cover of the grave is opened; while, incense is burnt; then, the corpus is inserted to it.



Figure 32:Excavation Technique.

4.4.2. Techniques of Wall Painting

The restorer and art historian are interested in the history of the wall painting technique. This provides the restorer with the necessary knowledge to recognize the various techniques used by the original creator (Hassan, 2016). In the church of Abreha and Atsbeha there are two type of wall painting techniques identified this are; cotton clothes wall paintings and mural paintings. Pearce (1810-9) describes how the cloth were applied to the wall:

After plastering the wall and smoothing it with clay, they line it, when perfectly dry, with cotton cloth, which is stuck to the wall by means of a slimy substance made from cows hide, or from the fruit of the wanzatra. Over this cloth they lay a coat of whitewash, made from chalk or lime stone, first burnt, and then pounded and mixed with water, adding a little of the aforesaid substance with which the cloth are stuck to the wall. They then draw the outline of the picture with charcoal and afterwards paint it with black paint, which they make by burning up hempseed nearly to a cinder

Then, the paintings are painted with tempera paints, most of the colors, may have had prepare from local plants and minerals; however, some of the paints may have imported from the outside, such includes the color blue. Over all on the cloth paintings seven colors are identified, such as, blue, yellow, green, brown, ocher, black and white colors. Style wise, the characters has round face, there is no visible source of light and shadow, the background of the painting is shaded in strong colors changing from ocher to red and green and this is typical characteristics of the second Gondarian Painting Styles.

The wall of the parent rock is also painted with unidentified lime-like material first; then, the desired subject with different paints. This wall paintings are positioned at the *Qidst*, on the upper part of the northern gate and on the northern wall. The paint used are four colors; These are, earthy brown, bluish green, black and white colors. It seems that the unidentified lime- like paint is used as background colors. All the colors are prepared from locally available natural materials. Style wise, the application of shading of the black paint and the cloths are depicted by lines that follow the contour of the body and are filled with geometrical patterns, which is similar to that of the first Gondarian painting style, however, the painting mustache is different from that of first and second Gonderian styles rather it is much mor similar with the paintings of crucifixion in the British museum which was taken from the church of Medhanialem at Adwa

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Figure 33: Technics of the mural painting of the church.

4.5. The Intangible Heritage of the Church

4.5.1. Liturgical practices

Different liturgical services are held in the church during, liturgical activity, *seatat*, *fithat*, *qine*, and Baptism, in the presence of the congregations. liturgical services are conducted in holidays, in baptismal ceremony, in burial ceremony, and in every day prayers; leading by the bishop if present, by priests and deacons. According to kesis Hadush, the origin of the church liturgy is started in the fourth century AD by the two kings, Abreha and Atsbeha; during their baptism in Hamassen, Debre Sina Church. Since then in every Ethiopian Orthodox church the ceremonial services have been conducting accompanied by two deacons and two priests. In the church Abreha and Atsbeha there are three sanctuaries dedicated to St. Mary, St. Mikael and St. Gabriel. Unlike the other ordinary days, by August 13 and October 4 the liturgical ceremony is usually accompanied by 9 priests and 6 deacons. In addition to liturgical activities, *seatat*, *qine*, *baptism* and *fithat* are also held on in these days. The liturgical ceremonies are accompanied by different church instruments, such as, drums, strums, censers, vestments, challis, tapper, incenses, arc, processional cross and hand crosses, standing sticks and the holy communions.

4.5.2. Festivity

There are two ceremonies celebrated once in a year at Abreha and Atsbeha church These are: Debre Tabor, which is celebrated on December 13th. On this day, the mass is held inside the three sanctuaries by fifteen priests. The other is, the festivity of Abreha and Atsbeha, which is celebrated

on October the 4th. On this day, a lot of congregations are gathered from different parts of the country. According to local information, it is next to Axum Mariam Tsion in terms the number of congregations. The mass is held within the three sanctuaries, leading by fifteen priests as that of the festivity of Debre Tabor. On this day of festivity, about 10 quintal of soil (sand) are taken by the congregations to be used for the purpose of medications for animals.

4.5.3. Chanting

The Ethiopian church has its own chanting prayers, which is conducting every day throughout the year. According to Ethiopian tradition Saint Yared, a priest from Axum invented the three mods of Ethiopian church music in the 6th century AD. These are *geez*, *ezi* and *araray*. (Tamrat, 1985). The church is claiming that all musical notes “even the sound of animals and the song of bird’s falls under one of the mods of the Yared the priest.

4.6.Movable Heritage of the Church

In the rock hewn church of Abreha and Atsbeha there are different kind of movable heritages, such as, musical instruments and liturgical service equipment. Some of these are displayed in the museum. The followings are among moveable heritage of the church:

Dram (*kebero*): the dram is cylindrical double headed in shape. It is made up of wood. The interior is hallowed and the cylinder is cupped with ox-hide; the skin of the two faces are starched and laced on the body of the dram; whereas, the solid body of the wood is covered with garments. The dram is often banged with bare hands ether, it is suspended horizontal with a strap from the shoulder; or sometimes, on the ground. The big face is banged with the right hand and the small face is banged with the left hand. It is used to accompany the church music of important religious celebrations of the church.

Cestrum (*tсенasil*): the cestrum is most probably the oldest and best-known idiophone. It has the shape of U with a handle at the bottom. The upper U-shaped is made up of metals and the lower part the handling is made up of woods or metal. It is equipped with movable disc, threaded on the rods, which jingles when the instrument is shaking. The cestrum is played by male priests and deacons in the church, but these days in the Sunday school, it is played by females also to accompany sacred chants.

Censer (*tsinha*): censer is made up of metals, silver or golds. It is made with chains connecting the incense burner vessel and the handle at the top. On the chain are small twelve bells jingling. The censer preparation is permitted to deacons; however, they are not permitted to censing; even, they are not allowed to handle it at the top, but can the side at the chain. It is permitted only to priests to swing. It is used during the prayer on liturgy, baptism and memorial ceremonies.

The Holy Arc: the book of exodus tells us that God instructed Moses in mount Sinai made the Arc and Moses was made the Arc to be 2 and half cubits in length one and half in height approximately, 131x79x79 cm. It is entirely gilded with gold. And four rings of gold are attached on its four corners. Cherub is placed on the upper part of the Arc. The Arc found in the rock hewn church of Abreha and Atsbeha is not the original Arc made by Moses; it is the replica of the original as most of Ethiopian church has. In this church there are three replicas of the Arc, named *Tabot* inside the three sanctuaries. These are: The Arc of St. Mary is placed at the center; it is in this sanctuary the everyday liturgical service is held. The Arc of St. Mikael is located at the sanctuary to the left in this sanctuary the liturgical services are only held on August the 13th and on October 4th the Arc of Gabriel, which is situated at the right section of the sanctuary. Here also the liturgical service is held on August the 13th and on October 4th. In this sanctuary not only the Arc, but also the corpus of the two brothers, Abreha and Atsbeha are placed. These are the most respected sections of the church, no one is allowed to enter and touch the Arcs, except the priests.

Standing stick (*meqomia*): the standing stick is usually made up of woods but the top part is sometimes covered with metal. The standing stick is used by the priests as body support or balance during the prayer; but it is also used to accompany the chanting ceremony of the church and the priests are holding it with their left hands and the strums with the right hand during the ceremonies.

Parchment/ Manuscripts (*brana*): the parchment is made up of goat's skin. Many of the books were written in the old Ethiopian, language geez. In this church number holy books are kept in the museum, such include: Arganon, Tselot Adam, and Haimanote Abews.

Crosses: there are two types of crosses in this church, such include hand crosses and processional crosses. Some of them have made from wood and some are made from metallic materials, such include bronze, silver and gold. They have different size and weight. Most crosses are found in good conditions.

Crown: the church is endowed with different types of crowns, such as, king's crown, bishop's crown, deacon's crown and priest's crown. Most of these crowns, particularly the crowns of the Kings and Bishops, are placed inside the museum, they have made of different kind of materials, such include silver.

4.7. Heritage Values and Significance of the Church

Cultural heritage value and significance means, for many including the Burra Charter, "aesthetic, geographical, science or social value to past, present or future generations" A heritage or a place is likely to be important by their values embedded on it, which usually help to understand the past or enrich the present, and will be of value to future generations.

4.7.1. Aesthetic value

Aesthetic significance includes sensory perception aspects for which parameters can and should be defined (The Burra charter, 1999). The aesthetical value of the rock cut church lies on the cutting of the rock, engraving of the different motifs of the cross, the different styles and beauties of the religious and secular painting as well as the vaults, the arch of the ceiling, which are decorated by engraving and paintings with different types of crosses interlacing to each other. It is also the most wonderful decorating styles. Besides the architectural design of the ceiling, are amazing works. The painting on some of the pillars and on the wall of the porch are well illustrated are witnessing the skills and knowledge of the society of that period. The execution techniques of the paintings and the excavation are unique Ethiopian style.

4.7.2. Architectural Value

The Rock-Hewn Churches of Abreha and Atsbeha is believed to have been excavated during the reign of the Kings' brothers, Abreha and Atsbeha, in the 4th century AD. The church is believed to be one of architecturally advanced rock hewn churches ever to be hewn that early age in Ethiopia. In terms of the overall idea, its refined architecture and aesthetic expression are showing the level of knowledge and skill that have existed at that time. By any standard, the rock hewn churches of Abreha and Atsbeha are unique and considered as special creations of human genius. Each pillar, capital, dome, and freeze in Abreha and Atsbeha is architecturally unique and reflects beautiful craftsmanship. Some of the churches and their columns are richly decorated with paintings, bas-relief figures, and a variety of window shapes and other architectural elements.

4.7.3. Historic value

Historical value covers aesthetics, science, and cultural history (The Burra charter, 1999). The rock hewn church is believed to have been excavated during the reign of the two brothers, Abreha and Atsbeha after their conversion to Christianity in the fourth century AD. Since the excavation the churches has passed through a number of good and bad times and events. the mummified bodies of the two brothers are still resting on the right side of the sanctuary. According to Priest Teklay, the churches were originally decorated with gold and other precious metals and ornaments, but later during the aggression of Queen Yodit, also named Gudit, the gold and the ornaments were taken away and the church was burnt with fire, where the impact is still visible; During the reign of Emperor Yohannes IV in the mid nineteenth century, a large porch was added to the western side of the old structure and another one was also added next to it during the Italian occupation.

4.7.4. Religious value

The rock hewn church of Abreha and Atsbeha, a well-known religious center, is a hub of annual ceremonies and spiritual holidays These ceremonies are the major features of the community life, which have yielded a considerable socio-cultural importance for the society at large.

The intangible part of the heritage is also another important feature of interest at Abreha and Atsbeha. An important ceremony celebrated in celebrated on October four is very colorfully which are attended by a large number of domestic and foreign tourists as well as by the local community of Abreha and Atsbeha and the surrounding areas. The site has very deep religious and spiritual significances as a place of pilgrimage. The annual Abreha and Atsbeha celebration and festival serve to maintain the sacred status that the place holds within Ethiopian society.

4.7.5. Social value

Social value comprises the attributes for which a heritage or a place has become the object of a majority or minority's religious, economic, national or other cultural feeling (The Burra charter, 1999). The rock cut church has spiritual value. The two brothers Abreha and Atsbeha are considered as saints by the Ethiopian Orthodox Tewahido Church for their contributions to the introduction and expansion of Christianity in the country. Due to these contributions the church is named after them. Every year many people come from different part of the country for pilgrimage as well as for salivations. The burial as well as baptismal ceremonies is held in the

church is visited by tourists from different part of the world in addition, the life of the surrounding community is highly associated with church and the church activities. The local market and other social services and facilities are also centered on the church. Therefore, the social value of the church is equally important.

4.7.6. Scientific value

This rock cut church has yielded substantial scientific information of the past, which includes information about the rock excavation technics, material used for excavation, painting style, and architecture style of the time as well as decoration technics used in the past.

The values of the Rock-Hewn Churches go beyond its spiritual use as prayer houses. The rock hewn represent the highest level of the then craftsmanship, knowledge and the skill of the Ethiopians in construction engineering and rock curving as well as spatial organization, as some of the structures could have been carved not as churches, but as graves which is not yet known how deep and how wide it is.

The overall heritage site, and the church contained within it, is considered important place as archaeological site. There might be a number of unknown materials, which may have archaeological values under the ground but no archaeological excavation has been carrying out yet. However, the church and its surrounding area are still believed to be rich source of information for future researches.

4.7.7. Associative value

The rock cut church of Abreha and Atsbeha has yielded a lot of data that are important to interpreted the knowledge, skills and style of the Axumite architecture that could help to enlighten the present generation of the country. Inters of location, church is located on the foot of the sandstone hill facing to the west. This had made deliberately to face the congregation to the east where the sun rises. Most wall paintings are helping transmit the doctrine of the religion to the follower congregation. From the birth of Jesus to doomsday are depicted. There are also interlaced decorations decorated by highly skilled painters on the roof.

4.7.8. Authenticity

The conservation of cultural heritage is rooted in the values attributed to the heritage in all its forms and historical periods (the Nara document, 1994). Our ability to understand these values

depends partly on how credible or truthful the sources of information about these values can be. Knowledge and understanding of these sources of information in relation to and meaning of the cultural heritage's original and subsequent characteristics is a necessary basis for evaluating all aspects of authenticity. Authenticity, thus considered and confirmed in the Venice Charter, tends to be the critical value-related qualifying factor. Authenticity understanding plays a fundamental role in all cultural heritage scientific studies, in the planning of conservation and restoration, as well as in the inscription procedures used for the World Heritage Convention and other inventories of cultural heritage.

The church Abreha and Atsbeha are unique and original with the cross in square as well as with the form of “T”. It is free standing except for the eastern end. It is designed with nave and five aisles including the sanctuary. The rock cut architectural design, the different interlacing cross decoration, the paintings on the surface of the rock and the wood used for the gates and doors are authentic except at the front that were added during period of emperor Yohannes IV and during the Italian occupation, but if we take this as a layer of history this can be taken as authentic as well. Inters of social contest the rock cut architecture is serving as church since its excavation, it has not been changing the age.

4.7.9. Integrity

Integrity is the quality / degree of the monument's completeness / intactness, demonstrated by its attributes such as structural, functional (in the case of a living monument) and visual. (NPC – AMASR, 2014). Functionally the rock cut architectural design, all the paintings depicted on the surface of the rock, the cross and all elements found in the rock cut church are functionally integrated with the ritual context of the religion.

Structurally the rock cut has never been changed since its excavation, but there are built up buildings added at the front during the reign of emperor Yohannes, which are smoothly structurally integrated with the old one. Never less, the later additions by the Italians are not much integrated with the previous one.

Visually the interior of the rock cut church is largely kept its integrity. But the later additions by the Italians, such as build up structures with corrugated iron sheet are partly affected the visual integrity of the church.

CHAPTER FIVE

5. Analysis and Interpretations

5.1.Past Conservation - Restoration Efforts

The rock hewn church of Abreha and Atsbeha has undergone conservation interventions since its foundation. A built up structure, a wall, was added on the half demolished part of the wall that is located at the atrium (*Qine-mahilet*) during the reign of emperor Yohannes IV and the portico at the entrance to the *Qine-mahilet* was also added during the Italian occupation (1935-41) and as to the study undertaken by two ARCCH conservators in 1999 the major problem affected the church have been found to be:

In the interior, disagreement is observed between the newly built up structures and the old rock hewn. Due to water flow from the new corrugated iron, the old rock hewn structure is highly deteriorating. water is still in filtering through the rock.; Beam is collapsing in the Qine-mahilet due to over load; termite attacking the wood beam; water infiltration through the joints of the rock hewn and the newly built up section of the Qine-mahilet, which is also affecting the wooden part, the wood are decaying; water also infiltrating through the window 'the right and the left corners, and accumulation of dirt and debris on the roof causing stoppage on the flow of water.

These experts, in their report, had suggested possible conservation solutions. The solutions include: conservation work has conducted to eradicate termites attacks; supporting pillars were erected on the overloaded beams; cleaning works have done on the roof to remove the accumulated dust and debris;; to facilitate water flow plastic pipes were installed as spots;; a ratio of one shovel of cement with two shovels of sand aggregates were applied to grouting the cracks on the roof of the rock hewn church after covering the cracks with locally available flat stones and six plastic spouts were installed at different corners of the roof to facilitate water flow and corrugated iron sheet was installed, as protective shelter, on upper part of the windows to protect the water leakage during the rainy season.

In addition, in 2005 a group of conservation experts from ARCCH had been sent for the conservation-restoration of the churches of Abreha and Atsbeha and Chelekot Silassie.

Some of the conservation-restorations activities that have been conducted during that time include:

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Flinging up the cracked wall and to strengthening the wall mortar and junipers procure crossing were applied across; replacing the damaged wooden truss that is located at the roof of the Qine-mahilet which had d with similar materials; Covering the roof of the rock hewn church with locally available flat stones using lime mortar and constructed a parapet to control the flow of water; Plastering the exterior part of the wall of the built up structure with compo mortar; and in general restoration works conducting to stabilize the rock hewn church and its additions. .



Figure 34: Restoration works at the Qine-mahilet(source; ARCCCH,1997E.C)

In 2006 a group of art restores from ARCCCH had carried out restoration works on the wall paintings of Chelokot Sillassie and Abreha and Atsbeha churches. According to the report, the experts have conducted the following restoration activities at the church of Abreha and Atsbeha:

- Detached some paintings from the wall; wrapped the canvas properly and placed them in a box and after the leaking roof were fixed the paintings were placed back to their original places cleaning the dirt from the paintings with pure water and placing back on to where it was.
- Consolidating damaged part with garment and covering the painting with plastic to protect it from dusts raised from the wall and the ground.
- Lifting up canvas paintings from the wood beams in the *Qine-mahilet*.
- Before the canvas painting is stitched back on to the wall some ironing work was done to make sure the paintings would not fold.

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- Strengthening the wall with mud and sand plasters and also on some of the parts stucco has used to fill the gaps.
- Strengthening the plastered wall with Vitamin glue to protect the mud and sand mix plaster from falling due to weak bond.
- Consolidating some wooden beams and replacing those damaged by termites and few severely damaged wall-paintings were retouched with similar paints and style.

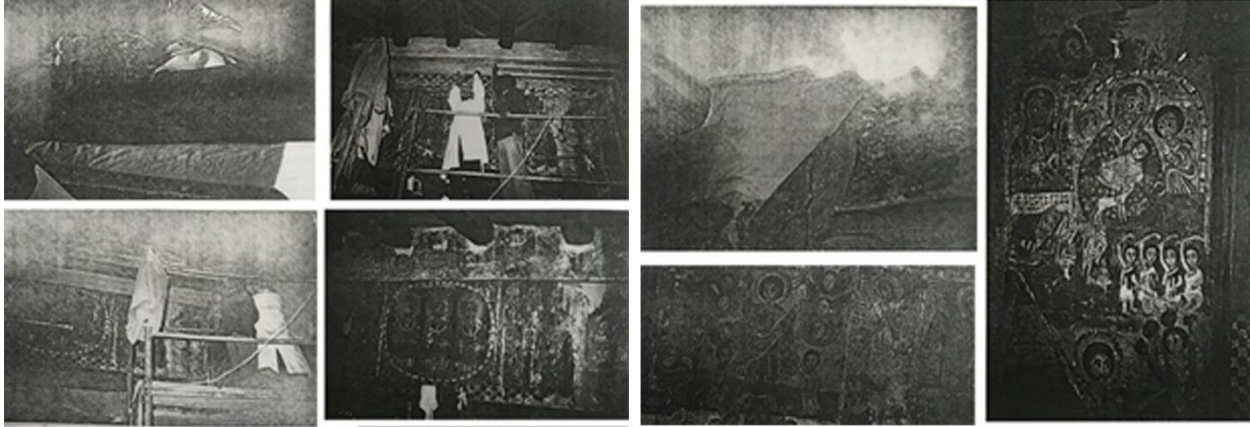


Figure 35: wall painting conservation (source; ARCCH, 1998 E.C).

In 2007 a conservation proposal was prepared by AE consult for a group of churches that are found in Tigray Region, such includes; Debre Tsion, Petros we Paulos, Cheloqot silassie and Abreha and Atsbeha rock hewn churches. On this proposal the firm tried to introduce them to describe the church and its wall paintings in brief and recommended that the corrugated iron sheet at the front should be replaced with flat traditional stone roof. It also suggested the replacement of damaged windows with similar materials and varnishing with anti-termite treatments.

5.2.Deterioration Analyses on the conservation Status of the Church

The rock cut church has been deteriorating due to physical, chemical and biological processes. The strength of the rock is mainly dependent on its internal structure and petro graphic composition and it is also depending on the environment to which it is exposed.

The various types of deterioration observed in the church include: biological attacks, water infiltration improper or poor restoration practices, diagonal cracks that run from the bottom right foot to the top rear end, erosion, counter scaling and wood decays.

Decay due to growth of plants, vegetations, mosses and lichens: The decay due to moss and lichen etc. is caused only in the case of stone objects exposed to rain. Acids generated by moss and lichens not only damage carbonaceous stones but will also attack silica and cause damage on the surface. Most of the northern wall is invaded by lichens.

Vegetation growth can cause only in the case of structures and exposed stone monuments. The vegetation growth withdraw water and retains the moisture inside the structure there by damage is created to the monuments. In the church of Abreha and Atsbeha, most of the plants and vegetations are grown on the outer upper edge of the rock hewn structure and most are germinated on the cracks and on the small horizontal cavities of the rock. This is due to the weakness of the rock.



Figure 36: lichen and plant growth.

Water leakage: most of the rock mass in all directions are exposed to rain water and due to this the weakest part of the wall is washed up and eroded. Stain is observed on the ceiling and on the wall surface indicating that water was leaking and in filtering through the roof and walls prior to the ARCCH interventions. Though the water that had been in filtering through the roof down to the ceiling was blocked water is still leaking through the windows at the southern elevation, which is causing decay on the wooden part of the windows and the wall beneath the windows.



Figure 37: water leakage through the window and crack.

Poor conservation: Ruminants of poor conservation interventions are observed at different parts of the rock structures; such as pillars and walls. Past restorations using cement is especially affecting the walls and pillars badly. This is mainly because cement is stiffer than the natural sandstone rock, which blocks the rock from breath that forced to explode on the other part. The corrugated iron which had installed on the upper part of the windows was uninstalled but no proper protection has made; due to that water is still leaking during rainy season. The wall had constructed above the gates at the narthex looks heavy that the wooden arched pillar is unable to carry it; and as the result, the pillar is cracked vertically.



Figure 38: poor conservation practice.

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5.2.1 Deterioration Analyses of the outer facades Southern Outer façade

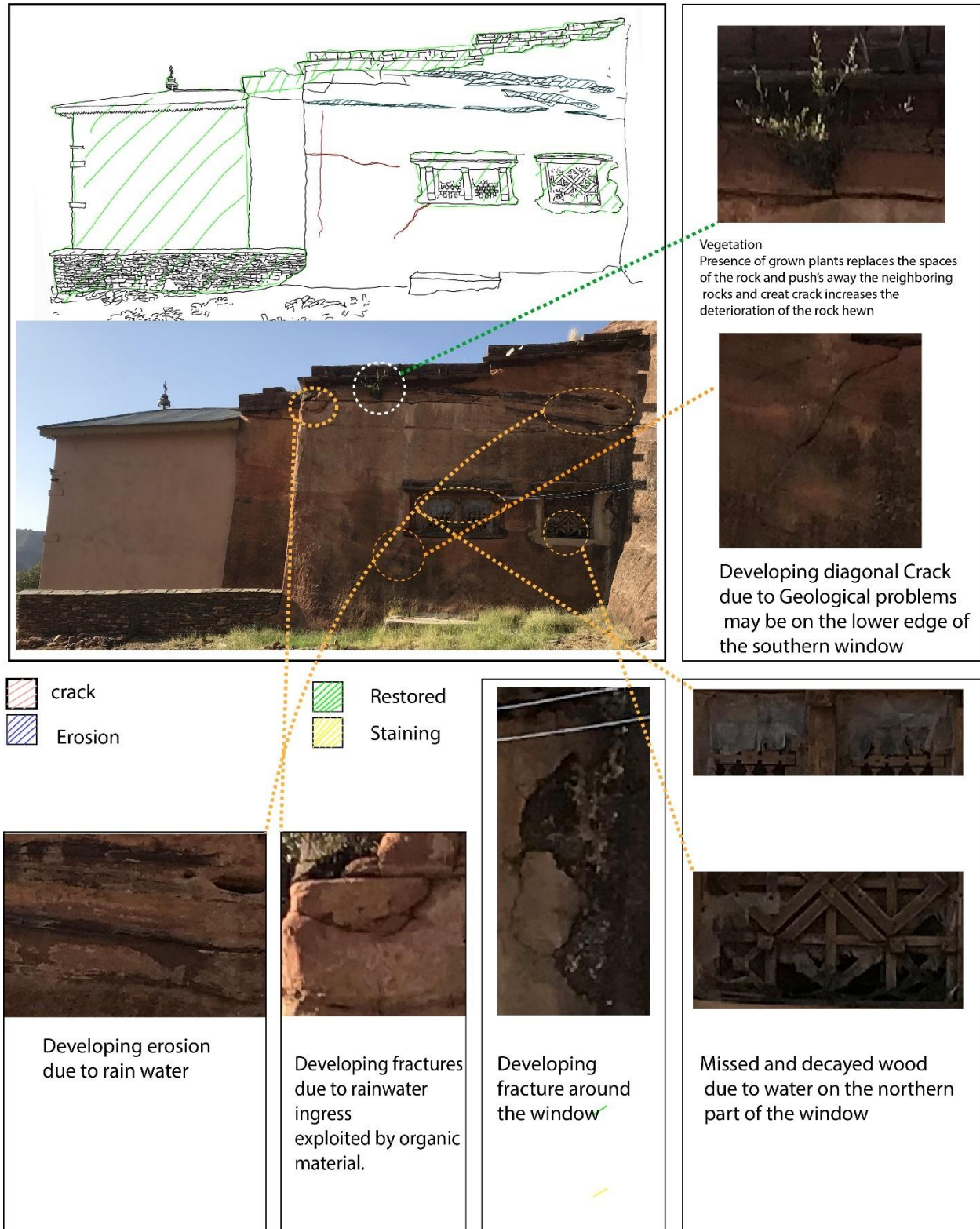


Figure 39: southern facade of the church.

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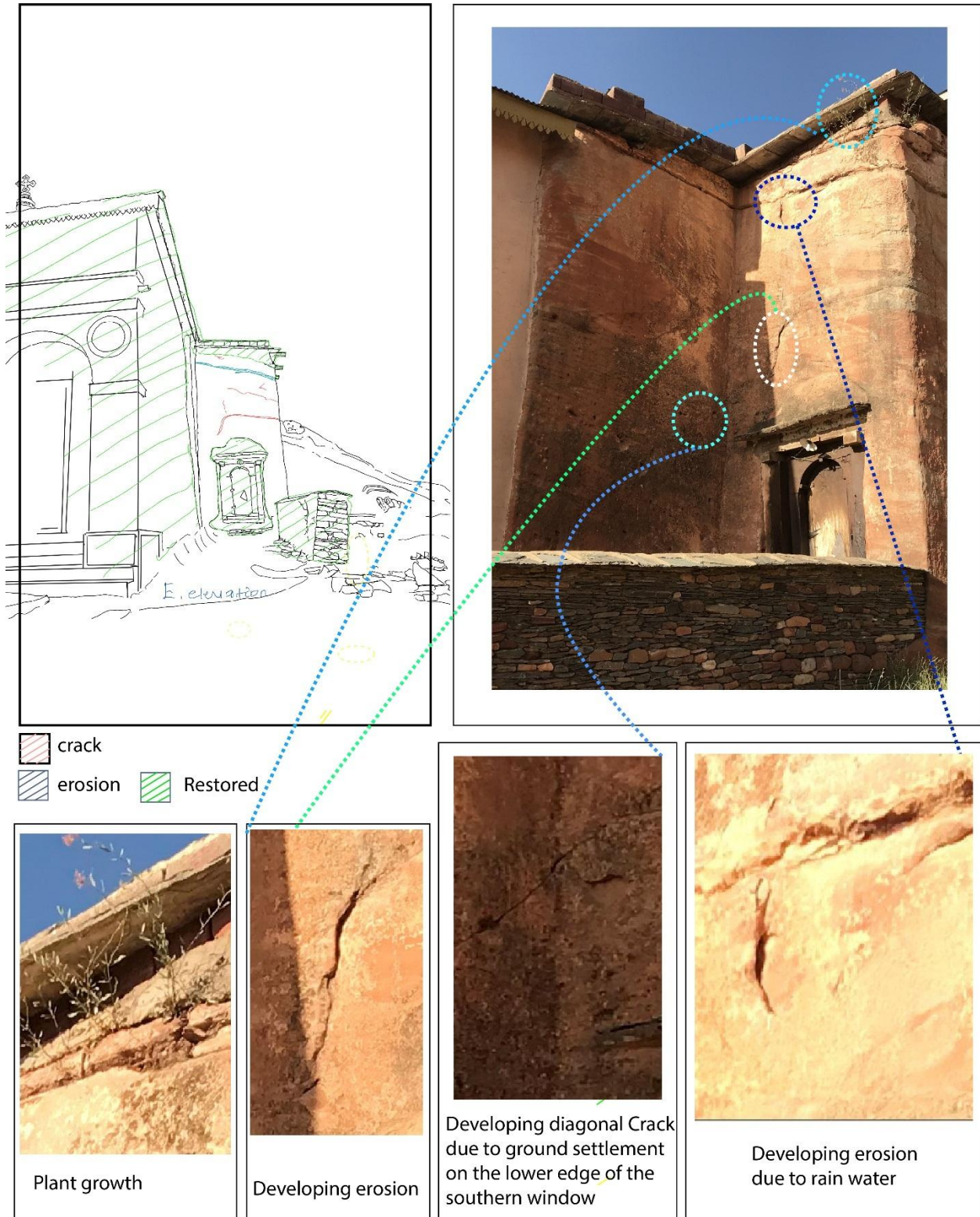


Figure 40: south west façade.

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Deteriorations of the outer northern elevation.

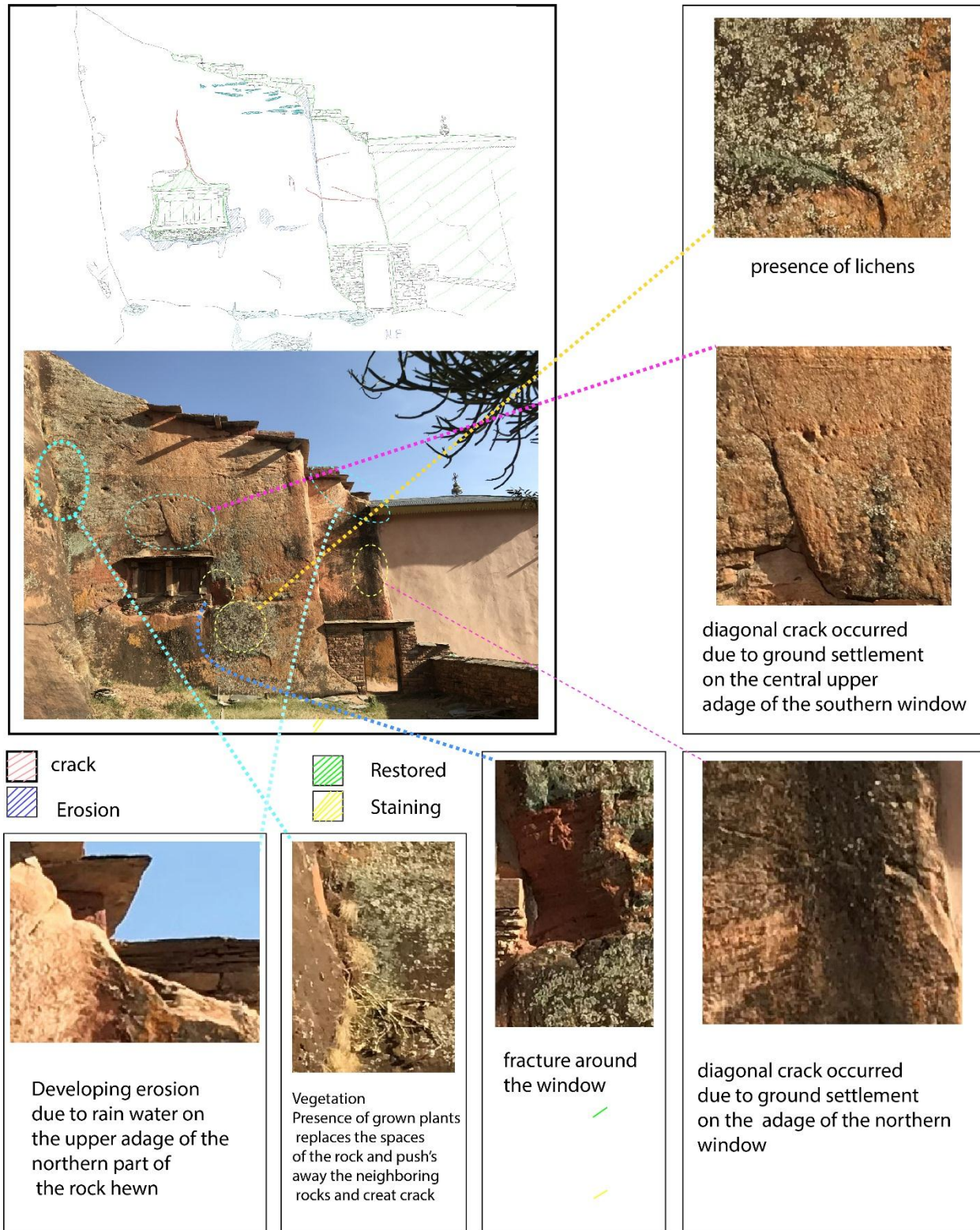


Figure 41: outer northern façade.

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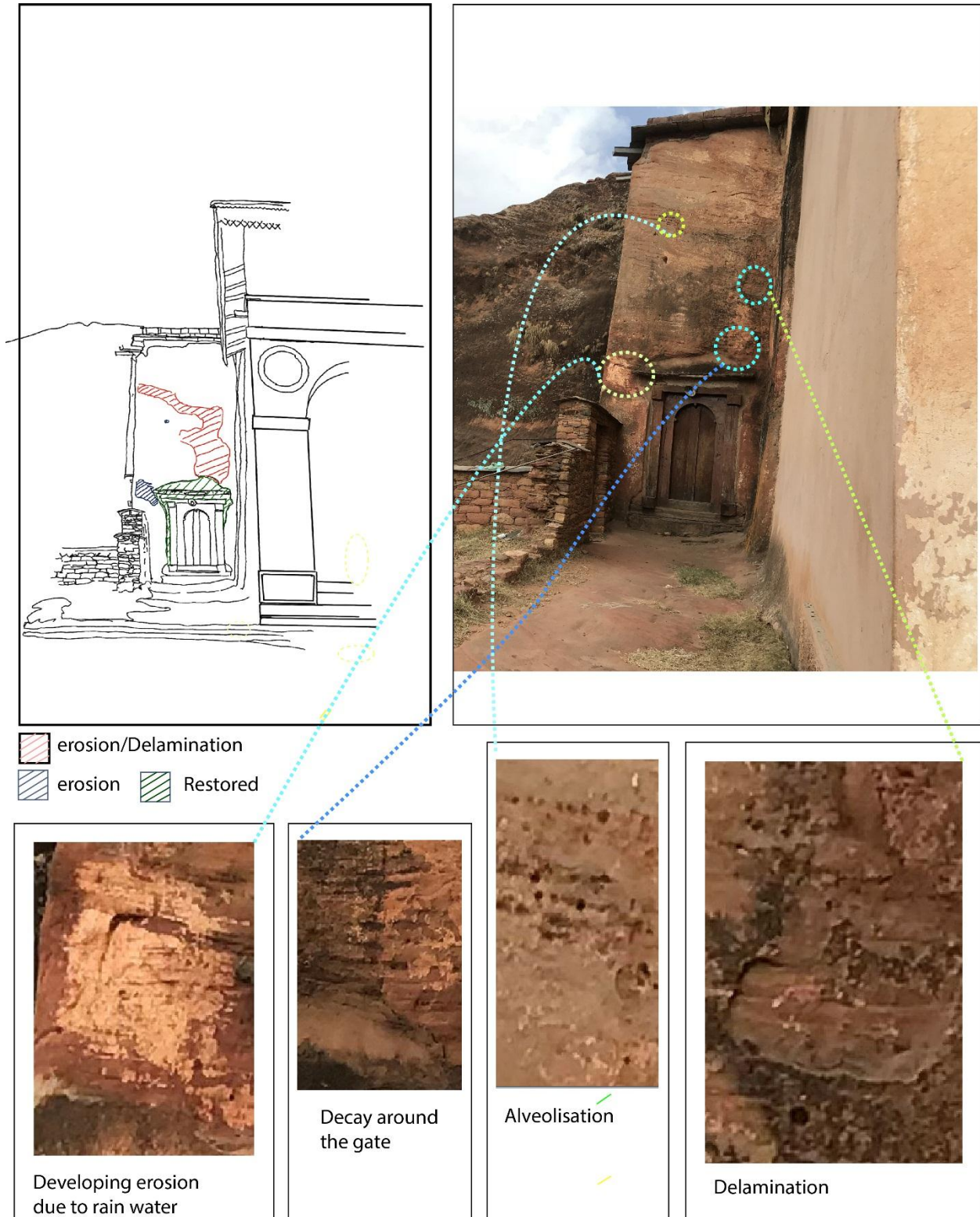


Figure 42: western façade.

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Western outer facade

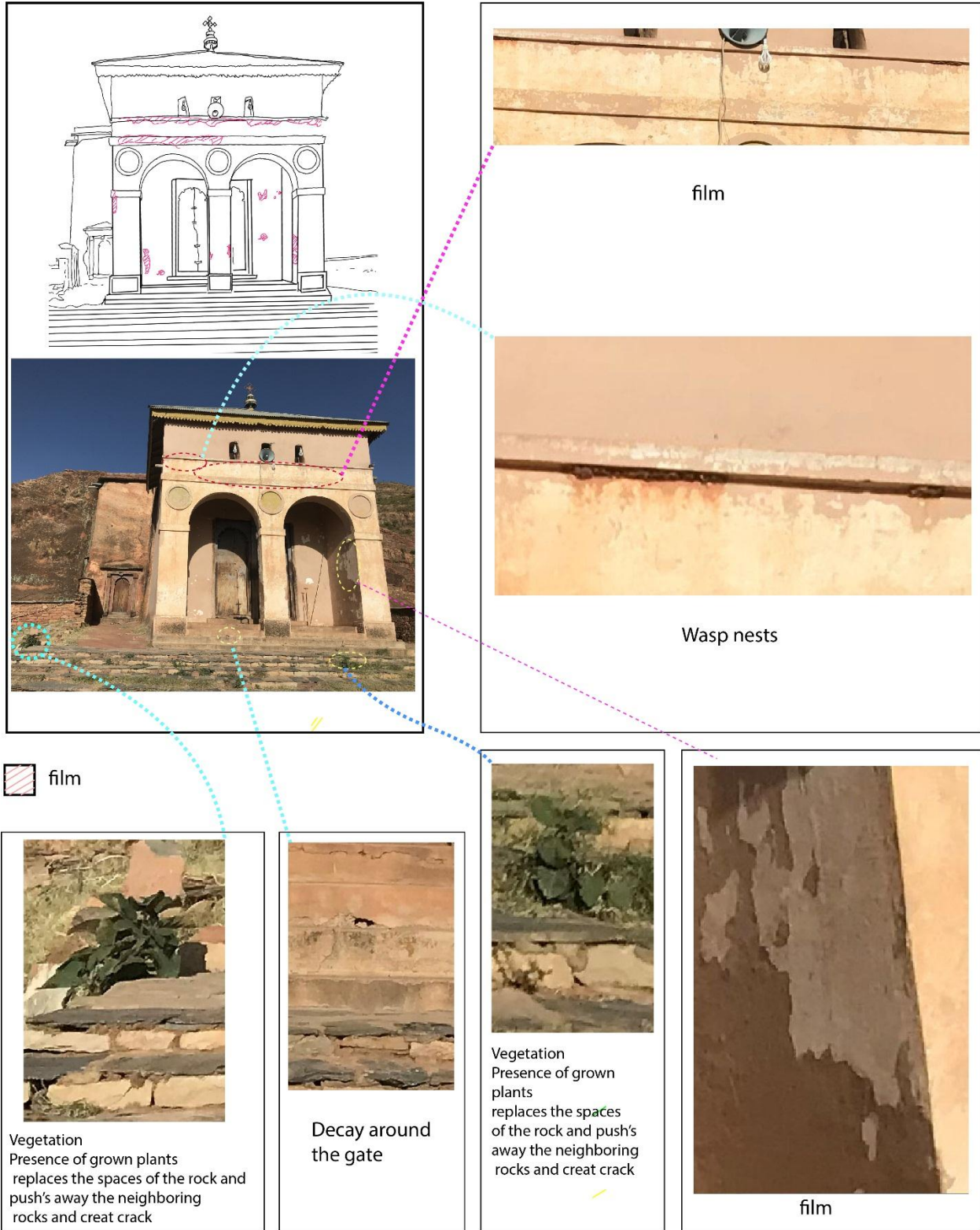


Figure 43: western façade.

5.2.2. Deterioration Analyses on the Wall paintings

Wall painting has been cultural expiration of human creations throughout history, from the earlier days: such as rock art to mural of the present day (ICOMOS, 2003). In the rock hewn church of Abreha and Atsbeha, there are two types of paintings. These are cotton cloth wall paintings that stitched on the wall and mural paintings, which are directly painted on the dry wall. In general, the wall paintings are found at different stage of deteriorations; such as, flaking of paint layer, lifting up of the paint layer in the form of cups, blistering, cohesion, scroll formation, fading of the paint layer, and abrasion are observed in the wall paintings. In addition, physical damage caused by mishandling and vandalism are also other factors of deterioration to the wall paintings. Dust, soot, moisture, heat, vibration, pollutants, cracks in the structure, salt action, biological agents, seepage and leakage of water are the various causes for the deterioration of wall paintings.

Due to the above factors of deterioration, in most wall paintings of the church, paints loss, fading, dirt and dust accumulation are observed. Besides damages caused by vibration and termite attacks are also observed.

Painting loss: the paintings are located on all the lower parts of the walls are severely damaged due to body contacts and past consolidation intervention. Though some good consolidation work was made in order to strengthen the cotton cloth wall painting; damages on the lower part of the wall is still continue due to the physical contact of the congregations.

Fading: natural or artificial light could Cause fading of colors on wall paintings. The infrared constituted within the light provokes different of thermal expansion in the binding materials of the pigment and this causes exfoliation. Most of the wall paintings on the atrium (*Qine-mahilet*) and on the *Qidst* are faded due to artificial and reflected natural lights. The natural colors used in the paintings are easily exposed to fading especially, the painting on the atrium.

Dust and dirt: among the deteriorating factors of the wall paintings, dust deposition and dirt are very common. There are also insect excrements and wasps' nest on some section of the paintings. Most of the paintings are covered with dust and this dust is descended from the ground by the congregation and tourists during prayer and visit.

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Vibration: though no one is aware of it, vibration could cause detachment of parts of the paintings that were deteriorated by other causes. In the church, during liturgical services and prayer, drum is banged and a big Bell is rugged, which causes vibrations.

Termite attack: termites are social insects with several types of individual in colony (Bennet, 2017). Each type of the colony serves different way according to Bennet, 2007): the winged reproductive forms swarm from mature colonies to disperse and establish new colonies.

Worker termite is the one who eat the wood. They are white and have soft bodies. They are the one who feeds the other and expand the nest size. Solder termites with big teeth are responsible keeping the colonies from intruders.

The upper northern wall of the atrium is heavily attacked by termites, which came from the nearby graves. As it may know, termites need wood for food and soil for moisture. Wood with soil is possible for termite to survive; however, if this is not conditional, they build shelter tube from mud to bridge to the wood they wish to feed from.

In the case of Abreha and Atsbeha church, there is no direct contact between the grave and the wooden ceiling and due to this the termites have forced to build tube shelters that could bridge them from the grave to the wooden truss. And attacking the paintings on the rock cut wall. As it can be seen below in the figure (44), which was taken from microscope, the soil they use to build their shelter tube is the sand soil. Most of the painting on the upper northern part of the wall is extensively damaged by the shelter tubes they built on. The big problem is even if the shelter tube is removed the painting, which the tube where on is turned white and the color is lost. The damage is not remained only on the wall paintings; some of the wood ceiling at the atrium is also destroyed by the termites. In addition to the ceilings, the wood beam at the entrance of the portico is also attacked and damaged.

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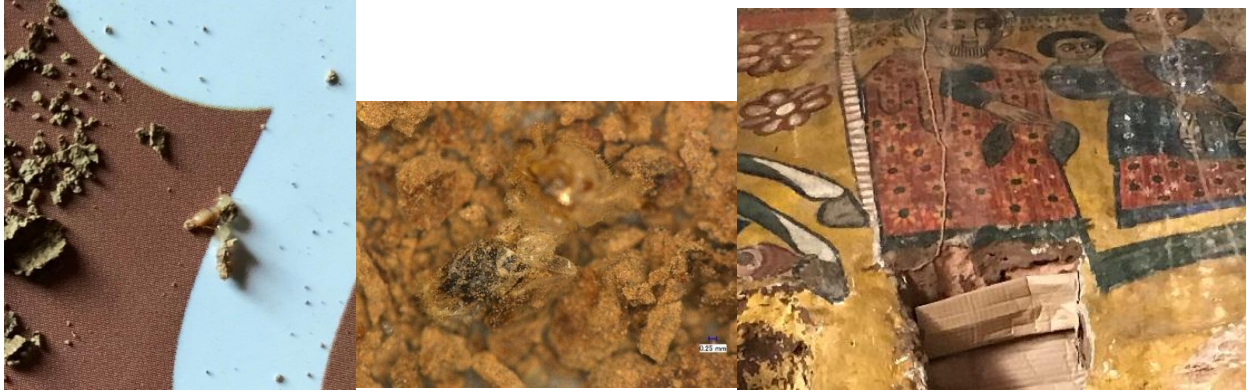


Figure 44: termite under microscope, on the painting and on the ground.

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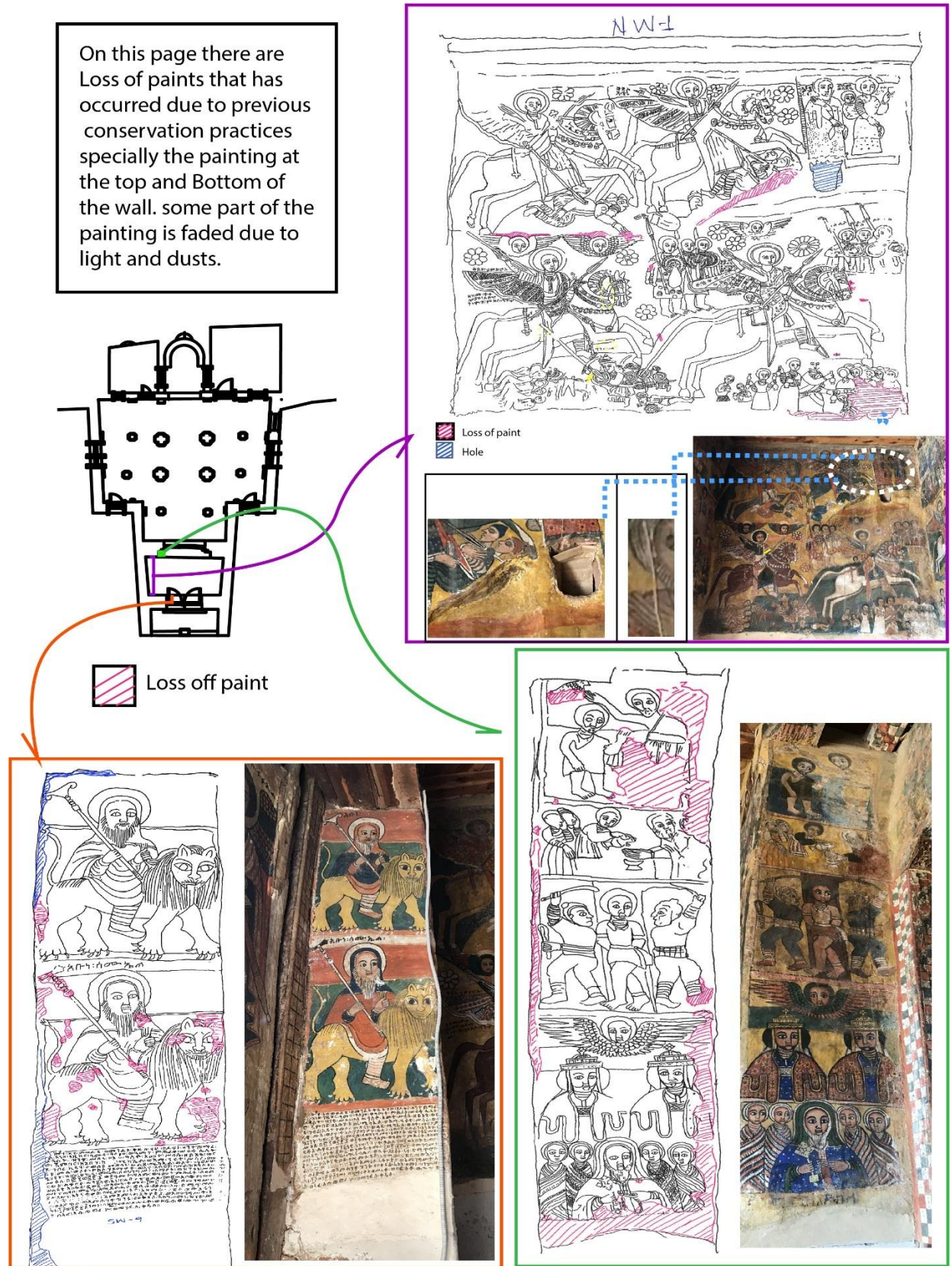


Figure 45: the wall painting at the atrium and at the narthex.

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there are Loss of paints that has occurred due to light and dusts. Some part of the painting on the bottom left and right side of the wall is missed and some part of the painting and the inscription on the bottom and top side of the wall are also lost.

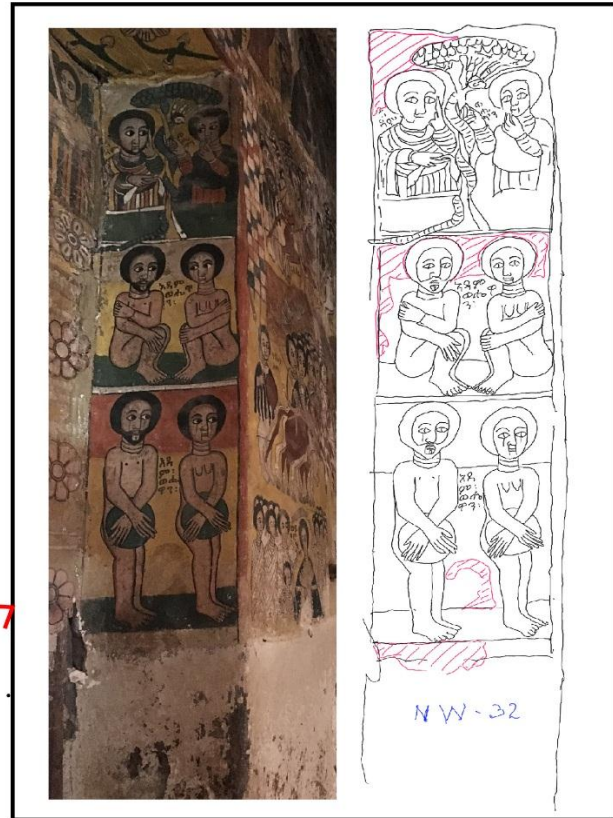
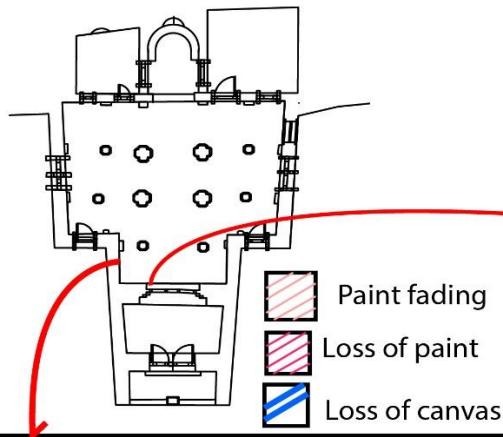


Figure 46: deterioration analyses of the painting at the northern wall of the qidist.

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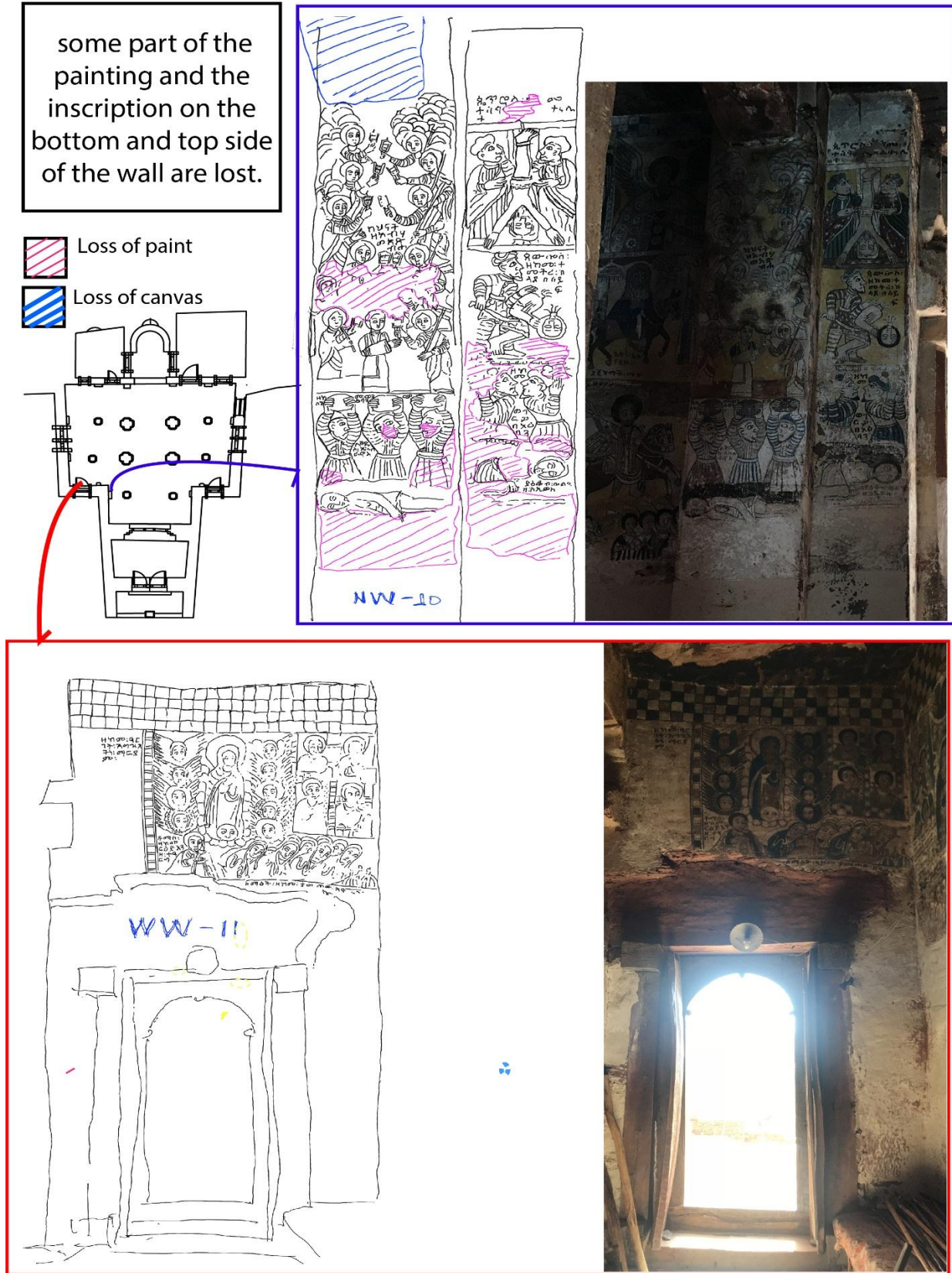


Figure 47: deterioration analyses of the painting at the northern wall of the Qidest.

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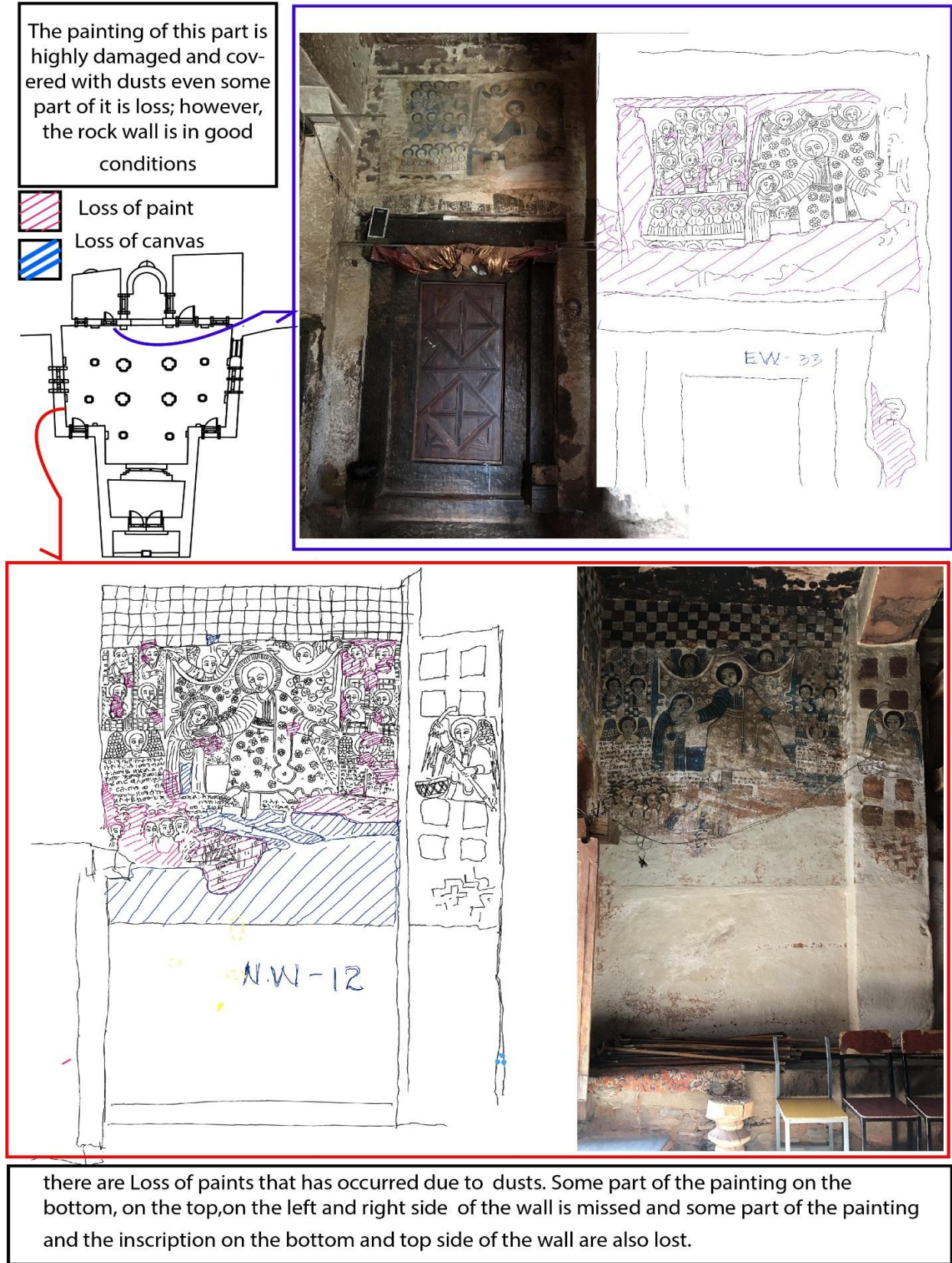


Figure 48: deterioration analyses of the painting at the wall of Qidest.

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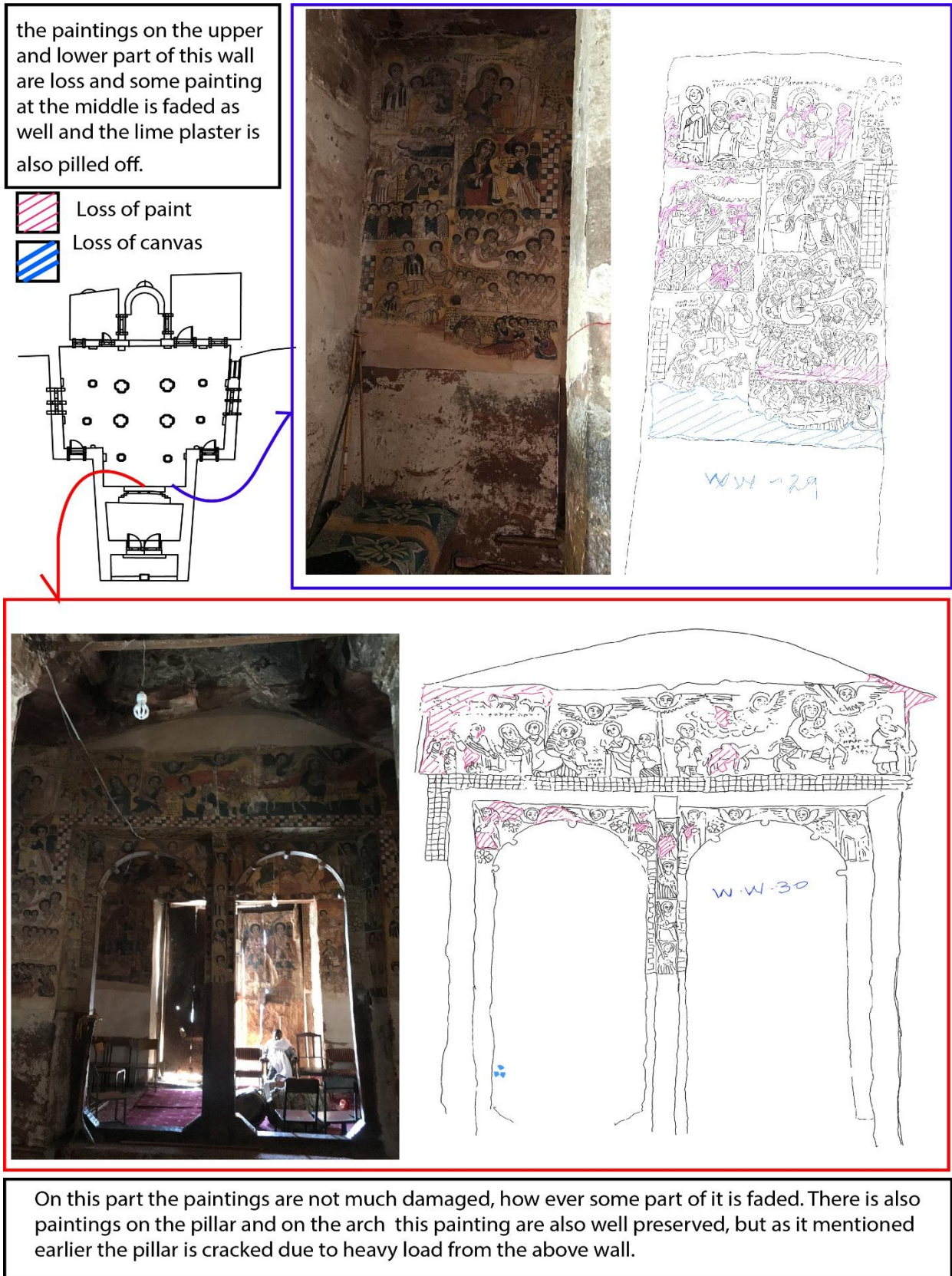


Figure 49: deterioration analyses of the painting at the western wall of the Qidest.

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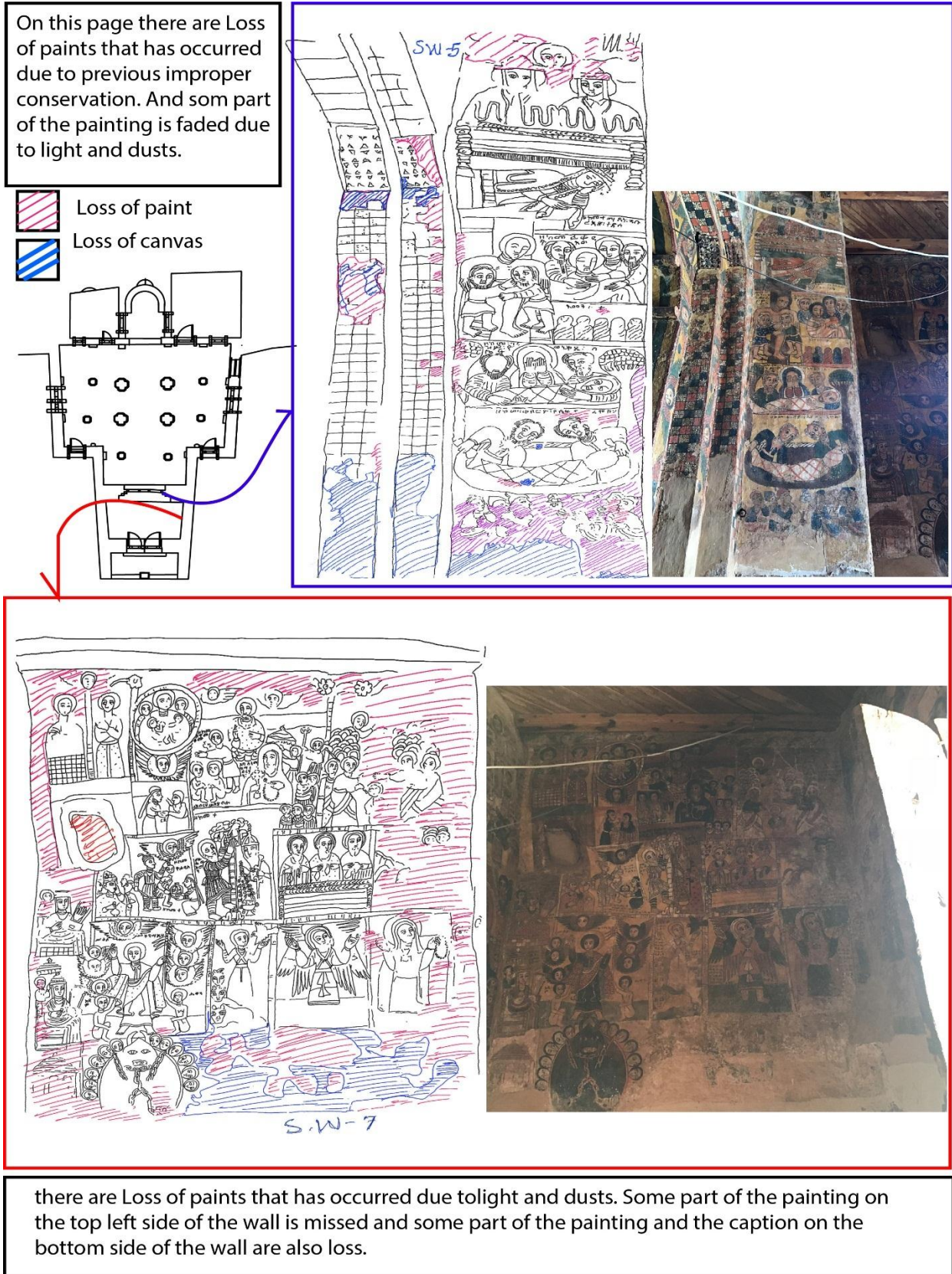


Figure 50: deterioration analyses of the painting at the northern wall of the Qidest.

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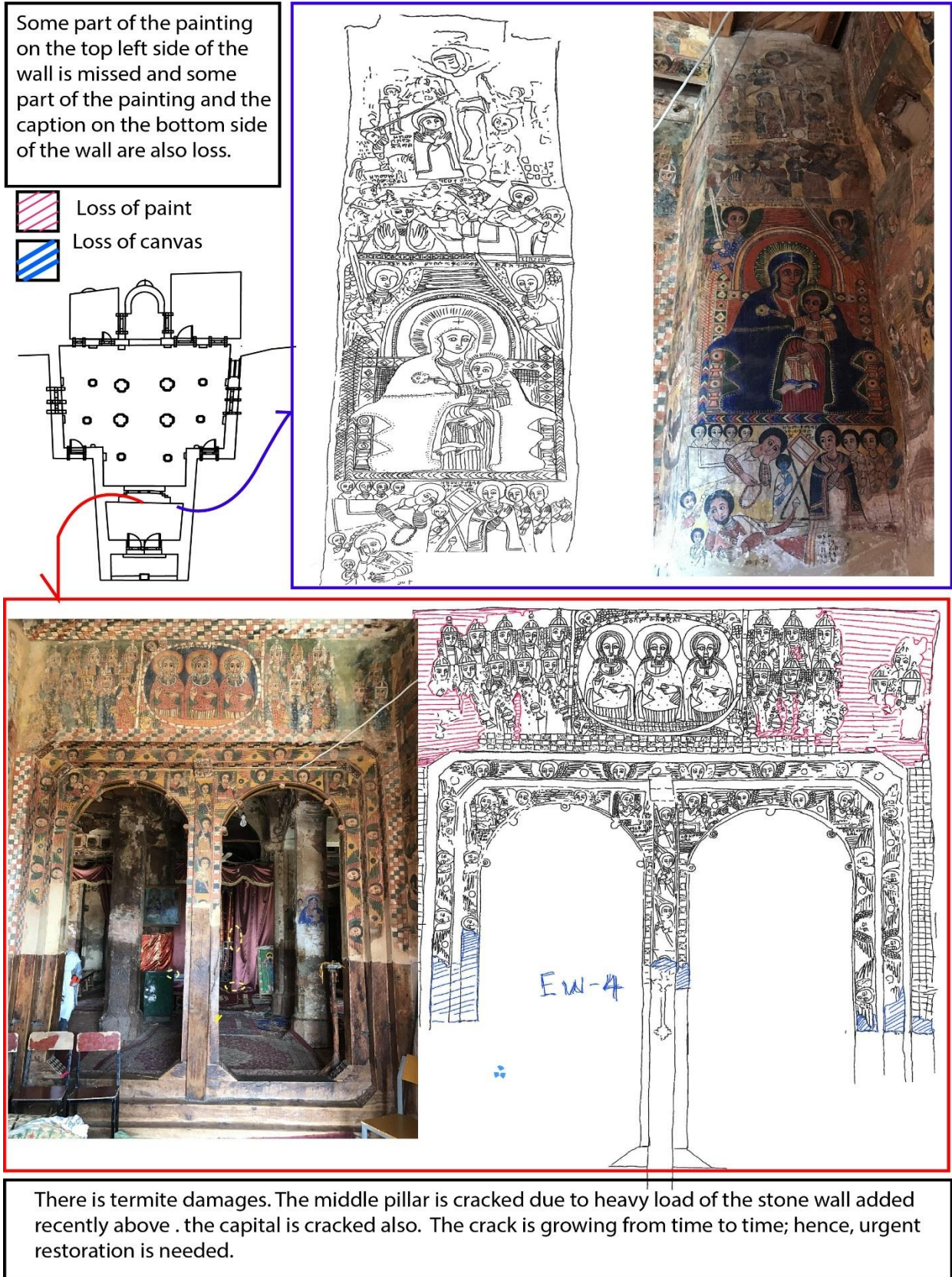


Figure 51: deterioration analyses of the painting at the northern wall of the Qine-mahilet.

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Figure 52: deterioration analyses of the painting at the western wall of the Qine-mahilet

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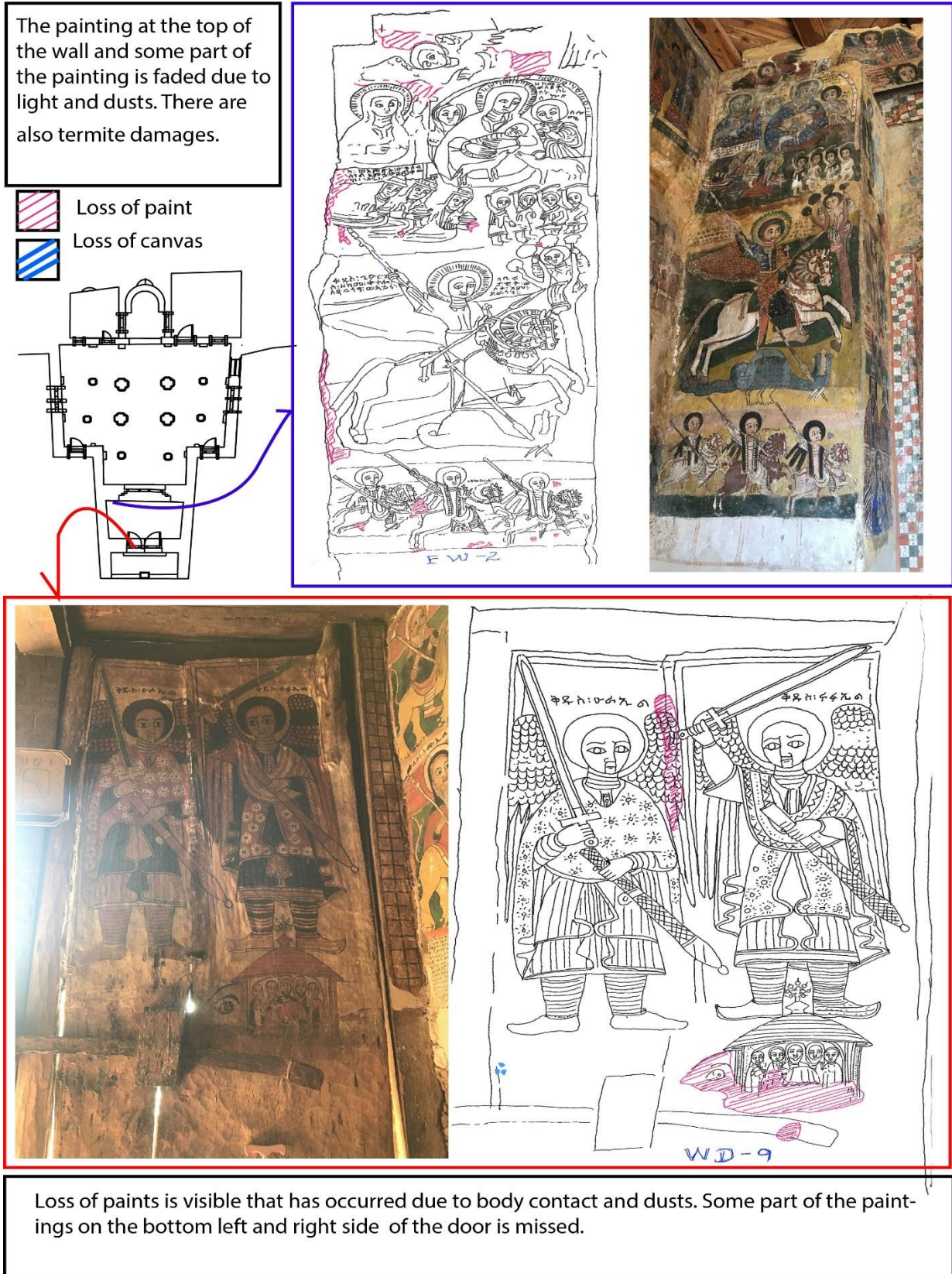


Figure 53: deterioration analyses of the painting at the main door of the western Qine-mahilet.

5.2.3. Deterioration Analysis on the Interior wall

On the walls of the church, there are different kinds of deteriorations are observed: such include crack, counter scaling, impact damage, poor conservation, wasps nest, stain, erosion and pilling of plasters (lime plasters).

Crack: there are diagonal cracks on the wall of the southern wall of the *Qidst*. The crack is deep and passing, which is visible on the outer façade of the rock cut wall. Rain: is in filtered through the crack from outside to the interior part of the rock hewn. The cause of the crack is not known; however, it most probably could be geological problems.

Rain: the window on the southern part of the wall is exposed to rain during the rainy seasons. When the rain leaks down in to the interior part of the wall, it creates thermal difference and this leads to further deteriorations of the rock wall. In addition to that, the rain is eroding the rock cut wall directly.

Counter scaling: the term counter scaling is given to detachment of part from the mother rock. Counter scaling may cause by exposure to rain waters over several years. The expansions and contractions of rock due to moisture, when expansive movement is taken place it is likely to occur rock detachments. There is no much counter scaling on the outer façade of the rock hewn; however, there is one on the intruded part of the southern west part of the rock and wall is crack is developing into counter scaling.

Impact damage: this damage is occurred due to human actives. It could be sudden or deliberate actions. On the interior part of the church there are some impact damages on the gate of the left side of the sanctuary and on the isolated pillar of the southern wall.

Poor conservation: there was an intervention by application of cement on the narthex. Cement has strong bond than the rock cut. Due to this the rock cut is unable to breathe, which eventually guilds to further damage.

Wasp: is an insect of order hymenoptera and suborder *apocrita* that is neither a bee nor an ant. Wasp built their nest under ceiling, window and caves. Fertile queen start building the nest and she also produces workers who could help at the constructing the nest. There is wasps' nest accumulated

on some upper part of the wall. It is not known, however, what will be the side effects of the accumulated soil in short and long terms., Nevertheless, it is clear that it is/will be destructing the aesthetical beauty of the rock hewn structure. Due to wasp presence placement is becoming irritating and uncomfortable for congregation Thus, it needs some kind of intervention to wipe out the wasp from the church compound.

Stain: on some parts of the ceiling staining is observed. It occurred due to moisture effects that left on the lime surface. Staining is decolonization's that could not easily remove from the part it is on. The factors that Couse staining include: water absorptivity, dirt retention and flow of water from the surface. The stain is occurred when the water dries and the particles do not wash off. The causes of the staining on this rock ceiling are water flows from the ceiling surfaces. In order to control the staining, the source of the water flow has to be mitigated and the surface has to be cleaned with steam waters.

Erosion: is the action wearing away surface by the action of natural forces from the mother rock due to wind water and other eroding agents. In the rock hewn church of Abreha and Atsbeha the water, which flows through the windows of the southern facade from outside dissolves the rock surface and washing it away from the mother rock. If action is not taken to block the flowing water through the window, it could bring structural problems on the wall of the southern façade in the long term.

To sum up, most of the wall at the *Qidst* is painted with lime and some of it pulled off from the wall surface. Stains are also observed on the wall, which causes discoloring on the lime plaster. This creates unpleasant views.

During field survey a sample test has conducted to remove the lime plaster by steam water and the results were encouraging. Thus, removing the old lime plasters might be one solution to improve visual integrity of the walls.

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Figure 54: deterioration analyses of the wall at the Qidest.

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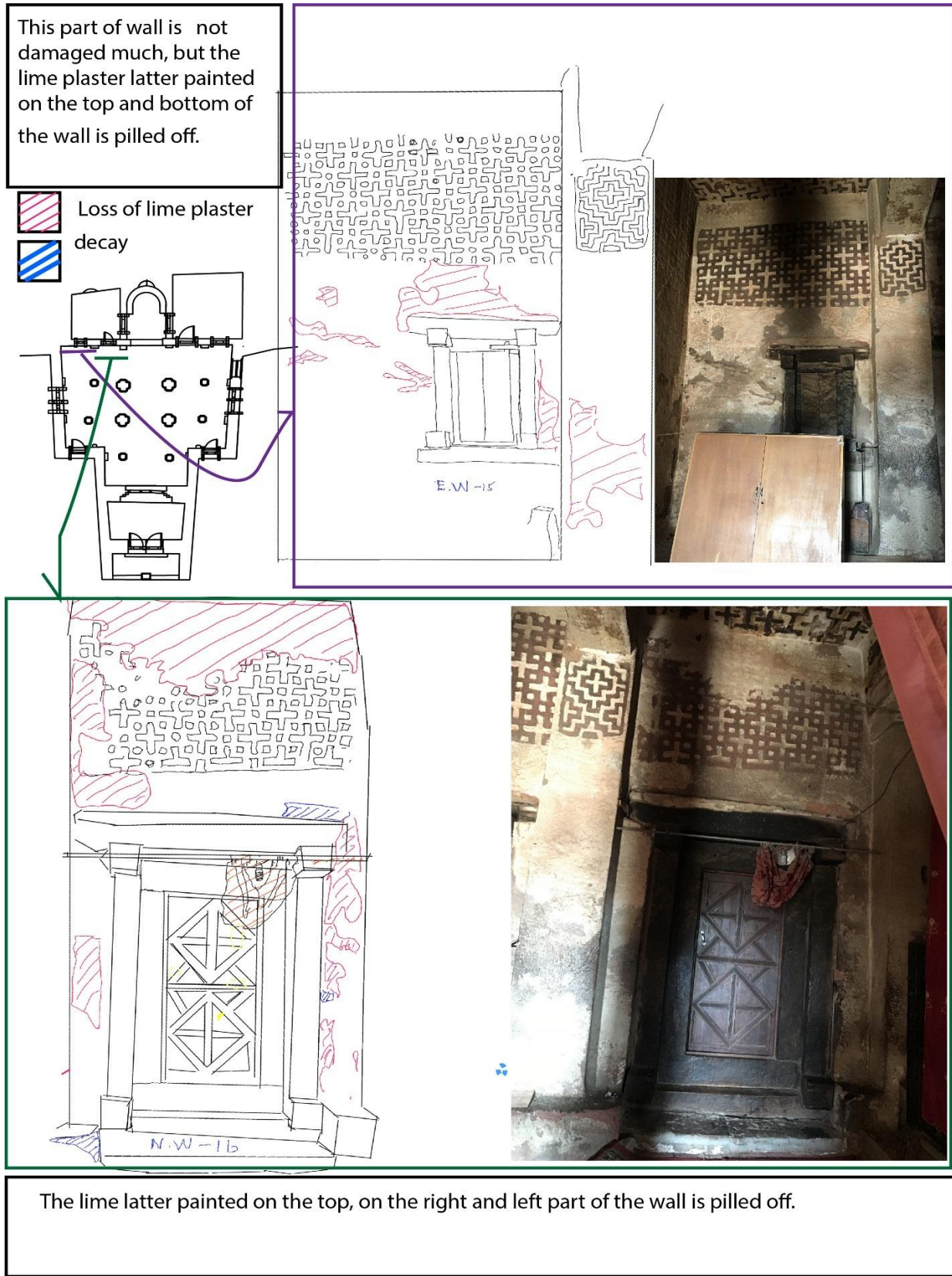


Figure 55: deterioration analyses of the wall at the Qidest.

June 6, 2020

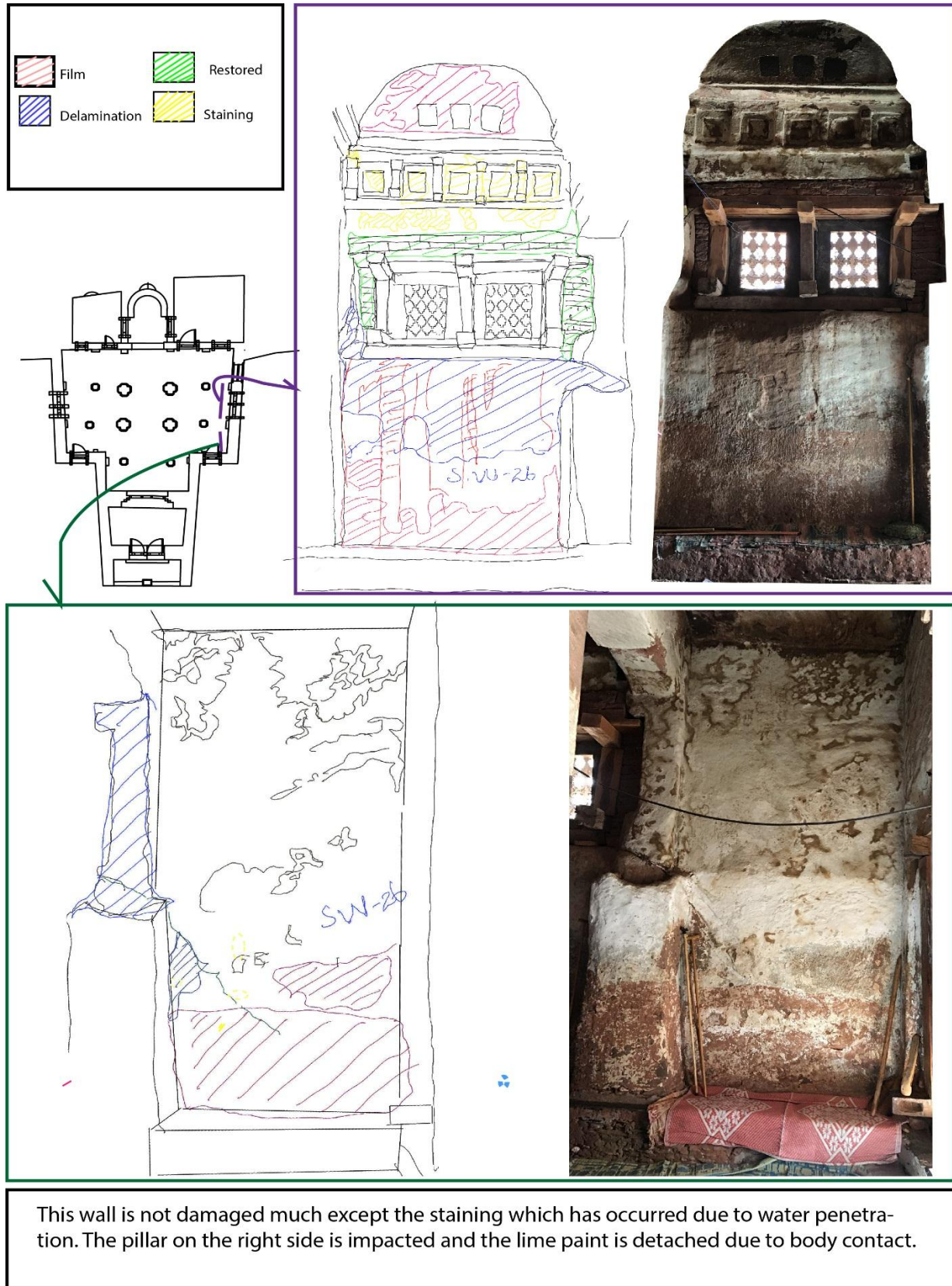


Figure 56: deterioration analyses of the wall at the Qidest.

June 6, 2020

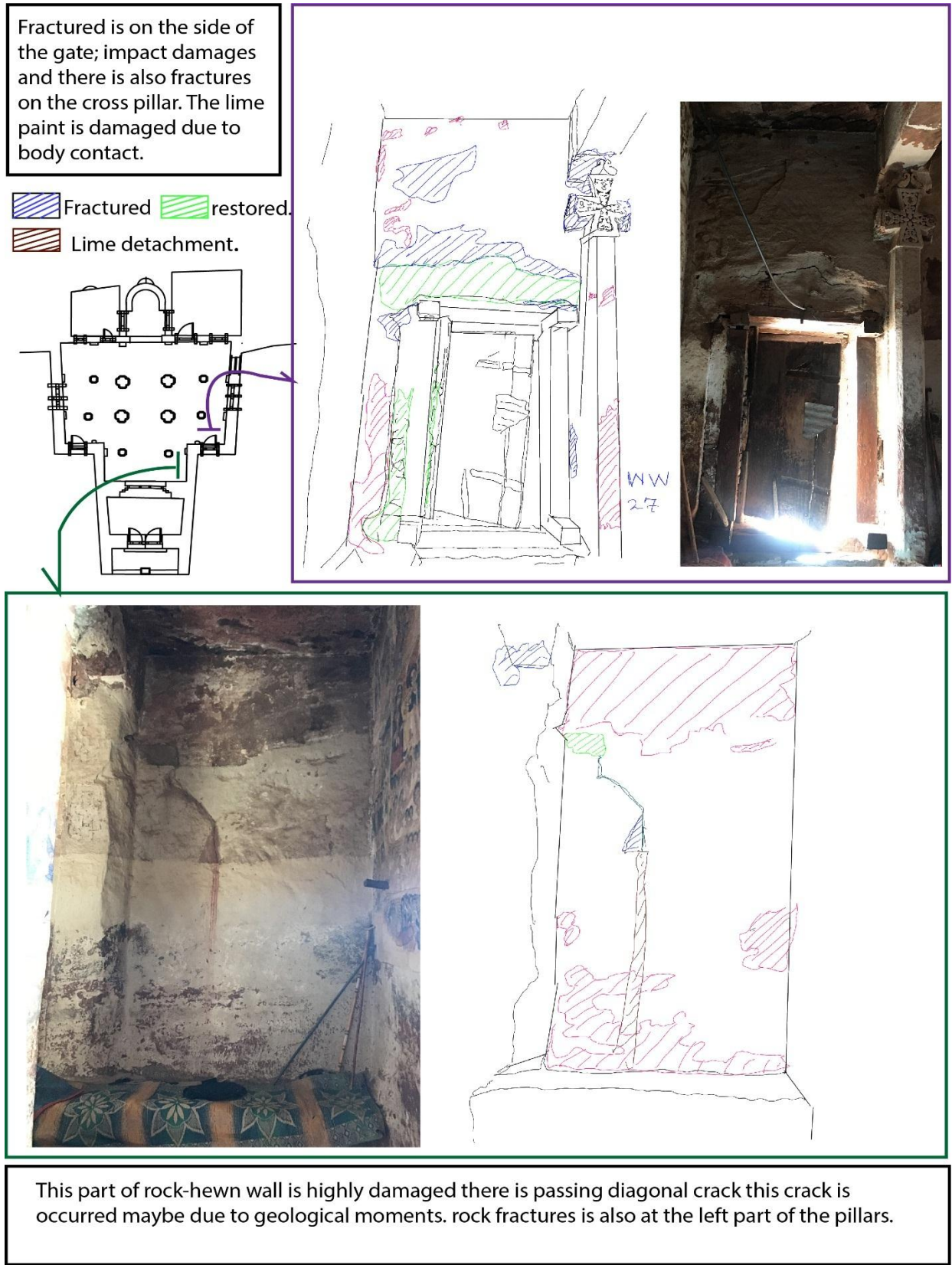


Figure 57: deterioration analyses of the wall at qidist.

5.2.4. Deterioration Analyses on the Pillars

There are different kinds of damage observed on the pillars, such include: improper intervention, impact damage, improper congregation activities, black spot, vertical crack and aging.

Improper intervention made on both the double and single pillars caused further damages to the pillars. Cement was used for the restoration of the pillars, which became incompatible with the original sandstone rock. Rock naturally breaths, however, the cement blocks the rock not to breath. This forced the rock to explode on the other side.

On these pillars there are also observed impact damages. Some of physical damages of the church are related to *Yodit Gudit* - who is considered a Queen in 10th century engaged in church distractions in northern Ethiopia. Some of them are related with improper human activities, such as, hanging curtains and electric installations. Other impacts are happened as the result of internal management, such as chairs chair and bench placements.

Improper congregation activities: some of the pillars are damaged due to the activities of the laity. It is believed that the pillars are pouring holy water every October Due to this, every October the 4th; pilgrims from all of Ethiopia come and take the prouder of the rock surface mix with the holy water by wiping from the pillars for curing purposes. As a result, the pillars are warning out and become tanner and tannest. Now only the hardest part of the rock is left.

Black spot: there are black spots on some of the pillars. It is not exactly known what the source of the black spots is. However, according to the Nibured Hadush, the black spots were the results of fire by Queen Yodit. It could also be bacteria or incense burning. The block spots are affecting the beauty of the church.

Vertical cracks: observed in different pillars of the church. Two cracks are observed on wooden pillars that are situated on the narthex and the other on the portico. The wooden pillar found on the narthex is cracked due to heavy load of the wall that is found above the arched gate. This kind of crack is occurred because of compressions. According to Nibured Hadush, the crack is worsening from year to year.

Age: everything in the universe gates old. The parent rock that rock cut church was hewed has counted millions of years and the rock hewn church has also counted more than 1400 years of age since its excavation. Due to old age, the rock of the church is turning into dusts on some part of the rock.

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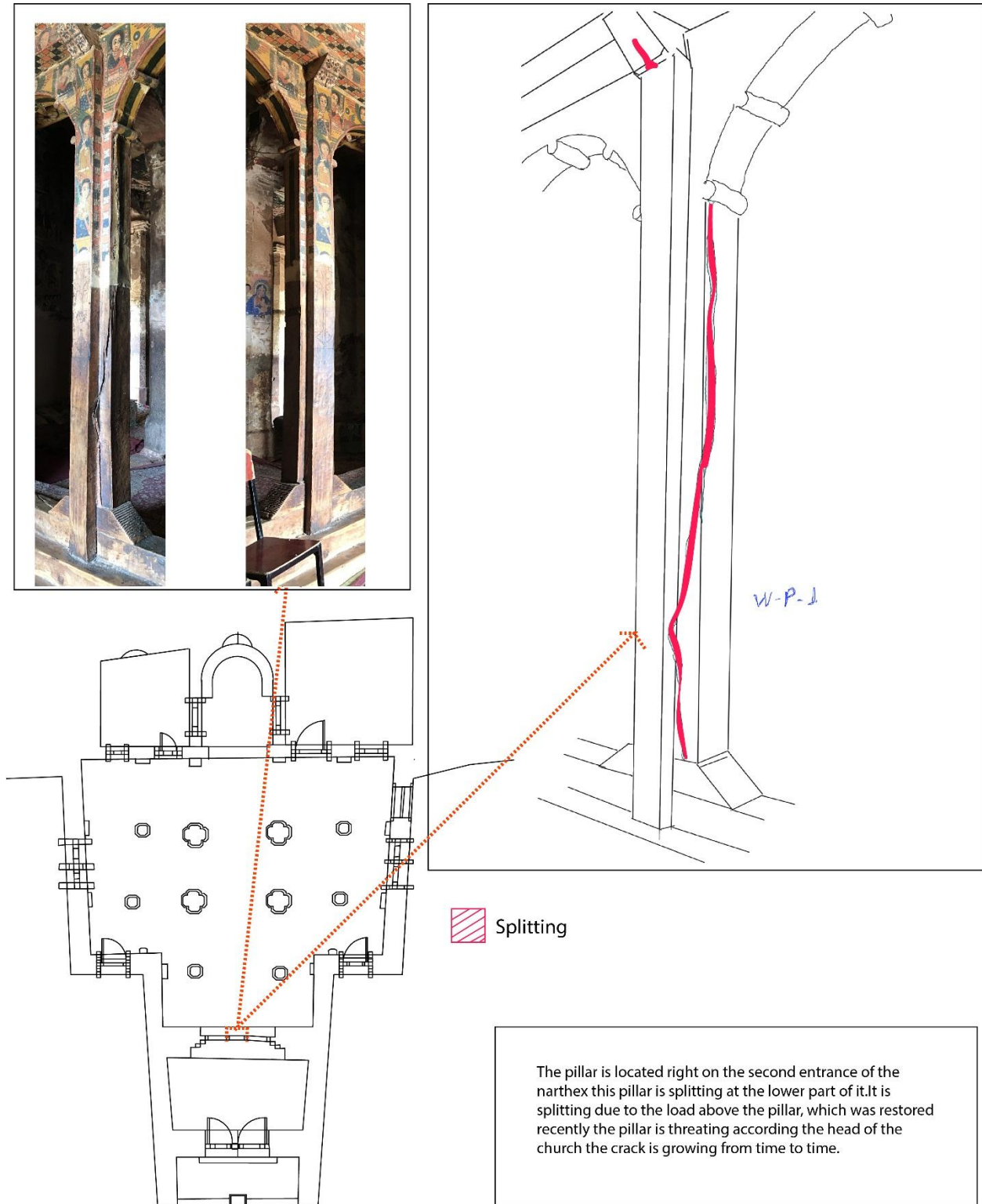


Figure 58: deterioration analyses of the wood pillar at the narthex.

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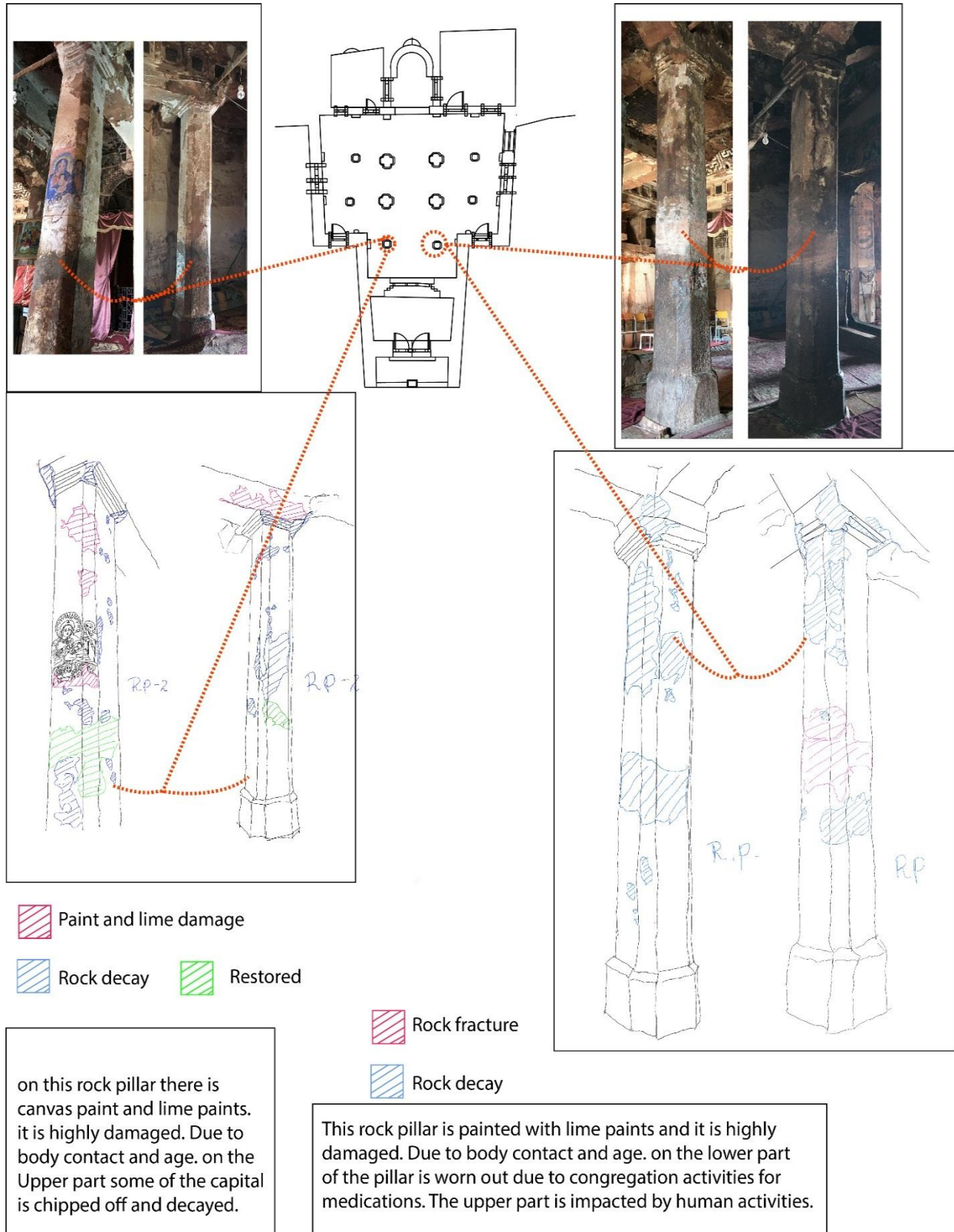


Figure 59: deterioration analyses of the chamfered rectangular rock pillar at the nave in Qidest.

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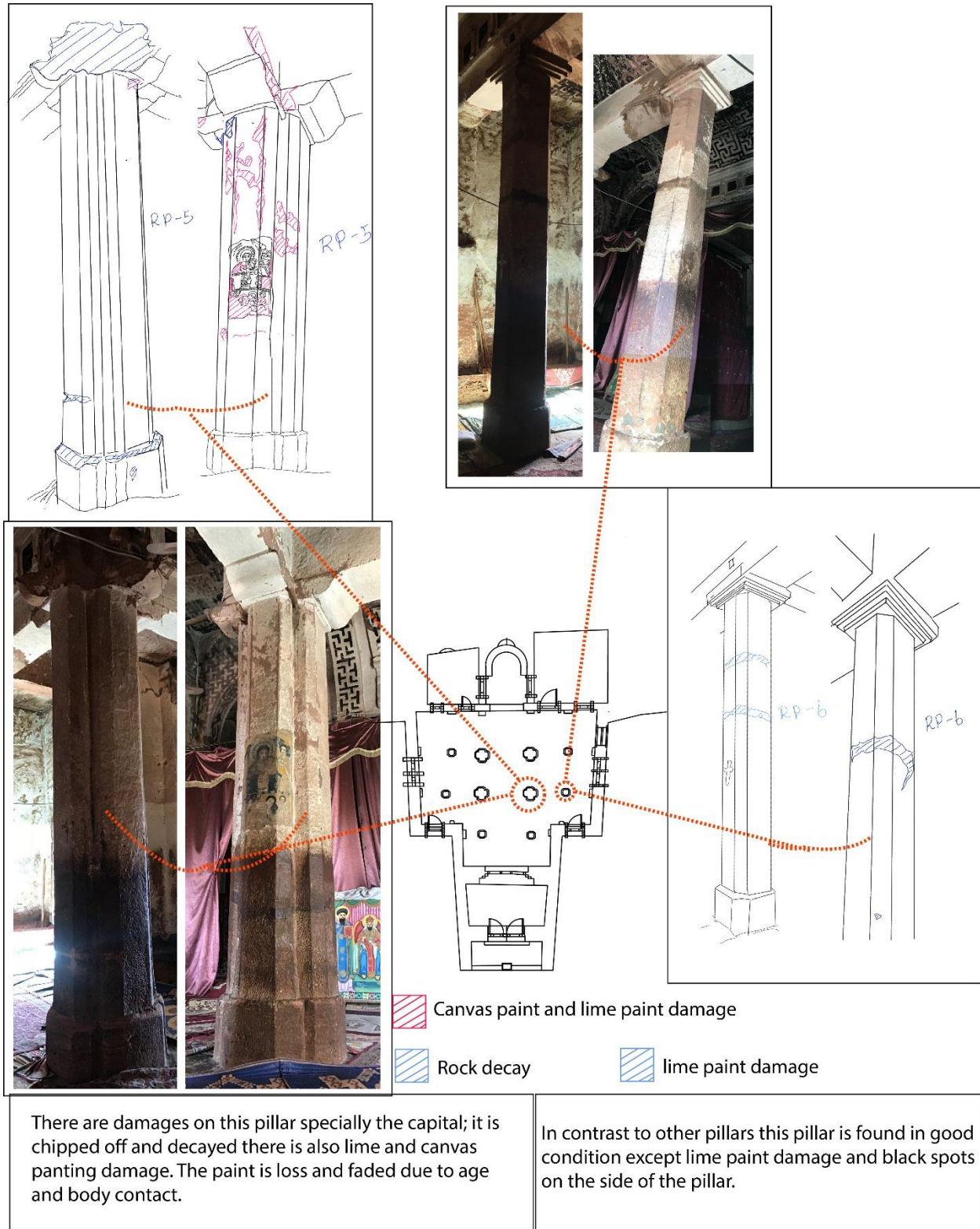


Figure 60: deterioration analyses of the chamfered rectangular and cross rock pillar at Qidest

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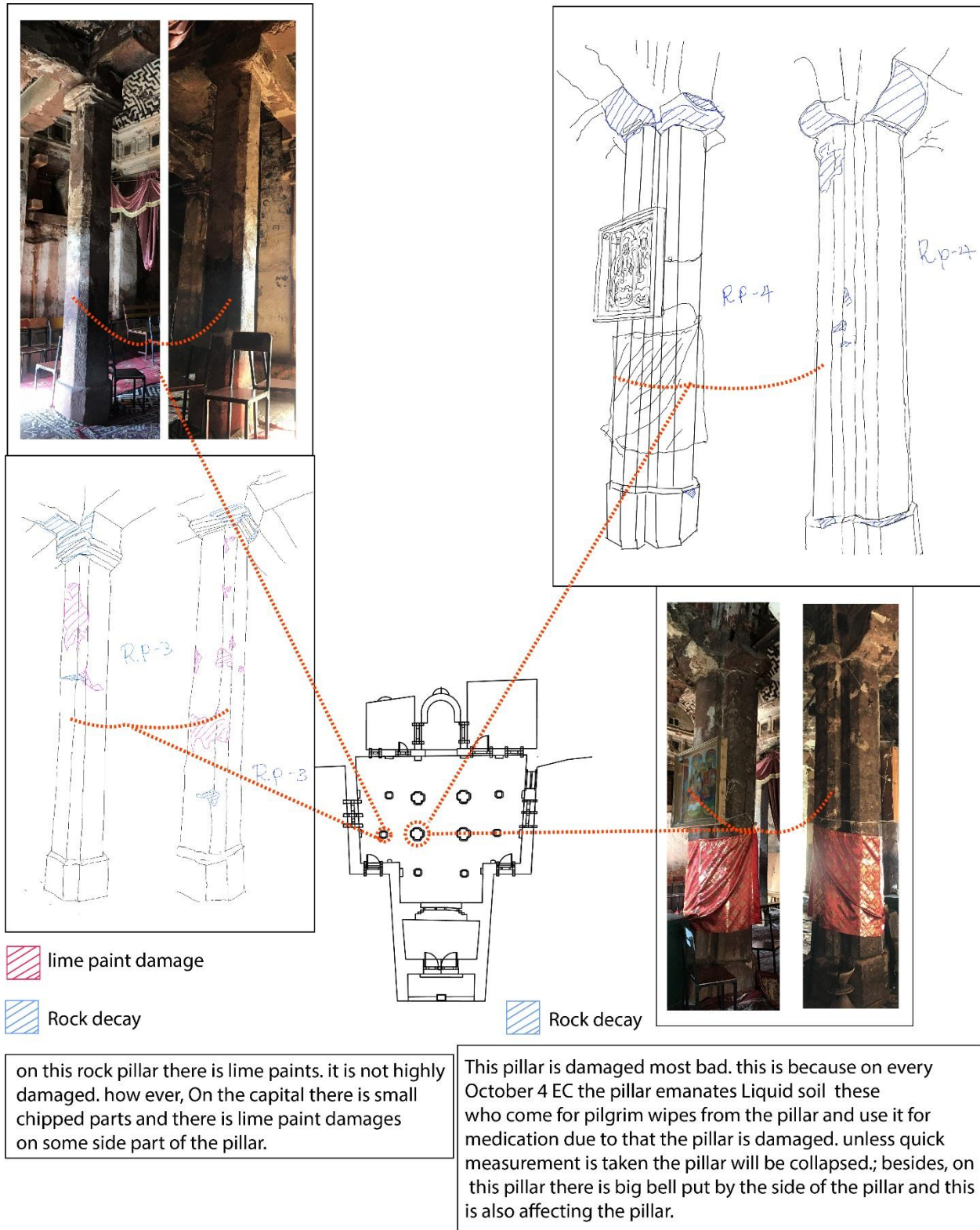


Figure 61: deterioration analysis of the rock-hewn pillar at Qidest.

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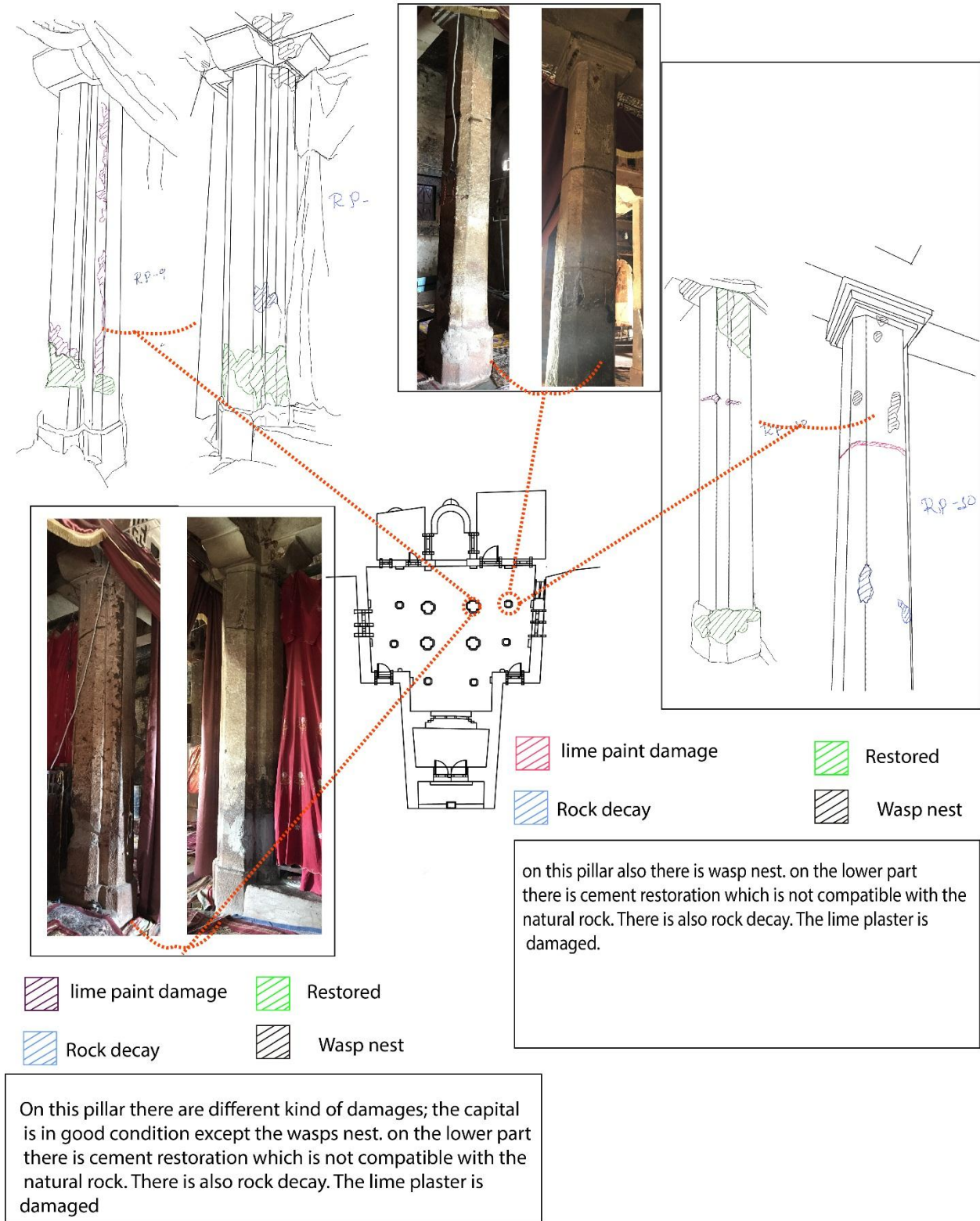


Figure 62: deterioration analyses of the rock-hewn pillar at Qidest.

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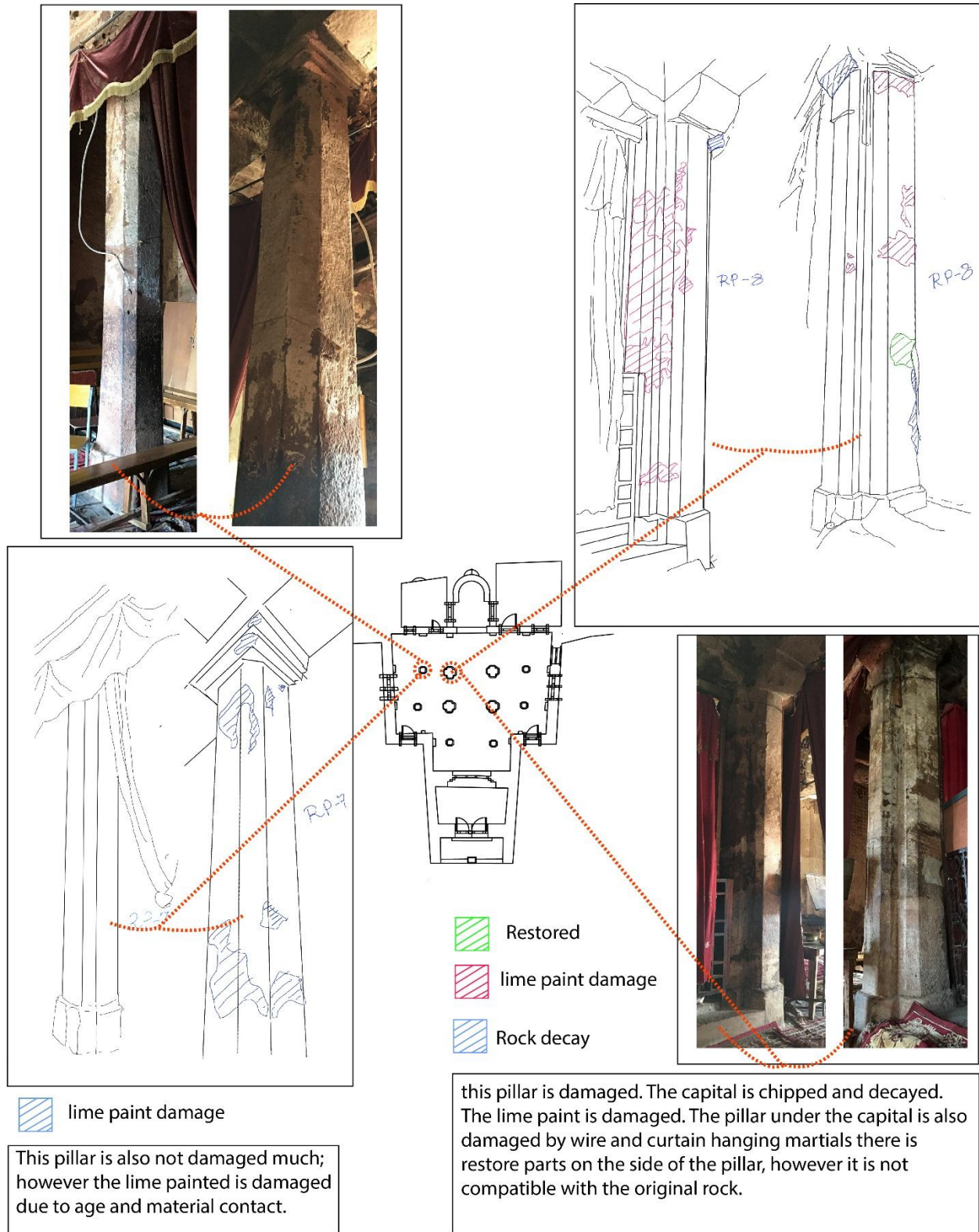


Figure 63: deterioration analyses of the rock-hewn pillar at Qidest.

5.2.5. Damage Analyses on Ceiling of the Church

The ceiling of the church is highly decorated with different interlaced crosses. The crosses are depicted with various styles. The ceiling is damaging due to a number of damaging factors, such include: black crust, delamination, staining, wasp nest, impact damage and cracks.

Most of the ceilings are invaded by black crusts. There are two hypotheses about the origin of black crust: burning of the church by Queen Yodit and incense burning

The crust is visible most on extruded part of the surface. This is due to its exposure to the smoke. The black spot has its own negative impact on the rock hewn structure. On one part, it blocks the rock not to breathe and on the other part, it gives bad look to the esthetical beauty of the rock cut ceiling.

There are delaminated injuries on the rock cut ceiling church; which are situated on the western part of the ceilings. According to Nibured Hadush, Queen Yoder's destruction has been creating thermal stress on the rock ceiling. , The minerals exposed to the heavy heat expands more whereas the rock far from the heat remains the same; then, as a result of the temperature variations created on the rock eventually makes the heated rock to detach from the mother rock.

On some part of the ceilings, staining is observed. It is heavily impacted the lime surface. Staining on these rock ceilings occurred due to water infiltration on the ceiling surfaces. In order to control the staining, the source of the water flow has to be mitigated and has to be cleaned the surface with steam waters.

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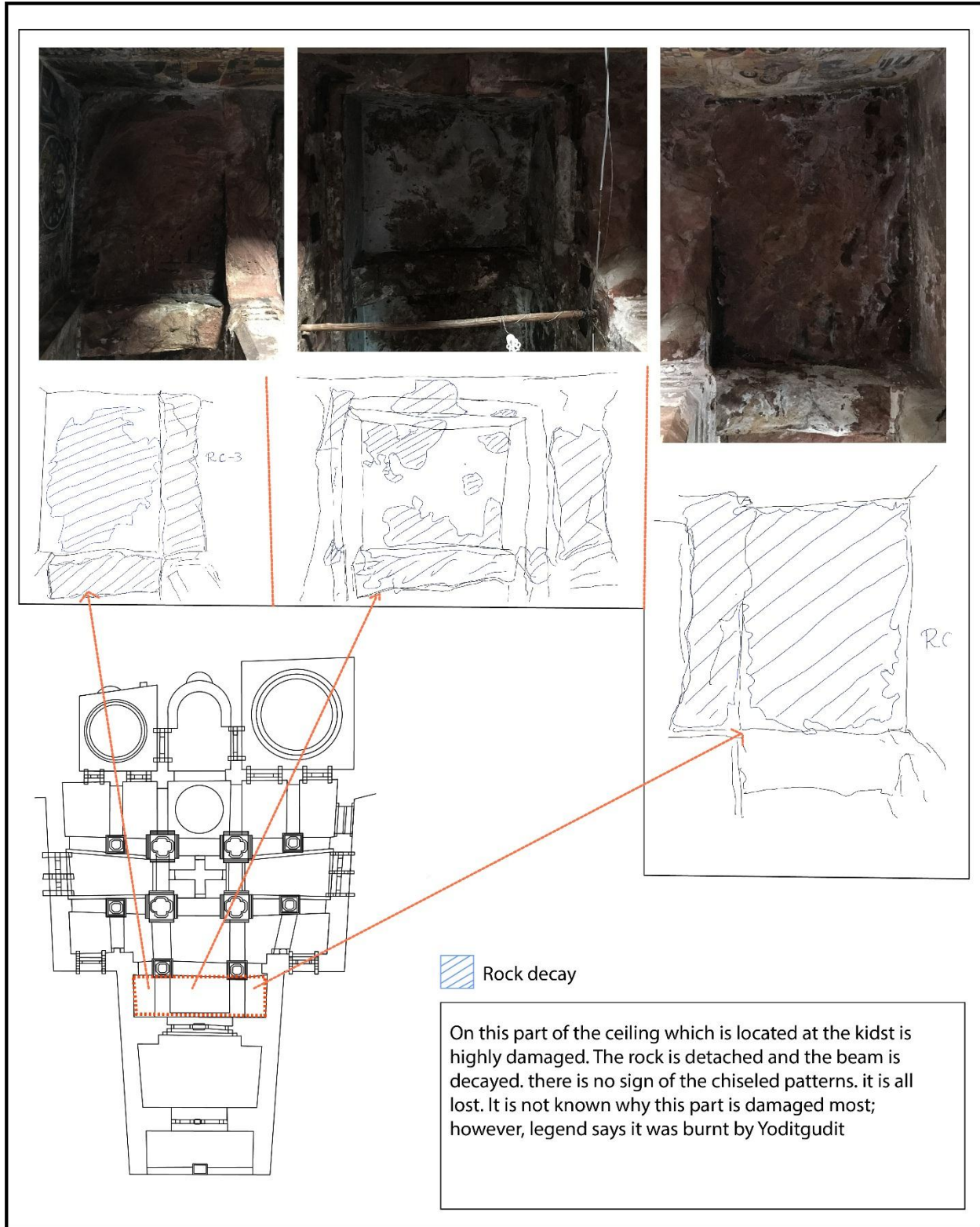


Figure 64: deterioration analyses of the ceiling at the Qidest.

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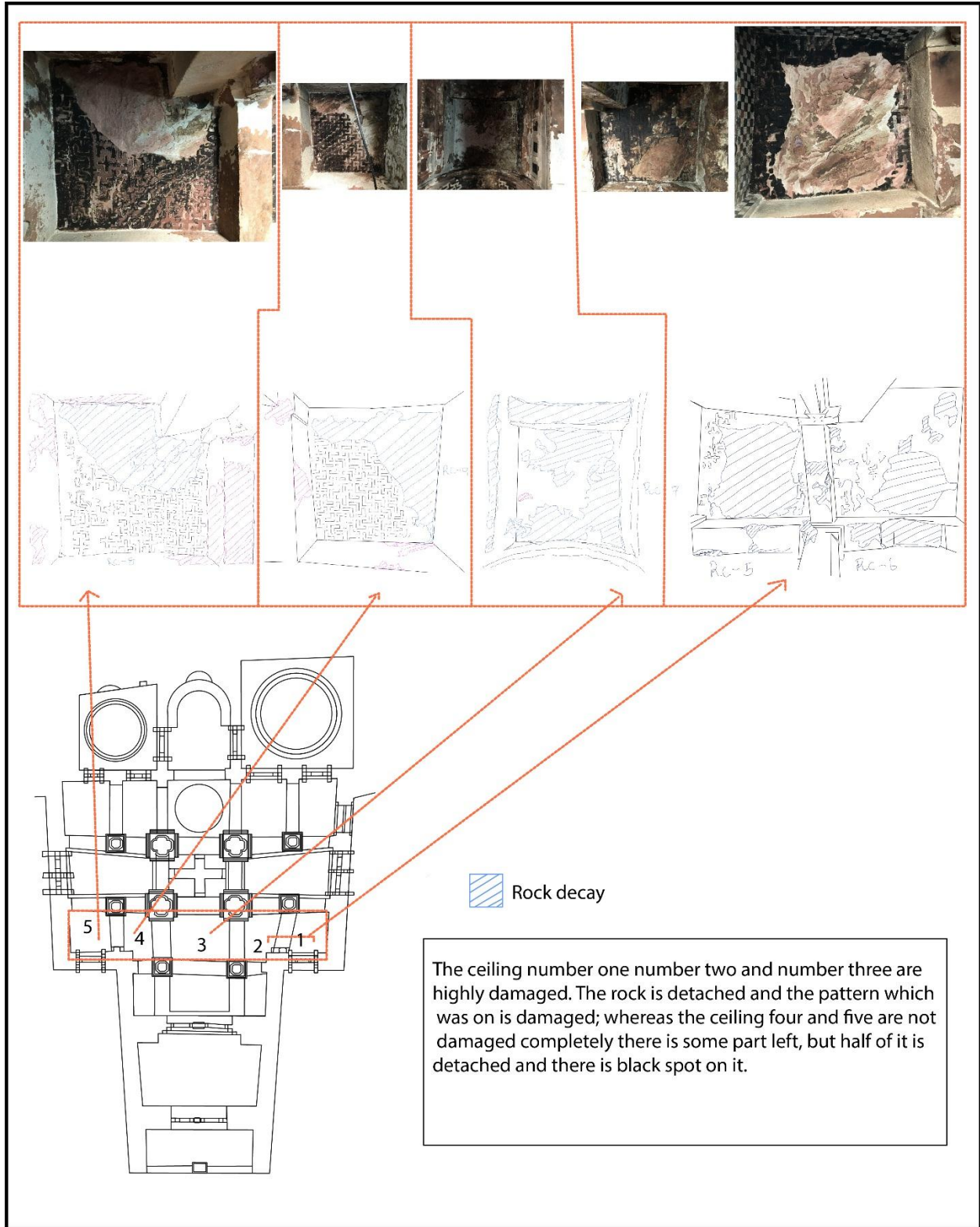


Figure 65: deterioration analyses of the ceiling at the Qidest.

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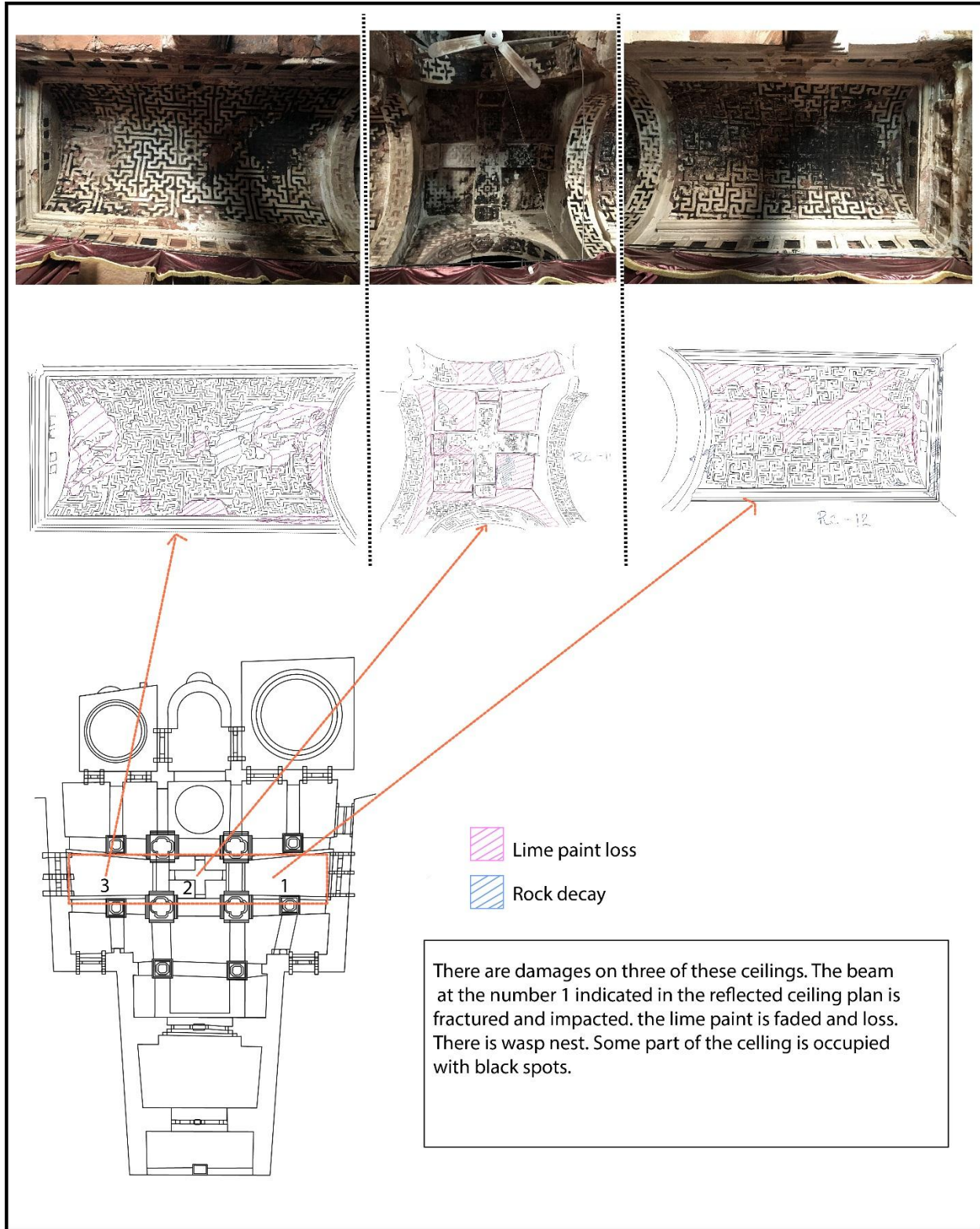


Figure 66: deterioration analyses of the ceiling at the Qidest.

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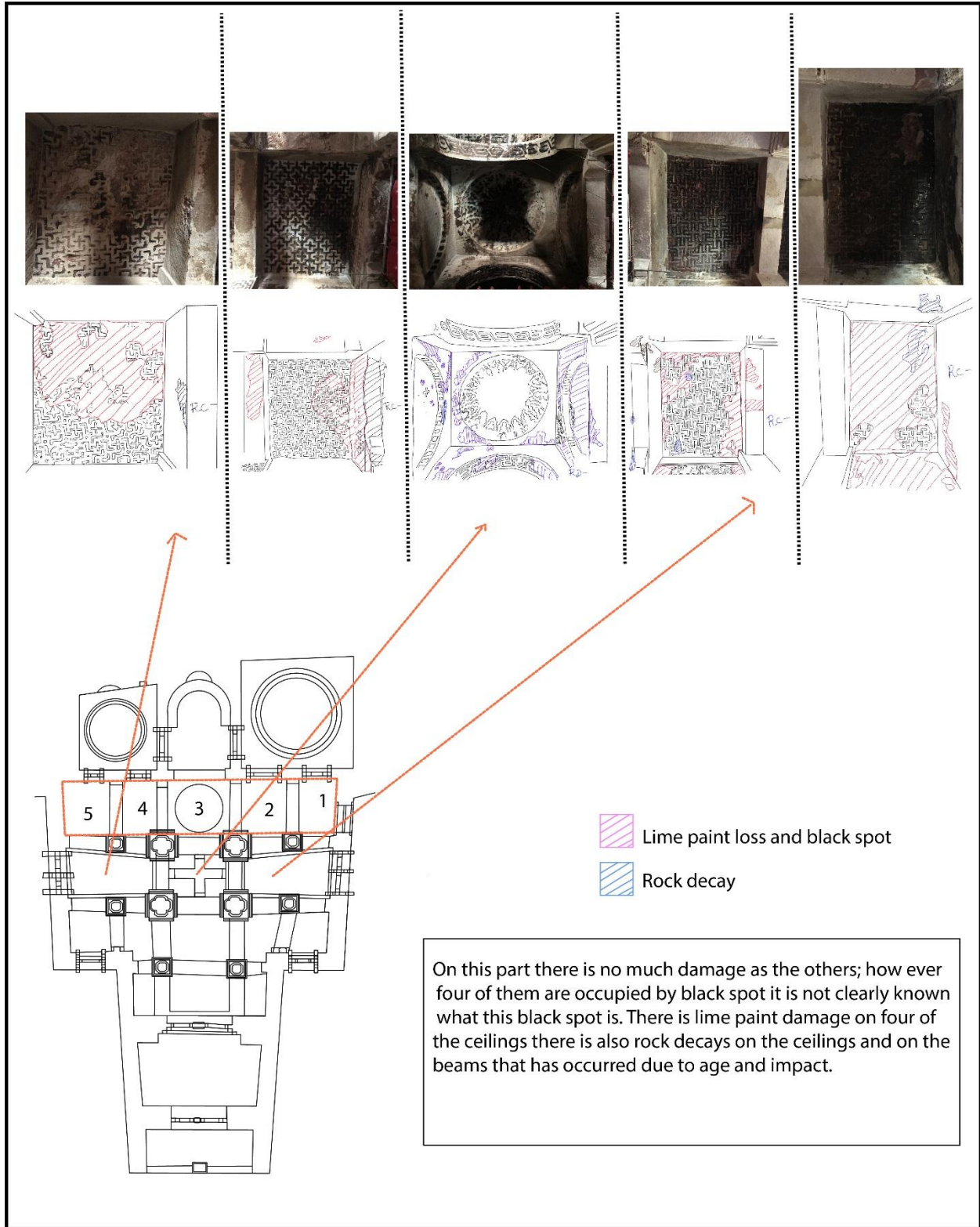


Figure 67: deterioration analyses of the ceiling at the Qidest.

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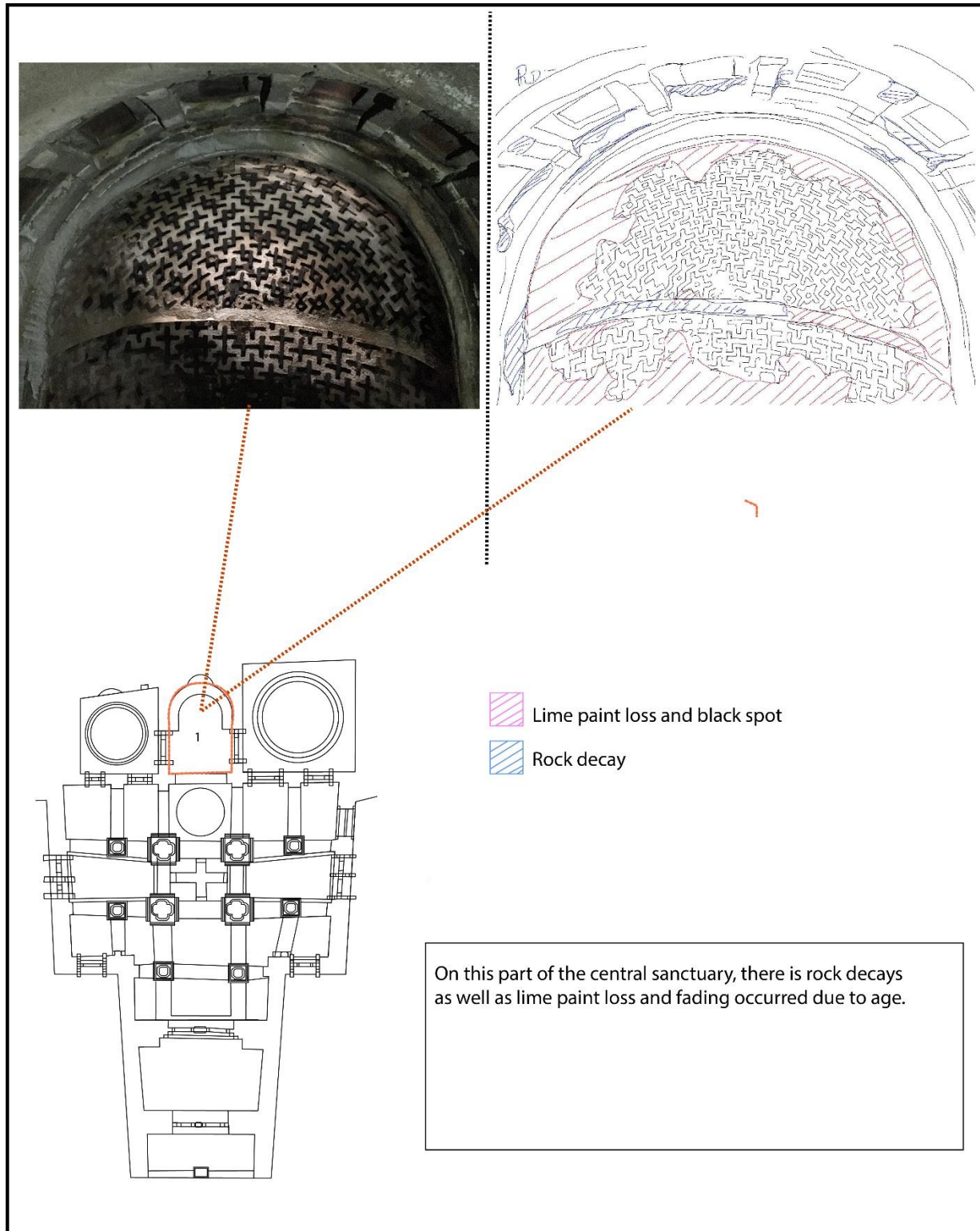







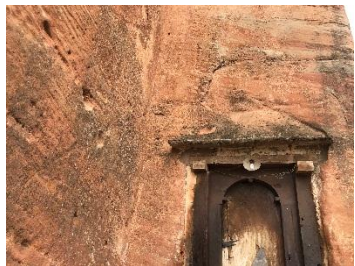
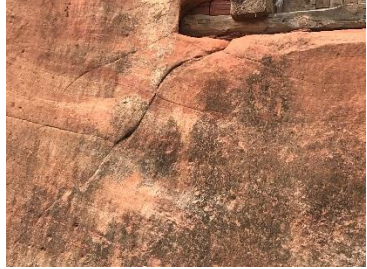
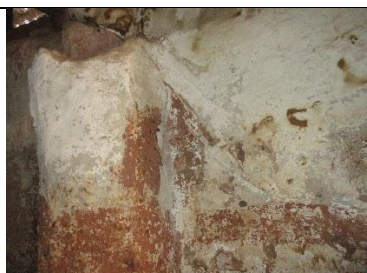

Figure 68: deterioration analyses of the ceiling at the Meqides of Mary.

5.2.6. Analysis on Degree of Damages

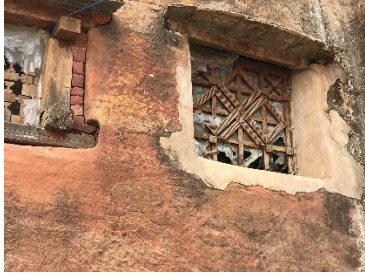




Table 2. degree of damage

| Damage in photo | States of damage | Description of damage | Crack width in (mm) |
|---|------------------|--|---------------------|
|  | Negligible | Hairline crack of less than about 0.1 mm widths are visible on the exterior wall of the portico, which was built during the Italian occupation and this hairline crack is classed as negligible. No actions are required. | Up to 1mm |
|  | Very Slight | There are fine cracks, which can be easily treated, on the left elevation at the center of the window that run up ward. The crack is generally superficial. It is visible in the external part rock cut elevation only. | Up to 1.1cm |
|  | Slight | There are cracks on the internal left side of the elevations. It is a vertical crack that runs from the middle of the rock cut wall. It is located next to the narthex. It can be easily grouting with lime and sandstone. Filling is required to ensure water penetration is protected. | Up to 1cm |
|  | Moderate | Some cavity is being formed on the top edge of right and left elevations, which require some patching by a mason before it is worsen. | Up to 6cm |
| | Severe | There are some extensive vertical cracks on the pillars of the narthex, which is occurred due to heavy load of the upper wall, it requires Splitting apart and chiseled out the interior part of the wood and place metals that could carry the load above to keep the | Up to 1cm |


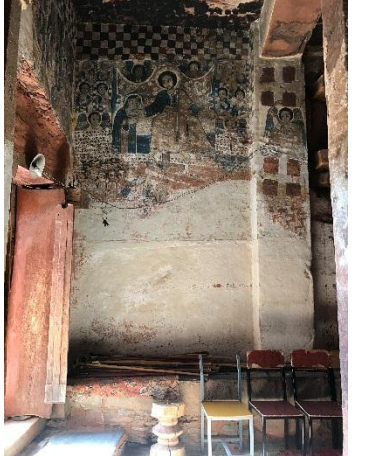
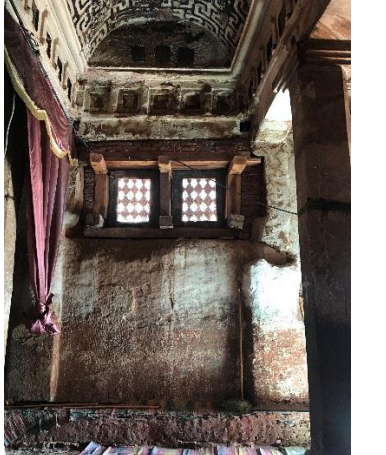

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| | | | |
|---|---------------|--|---------------------------|
|  | | <p>authenticity and integrity of the wooden sections.</p> | |
|  | <p>Severe</p> | <p>There is structural diagonal crack on the right side of the exterior left side of the elevation that run from the top to down. Above the door the crack is deep, which requires a major repair work involving Complete filling up.</p> | <p>From 1mm Up to 3mm</p> |
|  | <p>Sever</p> | <p>This crack is located at the right lower part of the right window in the southern elevation. It is a deep passing crack the crack might be occurred due to geological effects. Grouting is needed in order to protect further deterioration</p> | <p>up to 6mm</p> |
|  | <p>Sever</p> | <p>This crack is found in the interior opposite to the above stated crack.</p> | <p>From 2 up to 4mm</p> |
|  | <p>sever</p> | <p>This crack is located on the southern elevation of the interior wall next to the narthex at the <i>Qidest</i>. It is a large crack. Water is easily infiltrated when it rains.</p> | <p>From 2 up to 3mm</p> |





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| | | | |
|---|-----------------|---|---|
|  | sever | This damage is situated on the southern elevation of the left side window. The wooden patron the lower part of this window is decayed due to water leakage. The cement plaster is fractured | |
| | State of damage | Description of damage | Cause of the damage |
|  | Moderate | This impact damage is found on the interior part of the narthex (<i>Qine-mahilet</i>) It is damaged due to improper handling of the standing sticks. and the damaged body has to be restored with lime and sand mix. | Man-made damage due to improper handling of standing stick |
|  | sever | This impact damage is located on the side of the pillar at the nave of <i>Qidst</i> It leaks water around the month of October which is believed to be a holy water the congregations take away the soft part of the rock; due to that, the pillar is heavily worn out. | Man-made damage due to improper wiping of mad for medication. |
|  | sever | This painting is located at the atrium on the upper part of the northern wall. It is damaged due to termites' attacks; | Natural damage due to termite |
|  | Moderate | This vaulted barrel ceiling is located at the ceiling of the <i>Qidst</i> northern aisle. It is darkening by incense burning during the liturgical services and other daily prayer activities | Man-made damage due to burnet incense smock |

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| | | | |
|---|-----------------|---|---|
|  | <p>moderate</p> | <p>The canvas painting on the <i>Qidst</i> is damaged due to dusts and fading.</p> | <p>Man-made and age damage</p> |
|  | <p>sever</p> | <p>This painting is located in the wall of the <i>Qidst</i> to the northern part of the wall. It is damaged due to past water leakages. Most of the lower part of the painting is totally lost and faded.</p> | <p>Age and man-made damage. Due to dust and body contacts.</p> |
|  | <p>Moderate</p> | <p>In this wall that is located on the southern part of the church, water is infiltrating through the window. There is also a large crack at the right lower corner part of the window. The lime plaster is also washed away.</p> | <p>Natural damage Due to water leakage from outside through the window.</p> |
|  | <p>Moderate</p> | <p>This plant growth is observed at the upper edge of the southern elevation. The plant is growing on the cracked section of the rock.</p> | <p>Natural damage due to plant growth on the crack.</p> |

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| | | | |
|---|--------|---|--|
|  | sever | The rock fracture is located on the isolated pillar at the interior part of the southern façade. It seems impact damage is the factor of damage; however, it is not clearly known what caused it. | Most probably Man-made damage |
|  | Medium | The damage is found on the right side of the narthex. The damage is occurred due to lectern and standing sticks often placed on it. | Man-made damage due to improper placement of the lectern |
|  | Sever | This painting is located at the upper part of the wall in the atrium (<i>Qine-mahilet</i>) it is damaged by termite's mad tube accumulation. | Natural damage due to termite mad tube. |
|  | Medium | This wooden beam is located at the portico. The wood is eaten by termites that come from the grave nearby. | Natural damage, due to termite eaten. |

5.3. SWOT Analyses

This SWOT Analysis has conducted on the Conservation and Management Status of the Rock Hewn Church of Abreha and Atsbeha.

5.3.1. Conservation and protection

Table 3. Conservation and protection

| Issues | Strength | Weakness | Oportunatly | Threats |
|--------|--|--|---|----------------|
| | The church is still active and provide services for the congregations around | Lack of daily and regular maintenance and repair | Availability of support from the Federal and Regional governments | Climate effect |

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| | | | | |
|--|---|--|--|--|
| | Partial written document of the conservation practices has made so far is available | Lack of monitoring by concerned bodies | Public and the church community commitments for conservation | shortage of resource for conservation |
| | The existence of the rock cut church for millennia without collapse | Lack of skilled and knowledgeable expert in rock cut structure | Government commitments for conservation | Vandalism |
| | Preserved intangible heritage | Deterioration due to nature; such as, water penetration, plant grow, termite attack, occurrence of algae and mosses, erosion and age | Support of the society for conservation | Lack of appropriate conservation material |
| | | Lack of sustainable conservation and restoration of the church | Continuity of the church service | The grave in the churches yard. |
| | | Lack of established conservation offices | Uniqueness of the rock hewn and the wall painting to attract visitors. | Change and degradation of the land scape. |
| | | limited public awareness on heritage handling | | Natural factors such as geological movement |
| | | | | illicit trafficking to movable cultural heritage |

5.3.2. Proper management

Table 4. Proper management.

| Issues | Strength | Weakness | Opportunity | Threat |
|------------|--|---|--|---|
| Management | Boundary of core zone and buffer zone | lack of clear divisions among the concerning actors Vague management and decision-making bodies. | Local Community support for conservation | Lack of emergency management mechanisms |
| | Strong sense of belongings among the societies | Lack of inventory and documentation f heritage assets | | |
| | Strong tradition church management system still functional | Lack of modern heritage management system | Availability of Intangible resource related to Abreha and Atsbeha. | Landscape degradation |

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| | | | | |
|--|--|---|---|--|
| | | Lack of monitoring and evaluation | Availability of archeological potentials. | lack of strategies for movable and immovable heritages |
| | | Lack of trained human resource at the site level | | |
| | | Lack of trained heritage manager | | |
| | | Lack of heritage management plans for the movable heritages | | |
| | | Absence of archeological excavations. | | |
| | | Lack of documents on previous interventions. | | |

5.3.3. Visitor and tourism development

Table 5. heritage management and tourism development.

| Issues | Strength | Weakness | Opportunity | Threat |
|---------------------------------|---|--|--|-------------------------------------|
| Presentation and interpretation | Access of museum within the church compound | Poor interpretation and presentation | Presence of stories and indigenous knowledge | Absence of finance |
| | Chronological history of the rock hewn church | Lack of site interpretation based on tangible evidence | Placement of the site on the way to Gerealta | Unorganized presentation |
| | Living religious practice | Lack of narrations to visitor | Availability of guides who speak different languages | |
| | Presence of both canvas wall painting and dry fresco painting | Lack of guiding maps, visible signpost, information panels, brochures and fliers | Emerging opportunities that attract youngsters | |
| | presence of different decoration patterns | Lack of holistic tangible and intangible presentations | | |
| Visitor management | Availability of road | Lack of adequate information on the dos and don't | Peaceful and silence atmosphere | Unplanned development of residences |
| | Local tour guide | Absence of educational facilities | Beautiful landscape with layer of histories | High entrance fee |
| | Presence variety of heritages | Lack of public programs | Availability of transports | Poor site handling and presentation |
| | Suitable environment | Absence of hotels and restaurants | | |
| | safe security | Lack of shops | | |
| | | Lack of resting rooms | | |
| | | Lack of gas station | | |

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| | | | | |
|--|--|---------------------------|--|--|
| | | Absence of bank | | |
| | | Absence of souvenir shops | | |
| | | | | |

5.3.4. Community Participation and Benefit

Table 6. community empowerment.

| Issue | Strength | Weakness | Opportunity | Threat |
|-------------------|--|---|---|---|
| Community benefit | Dedication for heritage protection | Less involvement of communities on financial decision | Positive attitude of the societies towards of the heritage | |
| | Strong Sense of belongingness | Less participation of the communities in decision making | Fame of the heritage | Less interest of partners in terms of job creation for the societies around |
| | High concern for the properties of the church due to its religious value | Lack of coordination among of the stakeholders | Strong government commitment for protection and conservation of the heritage. | Less technical and financial support for the community job creation |
| | Job creation for the youngsters graduated in the field of tourism. | Less opportunity provided for the local community inners of creating job creation | Reach potential for job creation | |

CHAPTER SIX

6. Proposals for Heritage Conservation and Management Interventions

6.1. Conservation Principles and Approaches

Conservation means safe keeping or protecting from destruction or change the existing condition of a heritage property (Hassan, L. 2016). The general concept of preservation involves different types of treatments intended to preserve structures, places and historic cities, including care, reconstruction, expansion, and reinforcement. It is also an ethics of use, distribution, and security of resources. Conservation is the act of protecting both physical and cultural heritage from damage, degradation, waste or loss. In the past conservation has had several meanings, but the most common known definition was to return to its original shape and form to bring back its lost properties; however in the Bura charter (1999) the term preservation is used as ' returning to a known earlier state the current structure of a place by removing accretions or reassembling existing components without the introduction of new material.

Conservation of wall painting: wall paintings have been social expressions of human creation throughout history, such as rock art that extends to today's murals. A loss affects a large part of the world's cultural heritage. Paintings are damaged due to natural, accidental or intentional degradation.

The value of the wall painting is based on the variety of cultural icons, esthetic achievements, and the variety of materials and techniques used from ancient times to the present. The Charter of Venice (1964) put forward general principles to conserve and restore cultural heritage Wall paintings are an integral part of monuments and sites and should be maintained in situ. Many of the issues that affect wall paintings are related to the poor condition of the building or structure, its improper use, lack of maintenance, regular repairs and modifications. Frequent restorations, unnecessary exposure and the use of inappropriate methods and materials may also result in irreparable damage. Substandard and insufficient protocols and skills led to unfortunate results. It is necessary to have an appropriate document on the principles of proper conservation and restoration of wall painting for this purpose.

Historically, the theory of sustainability was influenced by many major philosophers. Some argued that restoration can be introducing new elements different from the original. But others opposed

and argue that the status quo must be retained. Viollet-le-Duc is supposed to be one of the theorists of modern architecture in the history of Europe. While, to the restoration of building he says *"Restoring a building is not to keep it, repair it or do it again; you restore it to a state of completeness that may never have existed at a given time."* And John Ruskin on the other side says *"A destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed."* (John Ruskin). Criticism was aimed at the actions of Viollet-le-Duc here. The criticism of the actions of Viollet-le-Duc applied to the question of authenticity.

Unlike Ruskin's goal of maintaining individuality, originality and reality, by upgrading architecture and adding architectural elements that had never existed, Viollet-le-Duc made up the truth. By his "stylistic sweeping," he demolished younger pieces of monuments from the Middle Ages and replaced them with new ones (Pirkovič, 2003).

Both approaches have to be taken interchangeably to conserve the historical rock cut church of Abreha and Atsbeha without disturbing the authenticity and integrity of the elements. Where there is missing part it is advisable to replace it with compatible material in order to prolong the duration of the heritage elements. Therefore, based on the above conservation approaches the following are proposed:

6.2. Conservation Intervention Proposals

6.2.1. Conservation measure to the architectural and structural part of the rock hewn

Consolidation:

- To start with the main threatening problem on the pillar is observed at the entrance to the rock cut church. A heavy load resting on the wood pillar is not proportional to the load of the wall above; as a result, it is about to explode. Thus, it needs urgent intervention; First, footage either wood or metal structure has to be installed to help carry the lentil; then, move out the pillar at the center. Split the wood pillar in to two then, engrave on both the spirited wood pillar. Insert RHS with the size 80x80 x3. Then, put the HRS in to the curved wood. Clean the painting on it. Then, tie with invisible bolt and bring carefully to where it was.

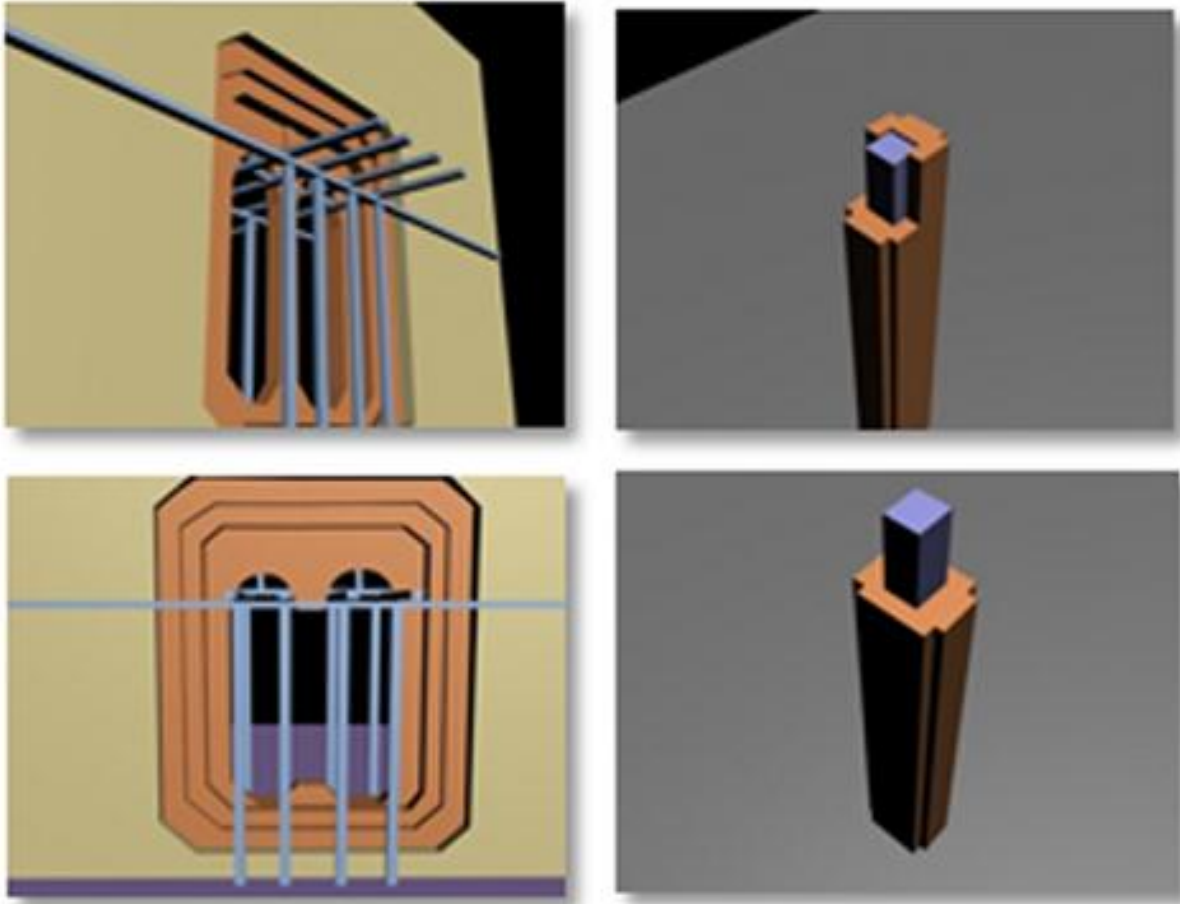


Figure 69: proposed conservation for the wood pillar in narthex.

Grouting of the cracks:

- There are cracks on the interior and exterior part of the wall. Some of the crack is verticals, diagonal, and horizontal. The diagonal crack is located at both on the interior and exterior part of the *Midst's* southern facade. There is also diagonal crack on the northern façade of the *Qidst*. These cracks have to be cleaned and removed the dusts, organic matters and the dirt in it. The crack has to be flushed with formalin to sterilize the surface. Having cleaned it has to be grouted with a solution of structural epoxy and it has to be carefully injected into the cracks in order to stop further water infiltration and deteriorations.

Cleaning the interior part of the church:

- The interior part of the rock hewn church is plastering with lime. Some of this lime is detached from the rock and some is stained due to previous impacts of water. Most of the

ceiling is covered with black crusts that come out of the incense smoke and tappers burnings. There are also greasy dusts, fatty martials and waxes on the interior wall surface. To clean the above-mentioned agents, it has to be studied in detail by professional painting conservators to propose appropriate conservation-restoration solutions.

Removal of biological accretions:

- The external wall is exposed to rain. Due to this, the external rock surface is colonized by deposits of moss, lichen, algae, other vegetation and plants. This plant and vegetation's make the stone surface look black and also formed pits on the surface of the rock, there by weakening the structure; so, some periodical inspections and maintenance actions are necessary to implement. Such include cleanings on daily, weekly and monthly bases with tooth brush, sponge and spray bottles in order to eliminate the presence of moss, lichen, algae, vegetation and plants without harming the rock surface. In a rock which is hard or dense, high pressure water jet has to be used. Once completed the external part of the rock wall has to be treated with biocide to kill the spores and microscopic materials embedded in rock surface to mitigate growth of the plants.

Repair of cavities and missing parts:

- Below the upper edge of the rock hewn church there are cavities created as the result of rain water, which take away the soft part of the rock. There are also fractures on the southern façades of the isolated pillars and erosions on the interior and exterior parts of the walls. The cavities and the eroded part of the rock hewn church should be filled with hydraulic lime mortars. The tile has carefully cut to fit the cavities. The repair has to be finished with stucco plasters to much the repaired surface with the original rock.

Windows and doors replacement:

- The flat stone installed above the windows is too short to protect the church from water penetration. Due to that water is leaking through the windows at the southern and northern part of the wall. Hence, in order to stop the water leakage, the damaged woods of the windows have to be replaced with similar wooden materials; then transparent glass has to be installed on the outer part of the window. This could protect the water leakage into the interior but the glass could let light into the interior without disturbing the authenticity and integrity of the wooden parts of the window.

Standing stick store:

- The standing sticks, the desk and the lectern have caused damages on lower part of the wall. This is because they are not placed properly. In order to avoid further deterioration plastic barrels should introduced for placing the standing sticks so that they would have no contacts with rock surface. The desks have to be removed from the church, ether new with soft edge has to be installed or it has to be removed completely from the church.

Removal of curtain:

- The curtain installed at the frieze of *qidst* stretched from the northern easel to the southern easel has to step-down. It has no use in terms of aesthetical beauty and functional uses; whereas, the weight of it is damaging the rock above when the wood that carry the curtain moves right and left. The ventilator installed at the pillar of the nave is also contributing to damages when it is turned on during the mass. This also has to be steeped off and find another way of ventilations in a way that doesn't harm the rock hewn.

6.2.2. mural Painting Conservation Intervention Proposals

There are many factors contributing to the deterioration of the wall-painting of the church Abreha and Atsbeha. The main causes are; termite attack, dusts, dirt, structural crack, spider-waves and recently tourism is also contributing great deal of decays. Some of the wall paintings are touched due to ignorance and photographs taking with flash also affecting the paintings and hence, some remedial, aesthetic and passive conservation measure are required. Some of the passive conservation that should be taken in this regard is:

- The congregations should take of their shoes just door steps of the church. This will prevent dusts coming in with the bare foots of the laity into the interior.
It is now believed that dusts that have accumulated on the cotton cloth wall paintings are the results of the transportation of dust by the laity bare foots while traveling from the compound to the interior with shoes off. Then it raises up on to the mural wall paintings; therefore, to prevent this problem the congregations have to be given instructions to come up with their shoes on till the door of the church, then take off,
Daily, weekly, monthly, yearly inspections and cleaning with vacuum cleaner is recommended to protect the floor from dust accumulations.

- The spider waves and dirt's on the corner of the wall should be removed from the surface by professional conservators.
- An Information panel should install that order the congregation not to get closer to the wall painting.
- The painting at the northern upper part of the *Qine-mahilet* and the wooden beam at the gate of portico are damaged by termite's attacks that came from the church grave; hence, a daily inspection is necessary to cleaning away from reaching to the church.

Cleaning is generally classed as a remedial intervention (Fox, 2016). According to (Hassan, 2016), “the choice of cleaning materials and methods depend upon the nature of the substances to be removed, and fundamentally upon the status of the wall painting.” From this point of view, remedial and aesthetic conservation measure has to be taken:

- The mural paintings should be cleaned after in detail study on type of pigment and plaster that are found underneath the cotton cloth wall-painting by professional wall painting restorers.
- The paints at the lower part of the wall in the *Qine-mahilet* has to be reinforced and consolidated with appropriate strengthen materials.
- The missing paint on the lower part of the wall at the *qine-mahilet* and at the *qidst* should be restored by professional art conservators.
- The painting at the western wall of *qidst* is torn apart due to the structural -vertical crack; and the vertical crack should be grouting with appropriate materials and then the painting also has to be restored after deep investigation.

CHAPTER SEVEN

7. Conclusion and Recommendations

7.1. Conclusions

The rock cut church of Abreha and Atsbeha is one of the earliest historical rock hewn churches in Ethiopia. The origin of this rock cut church, according to oral tradition, goes back to the 4th century AD. It is claimed to be excavated by the two king brothers,

Abreha and Atsbeha, who are as known as Ezana and Shizana were the first Ethiopian rulers who converted to Christianity in the fourth century AD.

The church of Abreha and Atsbeha stands out on three sides free from the rock from which it was curved. It was hewn as semi monolithic from the natural sand stone in the form of subtraction symbol. Each rock surface is further chiseled out, until the desired height and form was reached. It is described as semi-monolithic rock cut with white double arch portico covered with corrugated iron sheet.

The church is arranged in rectangular form with a nave and two aisles on either side. It is divided into three parts (*Kine-mahilet*, *Qidst* and *Meqdes*) as other Ethiopian traditional. Thus, the architectural, aesthetic, educational, historic, cultural and social value and significance of this church are very high.

The internal part of the *Kine-Mahilet* and some part of the *Qidst* are decorated with paintings of different age. The paintings are two types: cotton cloth and directly painted wall paintings. The painting directly painted wall paintings are categorized under the first Gondarian painting style, whereas the cotton cloth wall paintings are categorized under the second Gondarian painting style. Content wise, the paintings are also two types: spiritual and seculars. On spiritual content, as other Ethiopian churches Saints, Angeles, Miracles, and Martyrs are depicted and on the secular aspect, Kings, warlords and noble families are depicted. In addition to the cotton cloth wall painting and directly painted wall paintings, the ceiling and the interior wall of the *Meqdes* are engraved with different kinds of alphabets in the form of the clockwise and anticlockwise swastikas (misle-cherub.)

Despite of its cultural, emotional and use value, however, the rock hewn church of Abreha and Atsbeha exhibits a variety degree of damages as a result of natural and ma-made factors. The study has identified and analyzed the various types of weathering and damages witnessing on the church building and its wall paintings.

The analyses of this study demonstrate that:

- Large vertical cracks observed on the double arched wooden pillars at the narthex, may occurred due to heavy load and poor conservation, has assessed to be a high potential risk to the rock hewn church and need very urgent conservation intervention;
- Deep diagonal cracks that are observed at the southern wall are assessed to have medium potential risk to the church. It needs urgent interventions. But a Vertical crack at the wall of the narthex, might be a result of past restoration works, is assessed to have low risk.
- Other deterioration problems have observed in the church and its surroundings, such as wood decay at the windows and gates due to water infiltration; rock fractures and damage as a result of past interventions as well as rock decay and rock detachment due to improper installations of curtain and electric lines are assessed to have medium risk to the church and need urgent conservation-restoration solutions.
- Conservation problems that have observed on the wall paintings, such as, paint loss, paint fading and canvas wall detachment are assessed to have high risk to the wall paintings and need urgent restoration solutions.
- The church and the surrounding natural and cultural landscapes have untapped tourism potential. Both tangible and intangible heritage of the church and the surrounding community are great assets for the development of cultural tourism in the area. The surrounding sacred landscape is also additional values for tourism. Nevertheless, the attempts have made to develop these potentials was low. Thus, the community could not able to be beneficiary from the sector.
- Absence of main visitor's facilities and service in and around the heritage site, such include standard hotels, restaurants, handicraft centers, banks and. Telecommunication services.

In general, this study demonstrates that the church of Abreha and Atsbeha are found in low conservation status.

7.2.Recommendations

The study is recommended the followings:

- The lime plaster on the interior wall surface of the church should be removed after a thorough investigation.
- The curtain on the *Qidst* hanging down from above the capital is accelerating the deteriorations of the rock hewn should be removed from the place.
- Urgent conservation intervention should be conducted on the double arched wooden pillar at the narthex to provide solution for the heavy cracks.
- The black crust accumulated on the surface of the ceiling should be cleaned and removed.
- The dust and the dirt on the canvas and fresco paintings should be cleaned and removed by professional painting conservators.
- The termites and the termite's tube on the wall painting and on the wooden structures should be removed by professionals with proper anti-termite's treatment.
- The graves that are located near to the church should be closed for burial services in consultation with the community.
- The piles of soil dug up by wasps should be removed and cleaned.
- Proper placing for the standing sticks, lecterns and benches has to be prepared to mitigate the deteriorations caused by improper placing of the above-mentioned church instruments.
- The leaking windows at the southern elevation of the building should be fixed with transparent glasses that could prevent water infiltration. The damaged wooden part of the windows should be replaced with similar wooden materials
- The wooden doors to the *Qine-mahilet* and at the southern gate have to be restored.
- The diagonal passing cracks at the southern part of the rock hewn and the cavities at the edge of upper part of the parapet should be grouting in order to protect it from further deteriorations and water infiltrations.
- Daily, weekly, monthly and yearly periodical inspection system should be established to monitor the state of conservation of the church
- Continuous awareness creation and capacity building trainings should be provided for tour guides, priests, deacons as well as member of the community in heritage protection, heritage and tourism management

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- A comprehensive land-use planning shall be established by the Regional government to protect the church from unpinned development.
- A guideline should be developed for sustainable conservation and management of rock hewn churches and wall paintings at national level
- A stakeholders' forum, comprising of ARCCH, MoCT, BOCT, EOTC, the church and the representatives of surrounding communities, should be established to monitor the conservation status of the church and providing timely conservation and management decisions
- A cultural tourism development strategy should be developing at local level to utilize the untapped tourism potential of the church and its surroundings.

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Appendix

Interview questions

Part one, Interview detail:




- Name.....
- Position.....
- Place of interview.....
- Date of interview

Part two: questions




1. When is the church hewed?
2. Who was the rock hewn church hewed by?
3. Why was the rock hewn hewed for?
4. Are there any rock hewn churches similar to the rock hewn church of Abreha and Atsbeha around?
5. When is the wall painting of the rock hewn church painted?
6. What is the content of the wall painting about?
7. To which Ethiopian traditional painting style is the wall painting of Abreha and Atsbeha categorized?
8. Is there any documentation made of the tangible and intangible by any other concerned bodies?
9. What is the conservation status of the rock hewn and the wall painting of the church?
10. What are the major deteriorating factors of the rock hewn and the wall painting of the church?
11. What is the conservation history of the rock hewn and the wall painting of the church?
12. By how many tourists do the rock hewn church of Abreha and Atsbeha visited per a year?
13. Where are most of the visitors from?
14. What are the negative and positive effects of the tourist visiting the rock hewn church?

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Annex I : Wall Painting of the Northern Elevation

| Number | Description | Pictures |
|----------------------|--|--|
| Number one: | The wall painting designated with the number one shows a saint on lion back. With an inscription that say Abune “አቡነ” in geez. Meaning “our father”. Who? It is not known who he was. He is on the lion back holding standing stick and the lion’s mane and dressed reddish tunic over his head and black green below his shoulder, and also wear white trouser and red shoes. The lion has yellowish color with white line and black hair. The background of the upper part is painted with reddish and the lower part with dark green colors. |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| Number two: | It is also similar to that of number one, except the dress color. However, unlike number one, the Saint is identified, by the inscription written on it. The inscription says “Abun Samuel”. (አቡነ ሳሙኤል) meaning, “our father Samuel.” He is seated on the lion back, holding standing stick and the hair (mane) of the lion. He is dressed dark green above his shoulder and red tunic down his shoulder. He is also dressed white with red strip pant and reddish shoes. The background is painted with red above his neck and dark green below. On the lower part there is inscription that depicts the name of the donor of the painting and the time of the donation. But it doesn’t tell us who the painter was as it can be seen below. The inscription starts praising in the name of the Father the son and the Holy Spirit. It tells that it was donated from a woman called <i>Jember Kinfemikael</i> and her family. It tells also that it was painted during the reign of Emperor Yohannes IV and archbishop Demitros. |  <p>title: <i>Abun Samuel</i> donor: Jember Kinfemikael painter name: unknown year of paint:</p> |
| Number three: | This painting shows equestrian Saint “Fikitor”. (ፈቅጦር) on horseback throwing spear in one hand and holding another one. He is dressed in yellow with red strip tunic. Circle of light (turban) is painted around his head. He is facing right. The horse is decorated with different kind of ornaments. The horse has yellowish color. Four peoples are seen fallen down on the ground. The all body of the person at the front is visible. He is dressed light red with dark red striped pant and dark green with black striped jacket – like coat, but three of them are hidden behind. The one at the front is attacked by spear. All are with their eyes closed. They have turban on their head. |  <p>title: Fikitor donor: unknown painter name: unknown year of paint:</p> |





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| | | |
|----------------------------|--|---|
| <p>Number four:</p> | <p>shows equestrian Saint “<i>holy Aboli</i>”. (ቅዱስ አበላ) on horseback throwing spear in one hand and holding another one like that of <i>Fikitor</i>. He is dressed in dark green striped with black and white striped with black and also wear red tunic. Circle of light is around his head. He is facing right. The horse is dressed in black and decorated with different kind of ornaments. Three persons are seen fallen down, one around the horse’ back and the other two under the chest of the horse. They are laid on the ground facing up right. Their eyes are turn closed. Turbans are observed on their heads. They are dressed dark green with black striped pants. One of them is seen attacking by spear and the other person is stepped by the horse from behind. The background is painted with ocher. Four flowers are also painted on the back- ground.</p> |  <p>title: <i>holy Aboli</i> donor: unknown painter name: unknown year of paint:</p> |
| <p>Number five:</p> | <p>This figure shows Joachim and Ana are traveling. Joachim, is depicted in the manner of senior citizen with gray hair, follows Ana from behind. He is holding green handkerchief with his right hand and his shoulder with his left hand. He is dressed red tunic decorated with yellowish flowers. Ana is depicted walking in the front and carrying a baby on her back. She is also holding handkerchief with her right hand and white cuplike object with her left hand. She is dressed red veil and dark green with black striped tunic. The background is painted with ocher color. There is caption on the upper part of the painting. It is written in Geez language as follows: “ኢየቄም ወ ሃና ዘከመ ወለድኖ” meaning, “<i>Joachim and Ana are rejoiced at the birth of their daughter.</i>” Above the inscription the background is painted with dark green color.</p> |  <p>title: Joachim and Ana are rejoiced at the birth of their daughter donor: unknown painter name: unknown year of paint:</p> |
| <p>Number six:</p> | <p>Shows the equestrian saint “<i>St Tewodros</i>”. (ቅዱስ ቴዎድሮስ) on brown horseback throwing spear against the king of <i>Quz</i> and holding another spear. He is dressed dark green striped with black and white striped with black and wear red tunic. Halo is around his head. He is facing to the right. The horse is brown in color and decorated with different kind of ornaments. Above him two angels are seen from the neck up. Under the Saint’s horse, a king is seen in falling down motion from his horse back and facing left. He is holding sword and shield. His shield is pierced by the spear thrown by the Saint Tewodros. His Crown is still on his head and he is dressed dark green striped with white and black. In front of the dying king five necked persons are also seen in falling down state. Similarly, three guards with swords and shields are observed laying down on the ground. They all are dressed white. On this painting, there are three captions: one, that say “ቅዱስ ቴዎድሮስ” meaning St Tewodros and the other, “ዘከመ ቀተሎሙ፡፡ለሰብአ ቁዝ፡ምስለ፡ነጉሃሙ፡፡”. Meaning, “<i>as he has killed the people of Quz together with their king</i>”. And the third one, “ንጉሠ ቁዝ” meaning, “<i>king of Quz</i>”. The background is painted with ocher. There are also three flowers painted with red and black outline on this painting.</p> |  <p>title: <i>St Tewodros</i> donor: unknown painter name: unknown year of paint:</p> |




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| <p>Number seven:</p> | <p>This painting depicts the equestrian Saint “<i>St Georghis</i>”. (ፊደላ ጊዮርጊስ) on white horseback throwing spear to unknown object and holding another spear. He wears dark blue with black striped dress and yellow striped with red tunic. Halo is around his head. He is facing to the right. His horse is white in color and decorated with different kind of ornaments. On the back of the horse there is a portrait with caption which says “<i>mebelet</i>” (መበለት) and three persons are also seen holding spears and shields behind him. They wear white and red dresses. In front of the Saint portrait, another three persons (probably guards) holding spears and shields are seen marching onward. They wear green, white and red dresses. Their names are inscribed on each of them - which say, “ሉሊስ፣ሐርዳስ፣ሲሱሉሽ”. An angel, from the neck up, depicted above his head. On the lower part there are seen five persons carrying bottles of “<i>teg</i>” (<i>locally made honey beer</i>) with their both hands. Another ten persons are seen seated - probably waiting to serve “<i>Teg</i>”. They are dressed in white. The background is painted in ocher but the background of the horse is painted in dark green. There is caption that say, “ፊደላ ጊዮርጊስ ዘከመ ኣድኃኛ ለወልደ መበለት”. Meaning, “<i>as St Georghis saved the son of sinister</i>”.</p> |  <p>title: <i>St Georghis</i> donor: unknown painter name: unknown year of paint:</p> |
| <p>Number eight:</p> | <p>This painting is located on the northeast gate. The painting shows Jesus being baptized by John. Jesus is standing with his head bend. He wears dark brown striped with black dress. Only his right hand is observed. Johne is standing and holding stick with his left hand and raising his right hand above Jesus head. He wears yellow dress below his waist. White dove is above Jesus head. The background - above Jesus is painted in ocher and below his shoulder is painted in dark blue. Over all the painting is faded.</p> |  <p>title: baptism donor: unknown painter name: unknown year of paint:</p> |
| <p>Number nine:</p> | <p>Shows an elderly man seated and raising his hands for washing while a young boy is pouring the water. The boy is bending; however, his leg is not visible. From his behind there are two persons standing and holding their eyes with their left hands. Turban is on their heads. They are dressed yellow striped with red. A person is seated behind the senior man holding his face. The background is painted with ocher. Over all the painting is faded. The painting on the lower part shows a person tied on a wood and two persons on his right and left biting him with sticks. The person tied on the wood, is necked except a stripe of red textile lied on his waist. The two-person who are biting the man are dressed dark pants. Turban is on their heads. This painting has no inscriptions due to that the content is unknown. The background is painted ocher paint.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |




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| <p>Number ten:</p> | <p>This painting shows two kings, most probably Abreha and Atsbeha from the chest up. They are dressed red gabon and blue shirts. Crowns are on their heads. Above of them an angel with a wing is seen from the neck up. The background from the heads down is painted with ocher. Above their head is painted green. The painting has no inscriptions that tell about the painting.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number eleven:</p> | <p>This painting shows a bishop, most probably Aba Selama, from his chest up. The bishop is dressed blue tunic. He is holding hand cross with his right hand and beads with his left hand. Two persons on his right and two persons on his left standing. They are dressed white striped with black and red. Turban is on their head. The background is painted with ocher paint.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number twelve:</p> | <p>shows Adam and Eve seated. Adam is dressed ocher striped with red, white and black and Eve is dressed dark green striped with black tunic. Adam is holding handkerchief with his right hand and his face with his left hand and Eve is eating something with her left hand and raising her right hand to let Adam eat. Tree is at the middle of them and there is snake on the tree facing towards Eve. The background is painted with ocher paint. There is caption in geez that say “አዳም ወ ሌዋን”. “Adam and Eve”.</p> |  <p>title: Adam and Eve donor: unknown painter name: unknown year of paint:</p> |
| <p>Number thirteen:</p> | <p>On this painting Adam and Eve are depicted. They are seen seated. Adam is placed on the left holding his leg with his right hand and his arm with his left hand. And Eve is placed on the right and seen seated, holding her leg with her right hand and her arm with her left hand. Tears are dropping on their faces. The background of the upper part is painted with ocher and the lower part is painted with green. There is an caption on the background in geez that say, “አዳም ወ ሌዋን”. Meaning, “Adam and Eve”.</p> |  <p>title: Adam and Eve donor: unknown painter name: unknown year of paint:</p> |




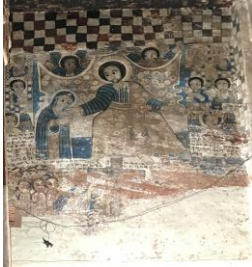
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| <p>Number fourteen</p> | <p>This painting is also about Adam and Eve. They are standing and necked, only covered their genital organs by tree leaves and they are facing to the right. The background of the upper part is painted in red, the middle in ocher and the lower part in green. There is caption that say, “አዳም ወ ሔዋን”. Meaning, “Adam and Eve”.</p> |  <p>title: Adam and Eve donor: unknown painter name: unknown year of paint:</p> |
| <p>Number fifteen:</p> | <p>This painting is located on upper part of the wall. Here God the father is depicted with Mary on the right and an angel on the left. The God the father is seated holding circular object with his left hand and rising his right hand and posing in the singe of cross. He is dressed yellow striped, with red tunic. Halo is around his head. His background is painted with dull dark green. White flower is on it. His figurine is framed inside a circle and the four beasts are around him. On his right is Mary posed in the manner of devotion pointing her left figure towards him. She is holding white handkerchief and dressed dark blue tunic. Halo is around her head. On his left is an angel holding sword and facing towards him. He is dressed gown decorated with flowers. His wings are starched upward. The painting is faded.</p> |  <p>title: God the Father donor: unknown painter name: unknown year of paint:</p> |
| <p>Number sixteen:</p> | <p>Unlike the other painting the painting number sixteen is unique in terms of its content. Secular content is depicted in here. The painting shows Emperor Yohannes IV marching to the right direction. A priest is seen carrying unknown object on his head, which is most probably the copy of the ark of the covenant. A number of people are from behind marching. From the priest back is seen the archbishop on horseback. He is holding hand cross and dressed dark green tunic. The horse is brown and decorated with different ornaments. Under the bishop there is caption that say, “አጤጤጤጤጤ አጥጥጥጥጥጥ” and “ደጃዝማች ማሩ” meaning, “our father Atnatewos and dejazmach Maru”. From behind is someone holding a big umbrella to shade the arch bishop. There is also another person on horseback and number of people marching with him holding spears. At the middle is Emperor Yohannes on horseback. He is dressed earthy kings’ dresses. Golden Crown is on his head. The horse is dark brown. Under him there is caption that say, “ገሥት ዮሐንስ” meaning “king Yohannes”. From his behind are seen three persons; one holding umbrella and the other two holding flags with three colors. Behind is someone on horseback. He is holding spear with his right hand. Sword is on his Waist. The horse is brown. Below the man on horseback there are four persons each holding spears and shields. The background is painted with light ocher paint.</p> |  <p>title: king Yohannes donor: unknown painter name: unknown year of paint:</p> |

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| <p>Number seventeenth:</p> | <p>On this painting Emperor Yohannes and other nobles are depicted. On the right part is depicted a man with the title <i>dejasmachs</i> seated on horseback and galloping. His right hand is holding spear s. On his waist is sword. He is dressed Gabon. His horse is brown, dressed decorated leather. On his upper left side is caption, which say "<i>Dejasmach Maru.</i>" "<i>ደጃዘማቸ ማሩ.</i>" At the middle is king Yohannes on horseback. Raising his right hand to throwing a spear. He is dressed ocher gown. On his waist is a sword. His horse is white decorated with different kind of ornaments. On the upper part is caption which says, "<i>ንጉሥ ዮሐንስ.</i>" meaning, "<i>king Yohannes.</i>" From his behind is a young man holding a spear with right hand and a shield with his left-hand and from his behind is Nebureed Tedla on horseback riding. He is raising his right hand to throw spear and holding another spear with his left hand. His horse is brown and decorated with different kind of ornaments. Here is also caption that say, "<i>nbureed Tedla.</i>" "<i>ንቡረድ ተደላ.</i>" There is also a young man holding spear with his right-hand and a shield with his left. All of them are facing right. A number of fighters are also depicted on the lower part. On the left there are warriors fighting with swords; at the middle they are fighting with firearms; tand on the left, they are seen marching forward to the left direction. They are holding spears on their shoulders. These paintings on the lower part are badly faded. They are visible only from their neck up. The upper part of the background is painted with red and the lower part is painted with tinted ocher paint.</p> |  <p>title: <i>king Yohannes</i> donor: unknown painter name: unknown year of paint:</p> |
| <p>Number eighteenth:</p> | <p>This painting is illustrated on the isolated pillar. On the upper elevation choir members are seen chanting. On the middle are choirs singing while holding standing sticks and cestrum. White turbans are on their heads. They are dressed white tunics crossed at the chest to the right and left. At the middle is caption which say, "<i>kahinat za Abreha we Atsbeha.</i>" "<i>ካህናት ዘ አብረሃ ወ አጽበሃ</i>" meaning, priests of Abreha and Atsbeha. On the lower part are depicted spiritual singers and drams banging. The persons on the right and left are holding cestrum on their right hand, moving standing sticks with their left hands. The background is painted with tinted ocher paint. Some part of the painting is damage and faded.</p> |  <p>title: <i>priests of Abreha we Atsbeha</i> donor: unknown painter name: unknown year of paint:</p> |
| <p>Number nineteenth:</p> | <p>This painting is depicted on the lower part of the isolated pillar. Here is painted Estefan being stoned by three persons. Estefan is laid on the ground with his eyes closed. He is almost necked. Three persons are from his behind holding big stones above their head. Two of them are standing facing to the right with half face. The person on the right is standing facing to the left. He is also posed with half face. This is to show that these persons are sinners. They are dressed similar dresses. Turbans are on their heads. On the middle of each are captions which say, "<i>zekeme wegrwo baeban leqedus estifanos.</i>" "<i>ዘከመ ወገርዎ በአዕባን</i>"</p> |  <p>title: <i>as St Estefen was stoned by stone.</i></p> |



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| | ለቅዱስ ለስጢፋኖስ” meaning, “as St Estefan was stoned.” The lower part of the painting is badly damaged and faded. | donor: unknown painter name: unknown year of paint: |
| Number twenty: | On this part of the wall, St Peter is depicted naked and crucifixion upside down. Two persons are standing, one on the right and the other on the left. The person on the right is standing and holding his face with his left hand and holding his dress with his right hand. He is dressed dark green striped with black. He is posed with half face. And turban is on his head, and the person on the left is standing and holding his face with his right hand and his cloth with his left hand. He is dressed dark green tunic. Turban is on his head. He is posed half face. On the upper part of the painting is caption which say, “ <i>phetiros zkme tsegle qulqulit.</i> ” “ጳጥሮስ ዘከመ ሰቀልዎ ቁልቁሊተ.” Meaning, “as they crucify peter upside down.” The background is painted tinted ochre. No. date and painter names. |  title: <i>as they crucify peter upside down</i> donor: unknown painter name: unknown year of paint: |
| Number twenty-one: | This shows Paul being beheaded with sword by someone. Paul is tied his arm and posed diagonal. He is beheaded. The beheaded of his head is seen upside down and blood is pouring from his head. The beheading person is from his behind holding sword with his right hand and Peter’s shoulder. A kind of turban is on his head. He is posed half faced. An caption written in geez is seen above Peter which say, “ <i>phawlos zkeme tmetre ksado bseif.</i> ” (ጳውሎስ ዘከመ ተመትረ ከሳዶ በሰይፍ.) Meaning, <i>as they beheaded pawl his head by sword.</i> The background is painted with tinted ochre. The painting is damaged and lost partially. |  title: <i>as they beheaded pawl his head by sword</i> donor: unknown painter name: unknown year of paint: |
| Number twenty-two: | This painting shows Jacob, son of Zebdewos, being stoned. Jacob is on the ground laid down. His eyes are closed. Above him are people holding big stones to stone him. They are facing to each other and all are depicted half faced. Turban are on their heads. The stones with the person at the right side is faded. Geez caption is on the background which say, “ <i>zekeme wegerwo beaeban le yaekob weldezbewos.</i> ” (ዘከመ ወገርዎ በአዕባን ለያዕቆብ ወልደዘበዴዎስ) meaning, “as they stoned Jacob by stone.” “The color of the background is lost and faded. |  title: <i>as they stoned Jacob by stone</i> donor: unknown painter name: unknown year of paint: |
| Number twenty-three | This painting shows God the father seated and stretching his hand. At the center, God the father is seated, who is dressed tinted red decorated with flowers. Halo is around his head. On his right is Mary in the form of devotion stretching her hands towards of God the father. She is dressed dark green striped with black line. Halo is around her head. Two angels are on his right and left holding curtain. On his further right four senior citizens are depicted facing towards the God the father. Below them is an Angel with wings depicted from the chest up. Below him is a geez caption which some part of it is lost. The visible one is read as fallow: “ <i>nu habebe burukanu le abuye tresu mengste emayat zdelw lekmu enmkidmeyfter alem esme rhibku we ablaekumuni</i> ” |  title: doomsday donor: unknown |




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| <p><i>tsemaeku asteykumuni areqku we albeskumni negde konku we ahderkumni deweyku we ha...ku mu. Wste esat.</i>” (ገዑ ኅቤየ ቡሩካኑ ለአቡየ ትረሱ መንግስተ ሰማያት ዘድልው ለከሙ እምቅድመ የትፈጠር ዓለም እሰመ ርህብኩ ወ ኢየባላአኩምኒ ጸማአኩ ወአሰተየኩመኒ አረቅኩ ወአልበስኩምኒ ነግደ ኮነኩ ወአህደርኩመኒ ደውኩ ወ...ላከመ:: ውሰተ አሳት...::) below the inscription are depicted mass of people facing towards of God the father. Most probably they are the saints. Most of the painting is lost and faded. Below God the father at the center is cross. On the right of the cross are people bowing; however, most part is lost, which is not visible. On the right upper part of the God, the father is four young and senior citizens depicted from the chest up facing towards Him. Below them is an angel holding caption, which is read as follow: “<i>we ameha mtsia welde egale emehyaw sbhatihu ameha.</i>” (ወአሜሃ መጽአ ወልደ አገለ እመ ሕያው ስብሐቲህ አሜሃ::) meanings, then, God the Son came <i>because his praise is eternal that time</i>. Below are seen people with their heads, without the rest of their body, who are most probably the sinners. On the right is an isolated pillar and on the pillar is an angel banging a dram with stick</p> | <p>painter name: unknown year of paint:</p> |
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Annex II painting of the eastern elevation

| Number | Description | Pictures |
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| <p>Number one:</p> | <p>This painting is located on the upper wall of the sanctuary of Mikael gate. Over all the painting is about Doomsday. God the Son is seated, and stretching his hands leaned to the left. He is dressed inner, dark green and outer, loose earthy garment decorated with flowers. Halo is around his head. On his right and left, down his nee are depicted Angels holding inscriptions. The inscription with the Angele at the right is damaged and the caption with Angele at the right is also lot except one line, which is read as follow: “niu ha... tresu... “(ገዑ ኅ... ትረሱ...) meaning, “come to me to inherit...” On his right is St Mary leaned towards of his hand. She is dressed in red garment and an outer dark green striped with black line tunic. Halo is around her head. On the top right and left of God the Son is depicted Angels holding curtain that suspend done to the ground. Further on the God the Son right is people depicted. They are seated on a chair facing towards of God the Son and pointing their fingers towards of him. Most part of the painting is damaged.</p> |  <p>title: doomsday donor: unknown painter name: unknown year of paint:</p> |
| <p>Number two:</p> | <p>This painting is also found above the gate to the sanctuary of Gabriel. This wall painting is badly damaged. It is even hard to identify who is depicted; however, it seems somebody is on white horseback. Someone is also seen in front of the horse, most probably a woman. There are also people from his behind. The painting is adhered on new garment.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |



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| <p>Number three:</p> | <p>This painting is located on the window of the sanctuary of Gabriel. The window frame is decorated with climbing trees. At the right and left of the window are Angels holding swords. The Angele on the right is dressed red garment inside the tunic and yellow tunic. And the Angele at the left is dressed yellow garment from inside and red tunic from outside.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number four</p> | <p>This painting is located at the right part of the narthex. On this part two content are depicted; one Mary waving cotton and the Birth of Christ. On the left part Mary is depicted waving with her right hand and holding the cotton with her left hand. She is dressed red garment from inside and blue tunic from outside. Halo is around her head. Angele is on her upper left hand stretching his hand to her, who is dressed like. His wings are stretched.</p> <p>On the right is Mary depicted holding her child. She is dressed red garment from inside and blue tunic from outside. Halo is around her head. She is leaned towards of her child and the child is looking towards of her. The Child, in swaddling clothes, lying in a manger. From her behind is Joseph is depicted looking towards of Mary and on her left is Solome seated holding her hand together. On the upper left side of Joseph is caption which can be read as follow. “Yosef” (ዮሴፍ) and on the left said of Mary is also inscriptions which can be read as follow. “Zkeme weledeto le egzia kulu” (ዘክመ ወለደቶ ለእግዚአ ኩሉ) meaning, “as she has given birth to the Lord of all.” On the left side of Solome is also caption of her name, which is written as follow. “Slome” (ሰሎሜ) In addition, a donkey on the left and an ox on the right are depicted breathing to the infant Christ. The donkey is ashy and the ox is earthy color. The three Wise Men from the East, the Magi are depicted on the bottom right side of Mary. They are holding the gift to brought to the child. Golden crown is on their heads and on the left side are depicted children playing hockey. On the upper right part of the Wise men is captions which can be read as follow. “Esme amtsiu lotu seba segel amha werqe itane we sihne.” (እስመ አምጽኑ ሎቱ ሰብአ ሰገል አምሳ ወርቅ አጣነ ወ ሰሂነ) ”</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number five</p> | <p>On this part St George is depicted on white horseback rising up his right hand to throw spear. He is holding another spear with his left hand also. He is dressed green rason and red garment decorated with flowers. Halo is around his head. On the ground is dragon with horn pierced with spear thrown from St Georg. The dragon is blue. On the left of St George is maiden seated on a tree and holding the branch. The tree is four branched. She is dressed white stripped with black. The back ground is painted with dark green except the upper and lower part, which is painted ocher paint. On upper left side is captions written in geez, which is read as follow. “Qidus georghis zekeme qetelo lederagon we adehana lebritawit welet emderagon.” (ቅዱስ ጊዮርጊስ ዘክመ ዊደራገወን ወ ላድክላን ሌብሪታወይት ዊላት ማደራገወን) ”</p> |  <p>title: St Georg as he has killed dragon and saved maiden from dragon</p> |

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| | <i>ቀተሎ ለደራጎን ወአድጎና ለቢሩታዊት ወለት እምነ ደራጎን</i> meaning, “ <i>St Georg as he has killed dragon and saved maiden from dragon.</i> ” | donor: unknown painter name: unknown year of paint: |
| Number six: | On this lower part of the wall equestrians are depicted. They are three on horsebacks, galloping. Three of them are raising their right hand up throwing spears the horse at the left and at the right is white whereas the horse at the middle is brown. Decorated with different kind of decorations. The upper part is painted ocher whereas the lower part is painted dark green color. Below the middle horse is caption written in geez which say “ <i>lij Hailesillasie.</i> ” (<i>ለጊ ዳይላሰሳይ</i>) |  title: Lij Hailesilasse donor: unknown painter name: unknown year of paint: |
| number seven | This painting is located on the upper part of the gate at the narthex. Trinity is depicted at the middle with the four beasts around them and the twenty-four priests on the right and on the left. The Trinity is depicted in the form of senior citizens who are dressed dark green garment from inside and red tunic from outside. Halo is around their heads. They are framed in a circle. The background is painted with dark green. On their upper part is caption written in geez and it is read as follow. “ <i>Siele silus qidus</i> ” (<i>ሥዕል ሥላሴ ቅዱስ</i>) meaning, “ <i>painting of trinity</i> ” There are also six priests of the heaven on the right and on the left part of the Trinity. They are holding hand crosses and sensor. On Each of their heads is crown. They are dressed tunic. Wing is on their back. Some part of the painting on the right and left is faded. The upper and lower part of the painting is decorated with rectangular boxes. |  title: Trinity donor: unknown painter name: unknown year of paint: |
| Number eight: | This painting is located on the eastern wall of the narthex. Christ is depicted on the cross. He is leaned to the left. Earthy garment is on his waist. On his right and left, below of his hand, are Angels blocking the blood dropping from the nailed finger. The two robbers are also crucified; one, on his right and the other on his left. Garment is on their waists. Mary is on his right standing and crossing her hand who is dressed red garment from inside and blue from outside. She is looking up towards of Christ. Halo is around her head. On his left is John standing and looking up towards of Christ. He is crossing his hands dressed red garment decorated with flowers. On the right part near to Mary a person on horseback piercing Jesus’s waist. He is posed half faced and turban is on his head. He is dressed light green stripped with black. On the left is also a person standing and holding stick. Turban is on his head. Disc is on the ground most probably skull. In this painting there is a geez caption, which is read as follow. “ <i>Zkeme bekeyet dengl.</i> ” (<i>ዘክመ በከየት ድንግል</i>) meaning, “ <i>as she the virgin has cried</i> ” |  title: as she virgin has cried donor: unknown painter name: unknown year of paint: |
| Number ten: | On this part Jesus Christ is depicted crowned and carrying the cross. On the left hand is depicted Jesus being nailed by soldiers. Jesus is raised his hands turning his hand out opened. He is dressed loose garment. Two of the soldiers at the bottom part are holding Jesus garment and the other two on the upper part are hammering Christ’s head with hammer. The soldiers are posed half faced. Turban is on their heads. On the upper left side is an caption written in geez. It is read as follow. “ <i>Zekeme korewo riso behilet.</i> ” (<i>ዘክመ ኮርዕዎ ርእሶ በህለት</i>) meaning “ <i>as they hammered him by chisel</i> ” On the right part of the painting Jesus is depicted carrying the cross. He is dressed in long sleeved dark |  title: as they hammered him by chisel donor: unknown painter name: unknown year of paint: |

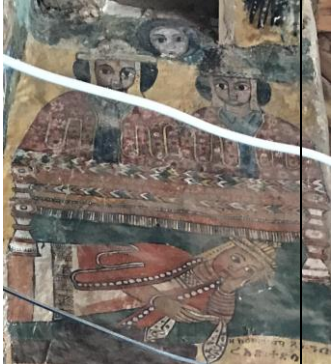



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| | green garment along with outer earthy garment gathered around the waist. Someone is in front of him helping. Behind of him are soldiers holding sticks. They are dressed in tight garments and turban is on their heads. They are posed half faced. | |
| Number eleven: | The virgin Mary is depicted with her infant child. She is seated on couch and holding her child resting on her lap. She is dressed in long sleeved tight red garment along with outer decorated blue tunic that is suspended from her head along to her feet. She is holding white handkerchief. Halo is around her head. The infant Chris is on her lap. He is dressed in tight long-sleeved garment along outer white, red striped gown. He is holding holy book with his left hand and rising up his right hand pointing out his index and middle out. On the upper middle part is captions written in geez; it is read as, “ <i>misle fikur welda</i> ” (ምስለ ፍቅር ወልዳ) meaning “with her beloved son.” Two angels are on the right and left upper holding swords. They are dressed in tight long-sleeved garment. The Angeles’ wing of the right and the left is stretched towards of Mary. On the upper right is captions that could be read as; “ <i>qidus Mikael</i> ” (ቅዱስ ማካኤል) it is translated as “ <i>St Mikael</i> ” there is also captions on the upper right part of the painting. This is read as; “ <i>qidus gabriel</i> ” (ቅዱስ ገብርኤል) meaning “ <i>St Gabriel</i> ” the back ground is painted with ocher. The upper and the lower part is decorated with diamond and bracket like patterns. |  <p>title: with her beloved son donor: miss zhumber painter name: unknown year of paint:</p> |
| Number twelve: | This part of the painting shows people in devotion. At the upper part of the painting is a woman laid on the ground in the manner of devotion. She is holding her face with her left hand and beads with right hand. She is dressed in tight red long-sleeved garment. In front of her is a black woman standing. From her behind are people depicted from the chest up. Below, at the lower left part is depicted a man laid on the ground and holding his head up with his right hand. He is holding beads with his left hand. He is dressed in tight long-sleeved garment along with outer white tunic. Sword is on his waist. His servant is depicted in front of him expelling flies. At the middle is lectern with a book on. On the right part of the painting is a woman standing laid her hand on her chest in the sign of cross? She is dressed in tight long-sleeved white garment along with outer Ethiopian traditional black cloth decorated along the edge. Three women are from her behind standing. Three of them laying their right hands on their chest. At the middle upper part of the painting is captions written in geez. It is read as; “ <i>zkeme temahtsenet weizero zhember.</i> ” (ዘካም ተላላጊነት ወይዘሮ ዝምብር) meaning, “as miss zhember has devoted” There is also inscriptions at the middle of the lower part of the painting; however, it is not read most of its part is damaged. |  <p>title: as miss zhember has devoted donor: zhumber herself painter name: unknown year of paint:</p> |


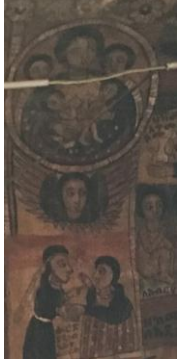
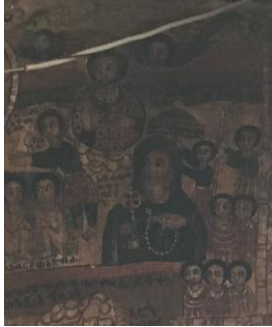
Annex III Wall Paintings of the Southern Façades

| Numbers | Descriptions | Pictures |
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| <p>Number one:</p> | <p>On the upper middle of this painting is depicted Cherub. Below are two kings seated on the bed most probably the kings Abreha and Atsbeha. Crown is on their heads. Both are dressed red church dress decorated with flower and veil is suspended down from their head. On the lower part of this painting is Nibure ed Tedla depicted. He is laid on the ground holding his head with his left hand and handkerchief with his right hand. Crown is on his head. He is dressed in tight long-sleeved white garment along with outer Ethiopian traditional red cloth decorated along the edge. On the right lower part is captions written in geez. It is read as; “<i>zekeme temahtsene nibured tedla</i>” (ዘከመ ተማህጸኑ ንቡረ ሊድ ተድላ) meaning, “<i>as Nibured has devoted</i>”</p> |  <p>title: as Nibured has devoted donor: Nibure ed Tedla painter name: unknown year of paint:</p> |
| <p>Number two</p> | <p>Joseph and Nikodemus bringing down from the cross. Jesus is necked except stripe of cloth on his waist. Joseph and Nikodemus are holding his waist and nee stepping down of the ladder. On the left upper part is caption, read as: “<i>zekeme awredwo emeskelu</i>” (ዘከመ አውረድዎ ለመስቀሉ) meaning, “<i>as they have descending him down</i>” On the right, joseph and Nikodemus are preparing to undertake him. Mary at the rare crying. On the upper middle part is captions written in geez which is read as: “<i>zekeme haqfto emu</i>” (ዘከመ ሐቀፈቶ ለሙ) meaning, “<i>as she has hugged him.</i>” At the lower right part are the five virgins covered with garment. The background is painted with ocher paint.</p> |  <p>title: as they have descending him down” down Jesus from the cross donor: unknown painter name: unknown year of paint:</p> |
| <p>Number three:</p> | <p>Joseph and Nikodemus are undertaking Jesus. He is laid on the ground covered by white garment being held by joseph and Nikodemus. Mary is at the rare covering her face with both of her hands. She is dressed in tight long sleeved red along with outer blue garments. Halo is around her head. There are plants on the right and left part of the painting and the background is painting ocher paint. On the upper part iscaptions written in geez, which is read as, “<i>zekeme genezwo Yosef we niqodimos</i>” (ዘከመ ንኅዝዎ ዮሴፍ ወ ኑቆዲሞስ) meaning, “<i>as joseph and Nikodemus has undertaken him</i>”</p> |  <p>title: as joseph and Nikodemus has undertaken him undertaking Jesus donor: unknown painter name: unknown year of paint:</p> |
| <p>Number four:</p> | <p>Joseph and Nikodemus are burying Jesus. He is covered with white garment and joseph and Nikodemus are dressed in a tight long sleeved dark green garment gathered around the waist. caption is on the upper part of the painting written in geez, which is read as “<i>zekeme qeberwo Yosefwe niqodimos</i>” (ዘከመ ቀበርዎ ዮሴፍ ወ ኑቆዲሞስ) meaning, “<i>as joseph and Nikodemus has buried him</i>” at the center of the lower part of the grave is a key locked and the grave keepers are at the lower parts of the</p> |  |





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| | <p>painting some of them are holding their faces and their jaws. Turban is on their head. They are dressed in a tight long-sleeved gown.</p> | <p>title: as joseph and Nikodemus has buried him donor: unknown painter name: unknown year of paint:</p> |
| <p>Number five:</p> | <p>On this part cherub is at the upper part of the painting. On the left is a man standing and holding handkerchief. He is dressed dark green garment. He is facing towards of right. On the right is a woman standing with her hand crossed on her chest. She is dressed red and gathered around her waist. She is posed facing towards of left. On the lower part is howl covered with carton.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number six: a</p> | <p>Woman is seated nursing two children on the right and the other on the left. She is dressed loose garment. From her rare are people one on her right and the other on her left hand dressed white garment. They are framed in circle. A Cherub is under circle framed painting. On the lower part are women in discussion. They are posed half faced.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number seven:</p> | <p>On the upper right and left part are cherubs and below at the middle is God the father on a cloud seated holding the glob with his left hand and placing his right hand in the sign of cross. He is dress in a tight long sleeved dark green garment along with outer decorated with sun flower tunic. Halo is around his head. Down on the lower left part are Abreha and Atsbeha seating necked being baptized by John. He is holding a Jar and pouring the water on to Abreha and Atsbeha. He is dressed in a tight long sleeved dark green sweeter with red skirt from his waist that suspend down to his knee. Stick is on John's chest with cross at the top. On the upper and lower part of Abreha and Atsbeha is captions, which can be read as: "zekeme atmeqomu Yohannes le Abreha we Atsbeha" (ዘኸመ ኣጥመቆሙ ዮሐንስ ለአበርሃ ወ አጵ-በሃ) meaning, "as john has baptized Abreha we Atsbeha" on the right part of this</p> |  <p>title: as john has baptized Abreha we Atsbeha donor: unknown</p> |





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| | <p>painting is depicted <i>aba selama</i> dressed black vestment and holding, hand cross with his right hand and beads with left hand. He is posed facing towards of the Abreha and Atsbeha. From his behind are servants depicted, the one holding big umbrella and the other, crozier. Two persons are seated; they are dressed in a white garment striped with black and red. caption is on the right side of Aba Selama the bishop; which is read as “<i>Abune Selama ksate birhan</i>” (አቡነ ሰላማ ከሣቴ ብርሃን) meaning: “<i>our father Selam who opens light</i>” the background is painted dulled ocher paint.</p> | <p>painter name: unknown year of paint:</p> |
| <p>Number eight:</p> | <p>On this part group of choirs is chanting being on the right and on the left. They are holding standing sticks with their left hand and sistrum with their right hand. They are dressed in green tight long-sleeved garments; along with outer Ethiopian garments gathered around their waist and turban is on their head. A person is in the middle banging a dram. Inscription is on the right part of the painting; however, it is not read clearly.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number nine:</p> | <p>On this part, a person is depicted playing harp. He is seated on a chair resting the harp on his lap. He is dressed in long sleeved dark green garment; along with outer sunflower decorated tunic. Crown is on his head and a veil is suspended down to his back from his head. From his rare is a man seated facing towards of the person playing the harp. Inscription above his head; however, it is damaged and faded and there is caption on the right part of the painting which can be read as “<i>bebegnahu</i>” (በበገኖህ) means: “<i>by his harp</i>”</p> |  <p>title: by his harp donor: unknown painter name: unknown year of paint:</p> |
| <p>Number ten:</p> | <p>On this part three content are depicted: one, on the left, Herodus is seated drinking <i>Tej</i>,” he is dressed in dark green long-sleeved garment; along with outer sunflower decorated tunic. Crown is on his head. He is posed half face. Around him are also people half faced drinking “<i>Tej</i>”; on the right is, john beheaded by a solder with sword. The solder is holding sword with his right hand hanging and the head of john with his left hand. He is dressed white, black striped dress and trouser. John is dressed white, black striped garment that round down from his armpit and above his shoulder and in front of him is welete Hrodiada Holding a dish with the beheaded head of john in. she is dressed in green garment tied with a stripe of cloth around her waist. caption is on the right part of the painting; written in geez, which is read as “<i>zekeme temetre Yohanes</i>” (ዘከሙ ተመጥረ ዮሐንስ) meaning: <i>as John is beheaded</i>” there is also captions on the lower part of the painting, which can be read as “<i>zekeme temetewet weleteherodiada rise Yohannes be tsahil</i>” (ዘከሙ ተመጠወት ወለተ ሄሮድያዳ ርእሱ ዮሐንስ በጻሕለ) meaning <i>as the daughter of Herodiada has received the head of John with dish</i>. And on the upper part, is the head of john flaying. He is looking towards of the right. caption is above his head written in geez; which says, “<i>zekeme awtsiat knife</i>” (ዘከሙ አውጽአት ክንፈ) meaning: “<i>as his head got wing</i>”</p> |  <p>title: as John is beheaded donor: unknown painter name: unknown year of paint:</p> |




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| <p>Number eleven:</p> | <p>Muse is depicted stretching up his hand and receiving the ten commandments from hand in the cloud. His right leg is on the ladder and his left leg on the ground. He is dressed in trouser along with outer garments that suspended down to his knee tied around his waist. caption is on the left part of the painting written in geez which can be read as “<i>Muse we Aron</i>” (ሙሴ ወ አሮን) meaning: “<i>Muse and Aron</i>” On the right is Aron dressed red vestment. He is holding censer with his right hand and tree with his left. Crown is on his head. on the right is caption of the priest Aron, which say: “<i>Aron kahin</i>” (አሮን ካህን) meaning: “<i>Aron the priest</i>” there is also captions at the upper part of the painting written in geez; which is read as “<i>zekeme temetewe tsilate bede egziene</i>” (ዘኸመ ተመጠው ጽላተ በአደ እግዚአብ) meaning: “<i>as Moss has received the covenant from Lord</i>”</p> |  <p>title: Musse and Aron donor: unknown painter name: unknown year of paint:</p> |
| <p>Number twelve:</p> | <p>Three people; Abreham, Yshaq and Yaqob are depicted in a manner of senior citizens and each holding handkerchiefs. They are dressed in tight dark green garment; along, with sunflower decorated tunic. Three of them are facing towards right. Their name is on each of their side; written, in geez. The caption is read as follow: “<i>Abreha m, Yshaq and Yaeqob</i>” (አብርሃም፣ይሱአቅ ወ ያዕቆብ) meaning: “<i>Abraham, Isaac and Jacob</i>”</p> |  <p>title: Abrham, Ysihaq and Jacob donor: unknown painter name: unknown year of paint:</p> |
| <p>Number thirteen:</p> | <p>On this part, people are depicted on horseback; however, most part of the painting is loss and faded.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number fourteenth:</p> | <p>On this part, a person is depicted playing harp. He is seated on a chair resting the harp on his lap. He is dressed in long sleeved dark green garment; along with, an outer ocher, red and black striped tunic. Crown is on his head and a veil is suspended down to his back from his head. From his rare is a man holding umbrella facing towards of the person playing the harp. caption is above his head as “<i>Ezra neby bemesenqohu</i>” (ኢዘራ ኑቤ በመሰንቆሁ) meaning: “<i>Ezra the prophet by his Mesenqo</i>” down at the lower part is a house depicted empty.</p> |  <p>title: Ezra the prophet by his Mesenqo donor: unknown painter name: unknown year of paint:</p> |


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| <p>Number fifteen:</p> | <p>On this part Jesus is depicted holding standing stick with his left hand and rising up his right hand and pointing two fingers out. Cross is on the upper part of the stick and down to the cross is also flag with three parts. He is dressed in tight long-sleeved garment; along, with an outer sunflower decorated red tunic. Adam is on his right necked and seated holding Jesus tunic. His name is written on the rare of Adam. It is read as “adam” (አዲም) Eve is also on Jesus left seated and necked holding as Adam Jesus garment. Her name is written in geez on her rare: it is read as “hewan” (ኤዋን) three cherubs are above Adam and three Cherubs also above Eve. There is one cherub above Christ. On the right and left are captions written in geez; which is read as “siele tinsaehu” (ሥዕል ትንሣኤሁ) meaning, “a picture of his resurrection” on the lower part of this painting is the devil tied his hands and feet with chain. He is black with his mouth opened; horn is on his head and big ear below. He is placed in a circle frame and rounded with people from the neck up.</p> |  <p>title: resurrection donor: unknown painter name: unknown year of paint:</p> |
| <p>Number sixteen:</p> | <p>On this part the local saint Abune Gebremenfeskidus standing rising up both hands posing in the sine of cross. Halo is around his head. He is dressed in white garment with a chain around his neck and waist. Beast in the form of a bird is in front of him to blind his eye. Lions and tigers are on his left and right. caption is on the background written in geez. Which can read as “kidus we kibur abune Gebremenfeskidus kokebe nihsa” (ቅዱስ ወ ክቡር አቡነ ንብረመንፈስ ቅዱስ ኮኮበ ንሒሳ) meaning, “St and respected our father Gebremenfeskidus star of nihisa” there is inscriptions on the right part of the painting, but it is not read. It is loss.</p> |  <p>title: Abune Gebremenfesqidus donor: unknown painter name: unknown year of paint:</p> |
| <p>Number seventeen:</p> | <p>On this part, Abune Teklehaimanot is depicted standing in divotion with one leg; holding cross with his right hand and beads with left hand. Both of his hands are raised up. Six wings are on his back. He is dressed in tight long sleeved dark green garment; along, with an outer ocher red striped tunic. Rope like chain is around neck and around his weist. The lower part of the background is dark green green and the upper ocher paint. On the left part of the bacground is caption written geez which is read as “kibur we kidus abune Teklehaimanot emaelaf hiruy” (ክቡር ወ ቅዱስ አቡነ ተክለጊዬማኖት አምአአላፍ ሕሩይ) meaning, “respected and Saint our father Teklehaymanot selected out of all”</p> |  <p>title: Abun Teklehaymanot donor: unknown painter name: unknown year of paint:</p> |
| <p>Number eighteen:</p> | <p>local saint Abune Ewostatewos is standing in divotion: he is holding hand cross with his right hand and beads with left hand. He is dressed in tight long sleeved dark green garment; along, with light red an outer tunic. Halo is around his head and veil is suspended down from his head. the upper background is painted dark green and the lower part is painted ocher paint.caption is on the right written in geez: which is read as qidus we bitsue Abune Ewostatewos tse...(ቅዱስ ወ ብጹእ አቡነ ኤዎስጣጢዎስ) meaning, “holy and graced our father Ewostatewos”</p> |  |



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| | | <p>title: Abune Ewostatewos donor: unknown painter name: unknown year of paint:</p> |
| Number nineteen: | <p>This painting is located on the get wall to” kidst” from the nerthex. Gigar is tied up his hand in the back. He is necked except stiripe of cloth on his weist. A solder is infront of the saint holding the rope with his left and sword on his right hand. He is drsded striped cloth gathered around his weist. Turban is on his head. he is posed half faced. The background is painted ocher paint. On the top of the background is caption written in geez, which is read as “<i>zekeme teasre gigar</i>”(ዘኸመ ተአሰረ ጊጋር): meaning, “<i>as Gigar is taid up</i>”</p> |  <p>title: Gigar is tied up donor: unknown painter name: unknown year of paint:</p> |
| Number twenty: | <p>On this part Gigar is being beheaded by Soldier with sword. Gigar is tied up his hand in the back with a rope. He is necked except stripe of cloth around his weist. Blood is flowing out from his neck. His head is on the ground laid upside down. The solder is at rare of Gigar holding swored with his right hand. He is posed half faced; dressed striped cloth and turban on his head. the back ground is painted with ocher paint. caption is on the upper right and left part of the painting, which can be read as “<i>zekeme temetre Gigar beseif</i>” (ዘኸመ ተመትረ ጊጋር በሰይፍ) meaning, “<i>as Gigar is beheaded with sword</i>”</p> |  <p>title: Gigar is beheaded donor: unknown painter name: unknown year of paint:</p> |
| Number twenty one: | <p>Gigar on horseback slaping Herodus. Gigar is on a white horsback slapin Herodus who is on a horseback near him. Gigar is dressed in tight long sleeved dark green garment; along, with an outer white black striped tunic. Herodus is seen from his head up crown is on his head. both are facing right. the upper part of the background is painted with red and the lower part ocher paint. captions is on the left side of the upper part of the painting: it is read as “<i>zekeme tsefio Gigar le herodus</i>” (ዘኸመ ጸፍኖ ጊጋር ለኃረርክ) meaning, “<i>as Gigar has slaped Herodus</i>”</p> |  <p>title: Gigar slapping Herodus donor: unknown painter name: unknown year of paint:</p> |




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| <p>Number twenty two:</p> | <p>This painting is located at the lower part of the wall. Herodus is seated on a chair. Snack is on his neck beig killed by a man at the front with pinsa. Herodus is dressed in tight long sleeved dark garment; along, with an outer white black striped tunic. Turban is on his head; he is posed half faced. People are on the ground died with their half face upward. On the front of herodus are three persons seated they are posed with half face. The upper part of the painting is painted with white down red and at the lower part is painted ocher. There is captions on the upper right part of the wall: which read as “<i>zekeme qetelomu temen le ayhud kewino bekisade Herodus</i>”(ዘከመ ቀተሎሙ ተመን ለ አይሁድ ከዋኖ በከሳደ ሄሮድስ) meaning, “<i>as snack has killed jew being in the neck of herodus</i>”</p> |  <p>title: as snack has killed jew being in the neck of herodus donor: unknown painter name: unknown year of paint:</p> |
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Annex IV. Wall Paintings of the Western Facades

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| <p>Number one:</p> | <p>On this wall painting is equestrian saint on white horseback. He is dressed in dark green gown; along with red striped ocher tunic. He is killing giant serpent with sword. The serpent is rounded around the horseback.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number two:</p> | <p>On this part a number of contents are depicted: on the left upper side of the painting are people on horseback galloping, next to the people on the horseback are trinity depicted in the image of old people. They are dressed in red tunic. They are framed in a circle. at the middle is unknown saint on horseback depicted. He is dressed in long tight green garment; along, with an outer red vestment decorated with yellow bold line at the edge. Crown is on his head. He is holding spear. The horse he is on whit; dressed and decorated, with different ornaments. In front of him is Abun Abib standing in devotion. He is leaned towards of the saints. caption is above him written in geez. It is read as “<i>zekeme segede abune Abib</i>” (ዘከመ ሰጊደ አቡነ አቢብ) meanings, “<i>as our father Abib has bowed</i>” at the lower part Infront of the saint in the horseback are people bowing to the saint on the horseback. They are all necked. At the upper of these bowing is captions which can be read as “<i>zekeme segedu nebsat le qi...</i>” (ዘከመ ሰጊዱ ነብሳት ለ ቅ...) meanings, “<i>as souls has bowed to ho...</i>” on the lower part are the people galloping on horseback; they are holding all spears with their right hands. Three of them are dressed in vestments decorated with dots at the edge. The equestrians are</p> |  <p>title: Abune Aboli donor: unknown painter name: unknown year of paint:</p> |




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| | galloping towards of the right. The two horses at the back are earthy colors whereas the horse at the front is black. | |
| Number Three | At the middle of one and four is depicted a saint on black horseback holding a spear and aiming at a person who is falling on the ground; another spear is on his left hand. The saint is dressed in ocher striped with red garment; along, with an outer ocher tunic. The saddle of the horse is decorated with different kinds of ornaments. The person fallen on the ground is posed in half face, facing to the ground. He is dressed dull green garments; which gathered around the waist. On the background there are four flowers depicted: three on the upper part of the painting and one on the lower part of the painting. Cherub is depicted on the lower part of the painting on the above beam part of the gate. caption is under the horse which can be read as “ <i>siel ...zekeme qetelo le ulianos</i> ” (ሥዕል... ዘከመ ቀተሎ ለ ሁሊያኖስ) meaning, “ <i>picture of... as he has killed Ulianos</i> ” |  <p>title: picture of... as he has killed Ulianos donor: unknown painter name: unknown year of paint:</p> |
| Number four: | On this above the beams of the western wall St Minas is depicted on white horseback holding a spear and aiming at an idol ox, which is falling on the ground stab with a spear; another spear is on his left hand. He is dressed in dark green striped with black garment; along, with an outer red tunic. Two of the hors legs in the back are stepped on the ground and two at the front leg are lifted up. The saddle of the horse is decorated with different kinds of ornaments. The idol ox fallen on the ground is posed facing to the right. On the background there are two flowers depicted on the upper part of the painting. Cherub is depicted on the lower part of the painting right on the above beam part of the gate. The background of the horse is painted with dark green and the rest is painted with ocher paints. On the lower part of the back ground there is captions written geez: it is read as “ <i>siele qidus minas hiruy zekeme qetelo le lahme taot</i> ” (ሥዕል ቅዱስ ሚናስ ሕሩይ፤ ዘከመ ቀተሎ ለላሕመ ጣዖት) meaning, “ <i>picture of holy Minas the selected: as he has killed the idol ox</i> ” |  <p>title: picture of holy Minas the selected donor: unknown painter name: unknown year of paint:</p> |
| Number five: | On this part, the equestrian saint St Fasiledes is depicted on black horseback holding a spear and aiming at people in the ground; another spear is on his left hand. He is dressed in ocher green striped garment; along, with an outer ocher tunic. Two of the hors legs in the back are stepped on the ground and two at the front leg are lifted up. The saddle of the horse is decorated with different kinds of ornaments. The people are posed side faced. On the background there are two flowers depicted on the upper right and left part of the painting. Cherub is depicted on the lower part of the painting right on the above beam part of the gate. The background is painted with ocher paints. On the lower left part of the back ground there is captions written geez: it is read as “ <i>siel qidus Fasiledes</i> ” (ሥዕል ቅዱስ ፋሲሊደስ) meaning, “ <i>picture of holy Fasiledes</i> ” |  <p>title: picture of holy Fasiledes donor: unknown painter name: unknown year of paint:</p> |


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| <p>Number six:</p> | <p>On this part, the equestrian saint St Wdewos is depicted on brown horseback holding a spear and aiming at a creature half man half lion and half snake in the ground and with his left-hand rein. He is dressed in long sleeved dark green garment; along, with an outer red tunic gathered around his waist and suspended from his behind. Two of the horse legs in the back are stepped on the ground and two at the front leg are lifted up. The saddle of the horse is decorated with different kinds of ornaments. The half man, half lion and tail snake is on the ground holding spear aiming at St Wdewos. The creature, from the chest up is human and from the chest down, it is a lion. Its tail is forked in to two: the end of the tail is snake head. On the background there are four flowers depicted on the upper right and left part of the painting. The upper part of the background is painted with ochre paints and the lower part is painted with dark green. On the lower left part of the background there is a caption written in geez: it is read as “<i>siel qidus wdewos</i>” (ሥዕል ቅዱስ ወደዎስ) meaning, “<i>picture of holy Wdewos</i>”</p> |  <p>title: picture of holy Wdewos donor: unknown painter name: unknown year of paint:</p> |
| <p>Number seven:</p> | <p>This wall painting is located at the right part of the gate of the interior western façade. Abeto Gebrehiwet is depicted on white horseback galloping: sword is in his right hand and spear in his left hand. He is dressed in long sleeved white garment; along, with an outer red vestment. The horse saddle is decorated with different kind of ornaments. The background is painted ochre and red stripes. On the top right of the painting is a name; which is read as “<i>Abeto Gebrehiwet</i>” (አቡጽ ገብረካወት)</p> |  <p>title: Abeto Gebrehiwet donor: unknown painter name: unknown year of paint:</p> |
| <p>number eight:</p> | <p>On this part, a figure of unknown name is depicted on brown horseback holding a spear; rising his hand up as if to throw; and another spear and shield is on his left hand. He is dressed in white garment; along, with an outer green vestment. Two of the horse legs in the back are stepped on the ground and two at the front leg are lifted up. The saddle of the horse is decorated with different kinds of ornaments. The background is painted with ochre and red stripe paints. On the lower left part of the background is a name some part of it is lost, written in geez: which is read as “<i>nibure id ...</i>” (ንቡረ አድ ...)</p> |  <p>title: Nibureed donor: unknown painter name: unknown year of paint:</p> |
| <p>Number nine:</p> | <p>On this part of the wall Lij Araya is depicted on brown horseback galloping: sword is in his right hand; spear and shield are also in his left hand. He is dressed in long sleeved white garment; along, with an outer dark green vestment. The horse saddle is decorated with different kind of ornaments. The background is painted ochre and red captions. On the top right of the painting is a name; which is read as “<i>Lij Araya</i>” (ሊጅ አረሳ)</p> |  <p>title: Lij Araya donor: unknown painter name: unknown</p> |


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| <p>Number ten:</p> | <p>On this part, nibure ed Tedla is depicted on ocher horseback holding a spear with his right hand and another spear and shield with his left hand; sword is also on his Wiest he is dressed in white garment; along, with an outer green vestment. Two of the hors legs in the back are stepped on the ground and two at the front leg are lifted up. The saddle of the horse is decorated with different kinds of ornaments. A person is fallen on the ground with his eye closed and his hand stretched. The background of the horse is painted with dark green and red paints. On the upper right part of the back ground is a name written in geez: which is read as “<i>nibure id Tedla</i>” (ንቡረ ኣዲ ተደላ)</p> | <p>year of paint:</p>  <p>title: Nibure ed Tedla donor: unknown painter name: unknown year of paint:</p> |
| <p>Number eleven:</p> | <p>On this part of the wall unknown person is depicted on white horseback galloping: he is holding spear with his right and another spear and shield with his left hand. He is dressed in long sleeved white garment; along, with an outer dark green vestment. The horse saddle is decorated with different kind of ornaments. The background is painted ocher and red stripes. On the ground is a solder fallen in front of the man on the horseback; his left hand is stretched to the right under his head and he is holding stick with his right hand. He is dressed in long sleeved white garment; along, with an outer dark vestment. Stripe cloth is on his head that reach around the neck.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number twelve:</p> | <p>One of the doors of the western gate at the porch to the narthex are depicted two angels. St Uriel is presented on the left part of the door: wing is on his right and left of his back; he is holding sword with his right hand and scabbard with his left. His hair is cut in a circle, afro style. He is dressed in long sleeved dark green garment that reach to the knee; along, with an outer red vestment decorated with flowers. He is also dressed black striped red trouser and red shoes.</p> |  <p>title: Uriel donor: unknown painter name: unknown year of paint:</p> |




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| <p>Number thirteen:</p> | <p>On this part of the door, the arch angel St Raphael is depicted holding sword with his right hand to kill the fish, which come to destroy the church in the island: his hand is raised up and the sword is inclined towards above his head; scabbard is with his left hand. His hair is cut in circle; it is afro style. Wing is on his right and left back that reach to his head and down to his knee; the wing is painted from up to down: red, green, red, green and red. He is dressed in: long sleeved black striped green; along, with an outer red costume; decorated, with flower and above of this, is red striped, white tunic that is round around his shoulder and suspended down to reach his knee. He is dressed also black striped red trouser along with red shoe. Underneath of him, is a church with in five deacons and priests in liturgy holding the holy communions. All are dressed church vestments. On the left side of the church is a fish depicted with big eye, who come to demolish the church. The roof of the church is painted with red paint and at the top of the church is a cross with seven diamond shaped eggs of ostrich.</p> |  <p>title: Raphael donor: unknown painter name: unknown year of paint:</p> |
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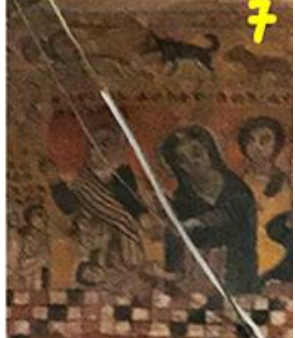

Annex V wall painting of the western façade of the *qidst*

| Numbers | Descriptions | Pictures |
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| <p>Number one:</p> | <p>As it was mention above the assumption is located at the upper part of gate; the entrance to the men congregations. The painting is directly painted on the wall; it seems that this is the earlier painting than the painting on the others in the church; Even, the style of the painting is related to the first Gonderian painting styles. According to Marline Heldman, it is dated to seventeenth century. On this part Mary is depicted crossing her hand at the chest ascending to heaven in the cloud. She is dressed in long sleeved red garment; along, with an outer bluish tunic; suspended down from her head to reach the feet. White towel is suspended down from her arm. Halo is around her head. Outside of the frame on the right side of Mary is captions, that reads as “<i>zekeme arget egzietne Mariam</i>” (ዘከመ ዓርገት እግዝእትነ ማርያም) meaning, “<i>as our lady Mary has ascended</i>” On her feet is a disc like face depicted. Four cherubs on the left and five cherubs on the right are depicted facing towards of her. On the left lower part is Tomas seated; holding towel with his right and his face with his left hand. He is dressed in long sleeved green garment; along, with an outer red striped, white tunic. captions is on his right side it reads, “<i>Tomas zekeme rieya enze tearig</i>” (ቶማስ ዘከመ ርእይ እንዘ ተዓርግ) meaning, “<i>as Tomas has seen her ascending</i>” on the lower part are nine martyrs; kneeled and receiving crowns of honor. They are dressed in blue and red vestments. And three crowns are putt on the left part of the martyrs. Underneath of the martyrs is captions, read as “<i>semaetat, zekeme tmetewu aklilate</i>” (ሰማዕታት ዘከመ ተመጠጧ እክሊላተ) meaning, “<i>as martyrs has received crowns</i>” to the left side of Mary are saints depicted in four episodes; three of them are depicted in the same gesture pointing out their two figures of their right hand; except, the one at the left lower part, who is holding his face with his left hand. All of them are dressed in long sleeved garments; along, with</p> |  <p>title: as our lady Mary has ascended donor: unknown painter name: unknown year of paint:</p> |



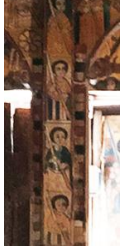
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| | an outer tunic. The upper part of the wall is painted with square block decorations. | |
| Number two: | Mary and Jesus Christ are depicted shaking hands. Mary is seated on the right side of Jesus Christ holding handkerchief with her right hand and shaking with her left hand. She is dressed in tight long-sleeved garment; along, with an outer blue tunic; decorated at the edge with a line. Radiating light is around her head. On her left side is Jesus Christ seated, holding handkerchief with his left and shaking her hand with his right hand. He is dressed in dark green garment; along, with outer red tunic. Halo is around his head. On the right, left and upper sides are cherubs rounding around Mary and Jesus Christ. On the left are big tree depicted; which its stem is big and its branch not as much as so its stem. |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| Number three: | Ras Araya and dejach Gebru are depicted on horseback galloping; ras Araya is on brown horseback holding spear with his right hand raised up and aiming at his enemy to throw another spear is also on his left hand. He is dressed in Ethiopian whit traditional costume; along, with an outer ocher vestment decorated with circle along the edge. The saddle of the horse is decorated with different kinds of ornaments. From his behind are hedf of solders depicted holding spear and shields; they are dressed in Ethiopian traditional costumes; along, with an outer vestment. Underneath of the horse is scripts written in geez; reads “ <i>Ras Araya</i> ” (ራስ አርላያ) On the right side of Ras Araya is Ras Gebru depicted on white horse back galloping. His right hand is raised up; holding spear to throw. Sword with in Scabbard is on his waist. He is dressed in earthy garment; along, with an outer ocher tunic; decorated with line and circle on the edge. On his rare are solders holding spears and shield following. Underneath of the horse is a name captions; written in geez. Translated as “ <i>dejat Gebru</i> ” (ደጃጉ ገበየ) |  <p>title: Ras Araya and dejat Gebru donor: unknown painter name: unknown year of paint:</p> |
| Number four: | Shaleqa Alula and Iij Tesfa with their selder are depicted. On the left part from behind is Shaleqa Alula on brown horseback galloping; sword with in scabbard is on his waist and he is holding spear with his right hand. He is dressed in white Ethiopian traditional cloths; along with an outer black vestment; decorated along the edge with lines. On his side are also solders on horseback galloping and holding spears. At the left part is a name captions written in geez. It is translated as “ <i>shaleqa Alula</i> ” (ሻሊቃ አሉላ) At the front on the right part is Iij Tesfa depicted galloping on brown horseback. He raising his right hand up holding spear in the manner of throwing and sword with in scabbard is on his waist. He is dressed in traditional white cloths; along with an outer ocher vestment. He is with bare foots. Underneath of the horse are captions of a name of the man on horseback. It is translated as “ <i>Iij Tesfa</i> ” (ሳጅ ጥሰፋ) the lower part of the background is painted with ocher and the upper part of the background is painted with red. |  <p>title: shaleqa Alula donor: unknown painter name: unknown year of paint:</p> |


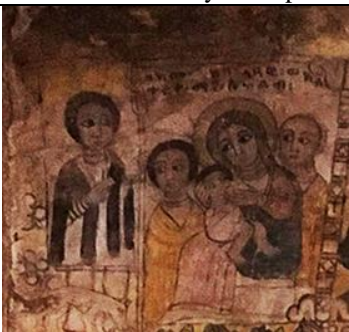
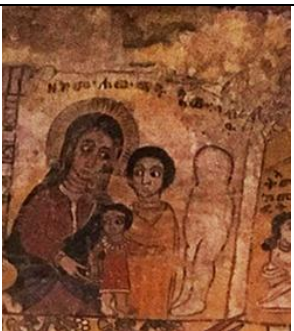
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| <p>Number five:</p> | <p>On this lower part of the wall is miss Kassa depicted; Criss crossing her hand on the chest. She is dressed in white Ethiopian traditional cloths; along, with an outer black vestment decorated along with linear decorations at the edge. In front of her at the left part of the painting is a lectern with in a book. On the right part are women's dressings in Ethiopian traditional white garments looking towards of miss Kassa. At the rare of miss Kassa are servants expelling away flies. At the middle is a name written in geez; it reads, "weyzero Kassa" (ወይዘሮ ካሳ)</p> |  <p>title: Weizro Kassa donor: unknown painter name: unknown year of paint:</p> |
| <p>Number six:</p> | <p>On this part, un known man is depicted on a horse back, holding spear. He is facing to right. His hair is cut in circle. Half of the painting is loss and faded.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number seven:</p> | <p>Jesus the infant fallen on the ground by Tieman. His feet and hand are lifted up from the ground. He is looking at his mother, Mary. Mary is standing leaned towards of her son lifting up her right and point out two of her fingers towards of Tieman and her left hand towards of Jesus. Halo is on her head. Jesus is dressed in tight reddish garment; along with an outer blue tunic. At the rare of Mary is solome standing; dressed yellow garment. At the front is joseph standing stretched his hand and pointing his fingers out at Tieman. He is dressed in long sleeved green garment; along, with an outer red striped white tunic. On the left part of the painting are women standing in row; they are dressed in white garments. They are posed in profile position. On the upper part of the painting are dogs chasing monkeys. Underneath of the dogs and monkeys are captions in geez; which is read as "zekeme konu halstio seba bete teman" (ዘከሜ ኮኑ ሐልሰተዮ ሰብአ ቤተ ጎእማን) on the left part of this painting is alsocaptions; it is translated as "Tieman zekeme iserefeta laele egzietne" (ጎእማን ዘከሜ ጸረፊታ ላለ ለግዝእትነ)</p> |  <p>title: Mary at the house of Timan donor: unknown painter name: unknown year of paint:</p> |
| <p>Number eight:</p> | <p>This painting shows Mary with her Son, Yosef and Solome getting in to the house of Tieman. Mary is on the right part of the painting standing and holding her son. This painting of Mary is different from the rest of the painting of her; her hair is exposed cut in afro style. She is dressed in black striped red garment; along with an outer blue tunic; decorated along the edge. Radiating halo is around her head. Jesus is suspended on the air hold by Mary as if transferring him to solome. He is dressed in gown decorated at the neck. Solome is raising her hand up and holding a glass of water with her left hand and its cover maybe, on her right hand. She is dressed in long sleeved green garment; along, with an outer yellow tunic suspended under one of her shoulder. From her behind is</p> |  <p>title: the flee to Egypt donor: unknown</p> |

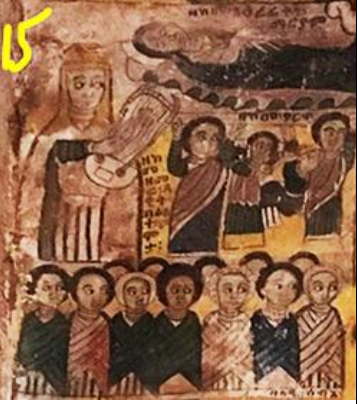


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| | <p>joseph seated holding a pot of water on his lap with his left hand and drinking with small jog. He is dressed in green gown gathered around his waist. The lower and upper part of the background is painted with yellow paints and the middle is painted with red paints. Cherub is depicted on the upper part of the painting looking towards of Mary and Jesus</p> | <p>painter name: unknown year of paint:</p> |
| <p>Number nine:</p> | <p>Mary is depicted on white donkey back riding; hugging her son on her lap. She is dressed blue tunic; that reach her feet suspended down from her head. it is decorated along the edge. Radiating halo is around her. Infront of her is solome going forward holding <i>mosob</i> on her head with her left hand and a pot with her right hand. She is dressed gown; gathered around her waist. Infront of her is her name; written in geez, which is read as “<i>solome</i>” (ሶሎሜ) behind of Mary is a donkey following and behind of the donkey is joseph, flogging the donkey. He is holding stick with his left on the shoulder pot is suspended down the stick. He is clothed in Ethiopian white dress; along, with an outer yellow tunic, suspended under one of his shoulder. On the upper part of the painting two angels are depicted on the right and left of Mary. The angel on the left of Mary is, in the cloud holding sword with his right hand and the angel at the right of Mary is depicted; holding swords with his right hand. His right hand is lifted above his head and his left hand is stretched, pointing two of his fingers out. The back ground is painted with Ethiopian flags from down up; green, yellow and red and the upper part of the painting is painted with yellow paints. Infront of joseph is captions that is read as “<i>zekeme tetsiene adg</i>” (ዘከሙ ተጸእነ አድግ) “<i>as the donkey is loaded</i>” Infront of Mary is also captions; which is read as “<i>zekeme tesedet egzietne</i>” (ዘከሙ ተሰደጉ እግዝእትነ) meaning, “<i>as Mary has fled</i>”</p> |  <p>title: flee to Egypt donor: unknown painter name: unknown year of paint:</p> |
| <p>Number ten:</p> | <p>This part is located on the ark of the gates to kids from the narthex. On the right and on the left part of the arc are angels depicted; holding sword and scabbard. Wing is on their left and right back. They are dressed vestments. Two cherubs are also at the middle facing on each other. The background is painted with ocher paints and there are flowers painted on the background.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number eleven:</p> | <p>On the pillar are four angels depicted each of them holding sword with their right hand and scabbard with left hand. All of them are facing towards of the right. Their air cut in circle; afro style.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |

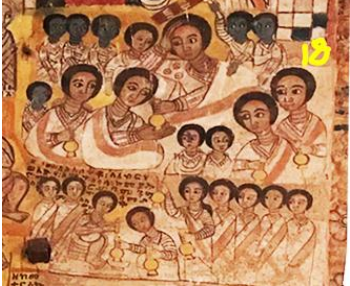

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| <p>Number twelve:</p> | <p>On this pillar are also angels, painted as these on the left part of the gate. On the right part of the arc are angels depicted; holding sword and scabbard. Wing is on their left and right back. They are dressed vestments. Two cherubs are also at the middle facing to the left. The background is painted with ocher paints and there are flowers painted on the background.</p> |  <p>title: unknown donor: unknown painter name: unknown year of paint:</p> |
| <p>Number thirteen:</p> | <p>Mary is seated holding her son on her lap. She is holding the baby's head and feeding the baby with her breast. The baby is dressed white small gown and she is dressed in red striped white garment; along, with an outer blue garment. Radiating halo is around her head. in front of her is solome seated looking the dog and at the rare is joseph sated looking towards of Mary. In front of Mary is a dog drinking water. Along the dog is a boy standing holding with his left-hand stick with a chain at the top of the stick and pointing his two fingers out. He is dressed Ethiopian traditional clothe along with an outer black vestment.</p> |  <p>title: Mary with her son donor: unknown painter name: unknown year of paint:</p> |
| <p>Number fourteen</p> | <p>Mary is kneeled down; holding her son with her hands. Her son is on the ground standing. The baby has starched his hand he is looking towards of his mothers' hand. He is dressed in red gown that reach his knee down from his neck. She is dressed long sleeved red garment; along, with an outer blue tunic that suspend down from her head. Radiating halo is around her head. in front of her is a woman standing most probably solome. She is dressed in yellow garments. At the rare, on the right part of the painting is a sculpture like standing white figure with no eye and ear. The background is painted with yellow paints and on the upper part of the painting is captions written in geez, which is read as "<i>zekeme hawmat...</i>"</p> |  <p>title: Mary with her son donor: unknown painter name: unknown year of paint:</p> |




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| <p>Number fifteen:</p> | <p>This painting shows the dormition of Mary. Two people are caring the bed in which the corpus of Mary is on: one at the back and the other in the front. Her hand is in Criss cross laid on her lap. Her face and her hand are uncovered; whereas the rest of her body is wrapped by blue garment. Underneath of her is a mat suspended down along the bed. Angel is at the middle cutting the hand of to fanias; with sword. Tofanias is people who try to let fall the corps of Mary in to the ground. He is posed in profile; as one eyed. On the upper part of Mary is inscriptions written in geez. Which reads “zekeme aerefet mariam” (ዘከመ አአረፈት ማርያም) meaning, “as Mary has passed away” underneath of the bade is also captions, which read “zekeme tsoruwa” (ዘከመ ጸሩዋ) meaning, “as they have carried her” on the left side of the painting is Dave playing the harp. He is dressed in long sleeved garment; along, with an outer white tunic. Crown is on his head. he is facing to wards of right. Infront of him is captions, read as “zekeme zemere dawit beilete mota” (ዘከመ ዘመረ ዳዊት በሰለተ ሞታ) meaning, “as Dave has sang on the day of her death” the background is painted with yellow paints.</p> |  <p>title: as Mary has passed away donor: unknown painter name: unknown year of paint:</p> |
| <p>Number sixteen:</p> | <p>On this part St Gabriel is depicted weighting the flash eaten by <i>belaie sebe</i> and the water he gives to the beggars in the name of St Mary. She is on his side inclined towards of the balance and holding handkerchiefs with her right hand and pointing out two of her fingers in to the balance St Mikael is holding. Due to her inclination the water is out weighting more than the flashes; <i>belaie nebsat</i> has eaten. She is dressed in long sleeved red garment; along, with an outer blue tunic, suspended from her head down. Radiating disc is around her head. St Gabriel is standing holding the balance with his right hand and scabbard with his left hand. Wing is on his shoulder with the wing at the left lift up. He is dressed in long sleeved green gown tied at the waist. Infront of him is captions written in geez, which reads “zekeme mezene nefsat we may” (ዘከመ መዘነ ነብሳተ ው ማይ) meaning, “as he has weighted souls and water” at the rare of mary is also captions, which is read “egzietne mariam zeadhanoto le belae sebe” (አግዛእትነ ማርያም ዘኡድኃነቱ ለበላዔ ሰብእ) meaning, “as Mary has save the carnival”</p> |  <p>title: as Mary has save the carnival donor: unknown painter name: unknown year of paint:</p> |
| <p>Number seventeen :</p> | <p>On this part three seen are depicted; one, somon the carnival is shown eating flesh on the right part of the painting. He is seated holding the flash with his left hand and the knife with his right hand. On the left part of the painting <i>belaie seb</i> is pouring water to the crimped man seated. He is also holding spear with his left hand. On the left upper part of the painting is inscriptions, which reads “zekeme asetyo maye leduwy” (ዘከመ አስተዮ ማየ ለዱውይ) meaning, “as he gives water to the thirsty man” On the lower part is a man plowing with oxen. On the upper part of the man playing is captions, which is reads “zekeme rekbo leharesawi” (ዘከመ ረከቦ ለኣረሳዊ) meaning, “as he found the plowing man” on the upper part of the painting are seven persons standing in a row, who they were eaten by the <i>belae seb</i>. The background is painted with ocher paints.</p> |  <p>title: as he has given water to the thirty crumbled man donor: Ametasilasie painter name: unknown year of paint:</p> |

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| <p>Number eighteen:</p> | <p>A noble woman is laid on; holding her face with her right hand resting on pillow and receiving <i>tej</i> with her left hand. She is dressed in long sleeved Ethiopian garment; along, with an outer white garment, in front of Amete Sillasie who is serving her <i>tej</i> also behind of her is a person holding <i>tej</i> with her/his hand. On the left of amete Silasse is servants expelling flies. On the right of her are also servant seated. On the lower part are people pouring <i>tej</i>; holding <i>tej</i> and in a row. They are all dressed Ethiopian traditional cloth. at the middle is caption; which reads “<i>zekeme asaleta leAbreha and Atsbeha ametesilase keme ykunomu merha bemengsite semayat misle wuluda</i>” (ዘኸመ ኢሥላሳቶ ለአበርሃ ወ አጽብሃ አመተ ሥላሴ ከመ የኩኖሙ መረሀ ለመንግስተ ሰማይት መስለ ውሉዳ) meaning, “<i>as amete Silasie has donated the painting to Abreha and Atsbeha ; may let her guiding to the kingdom of heaven with her sons</i>”</p> <p>On the lower left part of the wall is a boy seated Criss crossing his leg and his hand resting on his chest. Tow dog are on the right and left part of the boy barking on the boy. The dog on the left is black and the dog on the right is a white dog both are standing with their rare leg on his knee and for leg on his shoulder. On the left part is caption written in geez; it is read as “<i>zekeme tenaseku aklibt laele Gebrekirstos</i>” (ዘኸመ ተናሰኩ አክልብት ላዕል ገብረክርስቶስ) meaning, “<i>as the dogs has bitten Gebrekirstos</i>” on the right part is corps laid on the ground wrapped with red garment. From his behind are people crying some of them resting their hand on their head and Criss crossing on their chest. A king is also on the right part of the painting crying and holding tablets with inscriptions on it. Crown is on his head. He is dressed long sleeved dark green garment; along, with an outer red tunic; decorated along edge. in front of the mourners is caption; read as “<i>zekeme bkeyu abuhu we emu tewodsyos nigus we emu markeza nigst</i>” (ዘኸመ በከዩ አቡሁ ወ እሙ ቴዎድሳዮስ ገጥሥ ወ እሙ ማርኬዛ ገጥሥ) meaning; “<i>as his father and his mother has cried; king Tewodesyos and his mother queen Markeza</i>”</p> |  <p>title: as amete Silasie has donated the painting to Abreha and Atsbeha donor: herself painter name: unknown year of paint:</p> |
| <p>Number nineteen:</p> | <p>This painting is located on the near the dependent cross pillar on the left part of the gate entrance to the men. On the upper part of this wall, Mathew is depicted being beheaded. Mathew is kneeled down tied his hand; he is necked except stripe of garments on his waist. His head is cut off on the ground turned upside down and the solder is from his behind in profile holding sword with his right hand. Hat is on his head; he is dressed in dark green gown tied on his waist. there is caption on the upper and on the lower parts of the painting; which is read as “<i>Matewos zekeme temetre beseif</i>” (ማቴዎስ ዘኸመ ተመትረ በሰይፍ) meaning, “<i>Mathew, as he was beheaded by with a sword</i>”</p> |  <p>title: Mathew as he was beheaded donor: unknown painter name: unknown year of paint:</p> |

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| <p>Number twenty:</p> | <p>Tadewos is depicted letting pass a camel through the hole of needle. He is holding the camel with his right hand and the needle with his left hand. He is dressed in long sleeved green garment; along, with an outer red tunic. On his back is caption written in geez, which can be read as “<i>Tadewos zekeme awtsia gemele b...</i>” (<i>ጥቴዎስ ዘከመ አወጸአ ገመለ ቤ...</i>) meaning, “<i>as Mathew let out a Camel through...</i>” the rest of the inscription is loss. The back ground is painted with yellow paints.</p> |  <p>title: as Mathew let out a Camel through...” donor: unknown painter name: unknown year of paint:</p> |
| <p>Number twenty-one:</p> | <p>On this part Tomas is depicted; being skinned by solders. Four solder are skinning him through his right, left hand and right and left of his leg with a knife. All are depicted in profile with a hat on their head. Some part of the painting is loss and faded.</p> |  <p>title: Tomas donor: unknown painter name: unknown year of paint:</p> |
| <p>Number twenty-two:</p> | <p>At the end of the lower part of the wall Tomas is going carrying the skinned of his body from his behind is a solder shown in profile holding stick with his right hand. A hat is on his head; he is dressed in long sleeved gown tied at the waist. This painting is also lost and faded as the painting on the upper part.</p> |  <p>title: Tomas donor: unknown painter name: unknown year of paint:</p> |