

CORRELATION OF MAGNETOSTRATIGRAPHIC SCALES AND PALEOMAGNETIC CHARACTERISTICS OF TRIASSIC DEPOSITS IN THE NAKHCHIVAN AUTONOMOUS REPUBLIC (AZERBAIJAN, PRELIMINARY DATA)

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Summary. This article presents the results of investigations of the Mesozoic (Triassic) sedimentary deposits in the Nakhchivan Autonomous Republic, focusing on the horizontal movements of the Earth's crust and approaches to resolving related tectonic problems. Paleomagnetic investigations were carried out on the Akhura and Tananam stratigraphic sections, where Triassic sedimentary rocks were studied in detail. Based on the paleomagnetic data, the kinematic parameters of tectonic blocks and their horizontal displacements were determined. Similar results were obtained from the characterization of lithological components: clays and fine-grained sandstones exhibit the highest magnetic stability, coarse-grained rocks display metastable magnetic behavior, whereas coarse-grained sandstones, dolomites, and related lithologies are characterized by unstable magnetic properties.

During the magnetic cleaning (demagnetization) process, the stable components of remanent magnetization were isolated. On average, their directions coincide with the magnetization directions determined by the fold test. The investigated sections exhibit a regular alternation of rocks with normal and reversed magnetic polarity. Following thermal and stepwise demagnetization, rocks with both normal and reversed magnetization from the Akhura and Tananam sections yielded the same characteristic magnetization direction. This demonstrates the synchronicity of the natural remanent magnetization (J_n) and confirms the absence of the secondary magnetization components after demagnetization.

The objectives of this study were to investigate the paleomagnetic properties of the Triassic sedimentary rocks exposed within the Nakhchivan Autonomous Republic; to determine the position of the Earth's northern geomagnetic pole during the Triassic; to evaluate the horizontal displacements and rotational parameters of tectonic blocks; and to reconstruct the regional geological evolution and paleotectonic development based on paleomagnetic evidence.

The significance of the present paleomagnetic investigation lies in the fact that paleomagnetic methods provide the only quantitative approach for reconstructing paleotectonic settings and assessing the relative rotations of different geological structures.

This study represents the first comprehensive paleomagnetic investigation conducted in the Nakhchivan region (39.5°N, 45.3°E), in which paleomagnetic directions of the Triassic sedimentary rocks were determined using complete demagnetization procedures and Principal Component Analysis (PCA). Nevertheless, the results obtained from the Nakhchivan region are in close agreement with previously published paleomagnetic data from neighboring regions and stratigraphically equivalent Triassic sections, confirming the regional consistency and reliability of the obtained paleomagnetic dataset.

Keywords: *Magnetic susceptibility, stratigraphic division, geological-geophysical analysis, Tananam sections, Trias epoch*

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Introduction

The territory of the Nakhchivan Autonomous Republic, an integral part of the Republic of Azerbaijan, is distinguished by its complex geological-tectonic structure and a geological section spanning a wide stratigraphic range from the Devonian to the Holocene (Fig. 1).

Tectonically, the geological structure of the sedimentary cover is not homogeneous; it is characterized by the complex interrelationships

of the following structural units (tectonic zones) that differ in lithological-stratigraphic sections, deformation features, and geological history: 1. Sharur-Julfa Uplift Zone; 2. Ordubad Trough Zone; 3. Zangezur Uplift Zone; 4. Nakhchivan Superimposed Basin (Babayev et al., 2016). These zones differ from one another in the composition of their geological formations, the nature of tectonic deformations, age, and thickness; they are, in turn, composed of tectonic blocks of vari-

ous sizes bounded by deep faults. The studied area belongs to the Sharur-Julfa Uplift Zone.

Lower Triassic: Characterized by *Xenodiscus* and *Paratirolites*; *Goniatis adichianus* (Moll) is present at the basal part.

Middle Triassic: Tabular limestones (Muschelkalk) with various greyish-green and pinkish shades containing gastropod and lamelli-branch (bivalve mollusk) fossils.

Upper Triassic: A thick sequence of cavernous dolomite devoid of faunal remains. The observed thickness of the Triassic limestone sequence exceeds 1.5 km.

Geology of the studied area

The Nakhchivan Autonomous Republic (NAR) area consists of sediments from the Paleozoic, Mesozoic, Tertiary, and the Quaternary periods. The geological cross-section (from bottom to top) is shown in Fig. 1.

The Oldest Rocks: The oldest rocks are represented by alternating layers of medium- and thin-bedded gray and black limestones, mica-bearing intermediate layers, quartzites, and schists. The characteristic fauna of the Middle

and Upper Devonian periods has been discovered in the limestones and, to some extent, in the sandstones and schists. The visible thickness of this layer exceeds 1 km.

Carboniferous Rocks: A thick sequence of dark gray, medium- and thick-bedded limestones containing Carboniferous fauna lies directly on top of the alternating sequence of Devonian rocks mentioned above.

Permian Rocks: The Carboniferous limestones transition into reddish-colored limestones with Permian fauna, followed by a sequence of thin limestones (local marls and sandstones).

Triassic Rocks: At higher elevations, the Permian limestones give way to reddish-gray, partially dolomitic, medium-bedded Triassic limestone sequences.

The Triassic period is primarily developed in the southeastern part of the middle stream of the Eastern Arpachay River, within the upper and middle stream basins of the left tributary, Akhura-chay (Gabakhlychay). Outside the Eastern Arpachay Basin, the Triassic period is widespread in the Jahrichay region (Subus mountain range) and, finally, in the Julfa depression (Fig. 1).

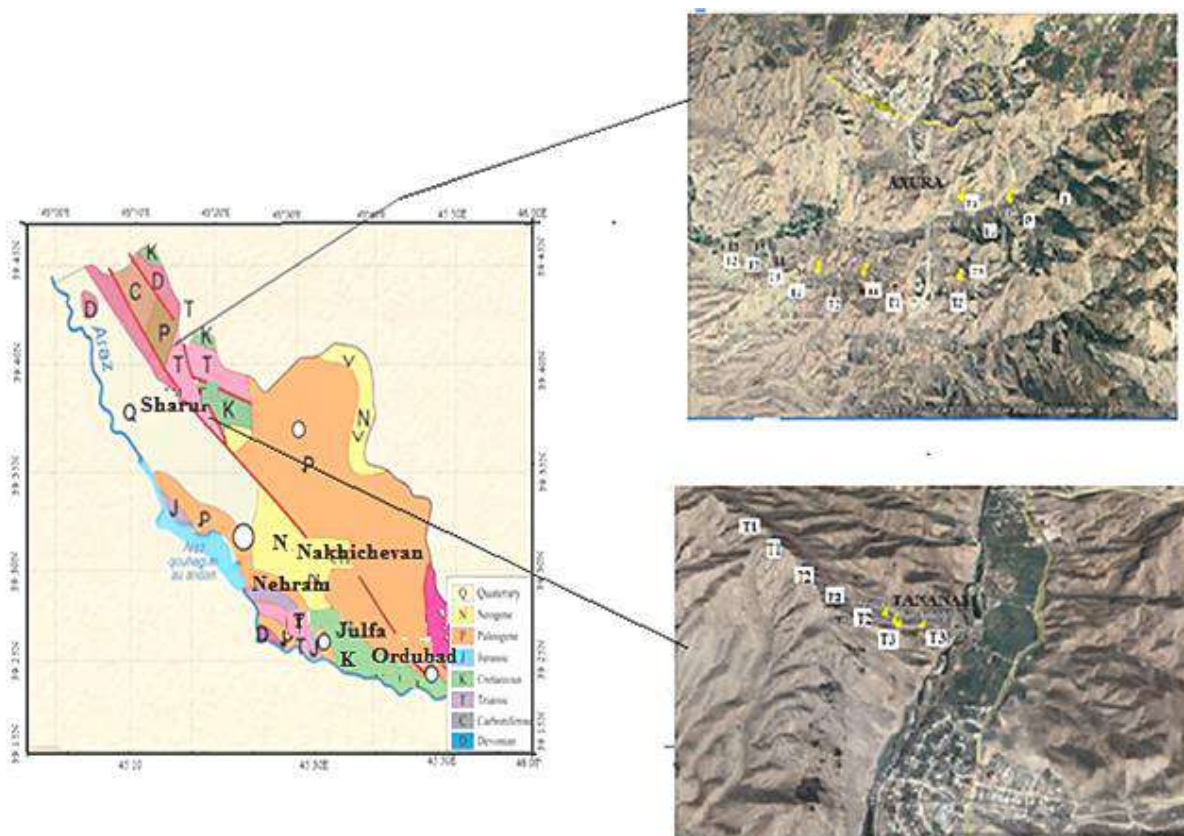


Fig. 1. Geological map of Nakhchivan and the locations of paleomagnetic sampling sites along the Tananam and Akhura sections

Stratigraphy of the Studied Area

The stratotype is located to the northeast of Tananam village, while the parastratotype is situated in the Nehram depression (Ismail-Zade et al., 2005). To the northwest, the major exposures are widespread around the Gabaglychay and Jahrichay basins, in the areas of Chalkhangala, Garabaghlar, Tananam, Akhura, and Havush villages. Additionally, it forms the summits and slopes of the Daralayaz mountain range, including the peaks of Ardaghy, Hinadali, Remlar, Garavultapa, Anabad-Gadik, Garagush, and Bazakli mountains. Smaller exposures are observed at the source of the Lizbirtchay and the upper reaches of the Kichik Davaolandara stream (the south of Ardych Mountain). It also participates in the geological cross-section of the northeastern wing of the eponymous rise in the Julfa depression in the southeast.

The area is represented by gray to dark gray dolomites and dolomitic limestones. The lower and middle Triassic deposits are transgressively deposited, with their weathered top sections unconformably covered by various Jurassic and Cretaceous layers. The discovery

of rare fauna remains at the base of the cross-section allows the upper Triassic deposits to be classified accordingly.

The dolomites are characterized by gray color, medium- to thick-bedded cavernous structures with cracks, which rest unconformably on the rock formations of the Ardaghy layer. Their thickness is around 30 meters (Rustamov, 2023).

The Upper Triassic dolomites, which are gray in color and have medium- to thick-bedded cavernous structures, unconformably rest on the rocks of the Ardaghy layer. The total thickness of the cross-section is 600 meters (the Upper Triassic) (Fig. 2).

The Middle Triassic Layer Sequence: Dark gray, thick-bedded, silicified and iron-rich brecciated dolomites with a thickness of 35 meters. The total thickness is 224 meters.

The Lower Triassic Layer Sequence: The layer consists of gray conglomeratic limestones, thick-bedded marly limestones, clayey limestones, thin-bedded laminated limestones, and thin-layered furoid-bearing limestones. The total thickness is 346 meters.



Fig. 2. Dolomites of the Upper Triassic Tananam Formation

Based on the data from E.A.Molostovski on the South Ural and the central part of the Eastern European Platform, a regional magnetostratigraphic table for the Lower Triassic was prepared (Bazhenova, 1983). The most up-to-date version of the regional magnetostratigraphic table for the Permian and Triassic periods of the Eastern European Platform has been presented by summarizing the works of the aforementioned researchers (Molostovski, 1985). However, most of the data used in its preparation were obtained and verified without meeting the requirements of magnetostratigraphy (Krasa et al., 2007).

Thus, obtaining new paleomagnetic data for the Perm-Triassic boundary interval of the Russian Platform is an urgent task for refining and detailing the regional magnetostratigraphic table and the GPTS (Geologic Time Scale). The study area is located in the western part of the Nakhchivan Autonomous Republic, around the Sharur plain, and includes the villages of Tananam, Nehram, and Akhura. The region has undergone significant deformation due to the Aip orogeny. Given its proximity to an active tectonic zone, weak seismicity is also possible (Fig. 5).

The Upper Triassic section is represented by the Tananam layer formation, a carbonate facies with a maximum thickness of 800 meters, and it is found in the geological structure of the Autonomous Republic, along with the Lower (Carnian) and Middle Norian stages. The rocks of the Carnian stage constitute the main part of the sequence, while the upper part of the cross-section belongs to the Norian stage. The area is tectonically active and rich in faults.

Methodology

The article is focused on the study of the geological structure, formation conditions, and paleotectonic characteristics of Triassic period sedimentary rocks and dolomites in the Nakhchivan region. In the laboratory, samples were subjected to petrographic analysis to study their mineral composition, magnetic susceptibility, and textural and structural characteristics through optical microscopy (Bagirova, Rzayev, 2018).

Geochemical analysis methods were used to determine the chemical composition of the carbonate rocks. In the Dynamic Geology Laboratory, demagnetization measurements of rock

samples were performed using the LDA-5 Demagnetizer, employing alternating and direct magnetic fields.

The remanent magnetization of rock samples, particularly those with strong magnetic properties, was determined using the JR-6A spinner magnetometer. In addition, the phase and amplitude of the induced electromotive force (EMF) in the samples were measured using this instrument.

Rock samples were also subjected to thermal demagnetization using the TD-48-SC thermal demagnetization furnace, which operates over a temperature range of 25-800°C.

Magnetic susceptibility was measured in the selected samples, and stepwise thermal and alternating magnetic field cleaning methods were applied to separate the initial magnetization components within the framework of the paleomagnetic studies. Based on the obtained results, the possible horizontal movements of geological blocks during the Triassic period and the influence of rifting regimes were assessed (Khramov, Sholpo, 1967).

Structural-Geological Analysis: Faults, anticline and syncline structures, as well as tectonic elements related to the rift zone were studied. In particular, the positioning of peridotite intrusions observed in the dolomite layers and their tectonic relationships were analyzed.

All the obtained data were comprehensively summarized, leading to the conclusion that the dolomites in the Nakhchivan region formed in riftogenic-sedimentary conditions during the Triassic period, involving mantle-derived magnesium-carbonate thermal waters.

Paleomagnetic Analysis

Magnetic susceptibility was measured in selected samples, and stepwise thermal and alternating magnetic field cleaning methods were applied to separate the initial magnetization components within the framework of paleomagnetic studies. Based on the obtained results, the possible horizontal movements of geological blocks during the Triassic period and the influence of the rift regime were assessed (Khalafly, 2007).

For paleomagnetic research, materials were collected from Mesozoic-aged sedimentary rocks from three cross-sections in Nakhchivan. This paleopole position is in fairly

good agreement with the mean Triassic pole position of the Turan Plate (149°E longitude; 49°N latitude). Additionally, a Triassic palaeogeographic reconstruction of Iran, Arabia (Gondwana), and the Turan Plate (Eurasia) is also presented (Soffel et al., 1996). To isolate

the characteristic remanent magnetization, both alternating and stable magnetic fields, as well as temperature demagnetization procedures, were used for detailed paleomagnetic analysis. The following results were obtained (Kodama, 2012) (Fig. 3.3).

Table 1

Primary paleomagnetic directions and paleomagnetic poles of the Trias rocks of Nakhchivan, T₁ in (Induan) T₁ ol (Olenekian) T₂ an (Anisian) T₂ ld (Ladinian) T₃ ca (Carnian) T₃ no (Norian) number of samples, D – Declination, Inc – Inclination, K = Fisher K, α_{95} = virtual geomagnetic pole (VGP) 95% cone of confidence

Spesimen	ϕ	λ	Dec	Inc	R	K	α_{95}	ϕ	Λ	Θ_1	Θ_2	Rot
T ₁ in	39.84	45.33	238	39	2.09	10	10	-21	282	11	3	CCW 58
T ₁ ol	39.502	45.334	192.9	8.5	20	21	7	-40	90.8	8	11	CCW 40
T ₂ an	39.503	45.197	207	20.1	31	9	10	-34	192	10	5	CCW 37
T ₂ ld	39.504	45.196	210	7.02	31	9	10	-38.9	185	10	5	CCW 30
T ₃ ca	39.504	45.195	139	13.8	20	21	13.8	-30	274	10	5	CCW 41
T ₃ no	39.500	45.192	148	2.73	21	21	10	-40	269	10	5	CCW 42

Induan: In between 3-7.9

Olenekian: In between 1-4.9

Anisian: In between 1-2.4

Ladinian: In between 1-3.16

Carnian: In between 2-9.3

Norian: In between 1.5-4.75

counterclockwise-CCW

Geodynamic Interpretation

Fisher Mean: Dec = 189.7°

I (Inclination): 15.1°

α_{95} (Confidence Interval): 8.5°

k (Concentration Parameter): 18

This data indicates that Nakhchivan was situated in an **equatorial–subtropical** position along the northern margin of the **Tethys Ocean**.

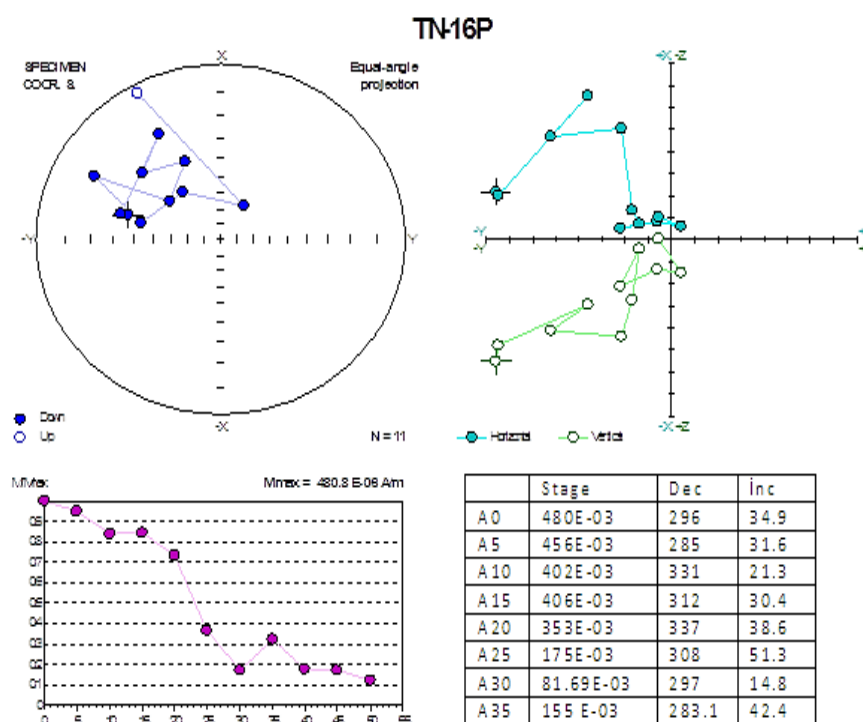


Fig. 3. Stereographic Trajectory of Movement for Sample No. 16 in the Tananam section

In the Tananam Gross-section, the direction during step-by-step demagnetization of sample No. 16 is shown. The (D, J) projections are presented (Fig. 2). In the top-right corner – **Zijderveld Dia-**

gram – shows the directional changes of the vectors during demagnetization (both in the horizontal and vertical planes).

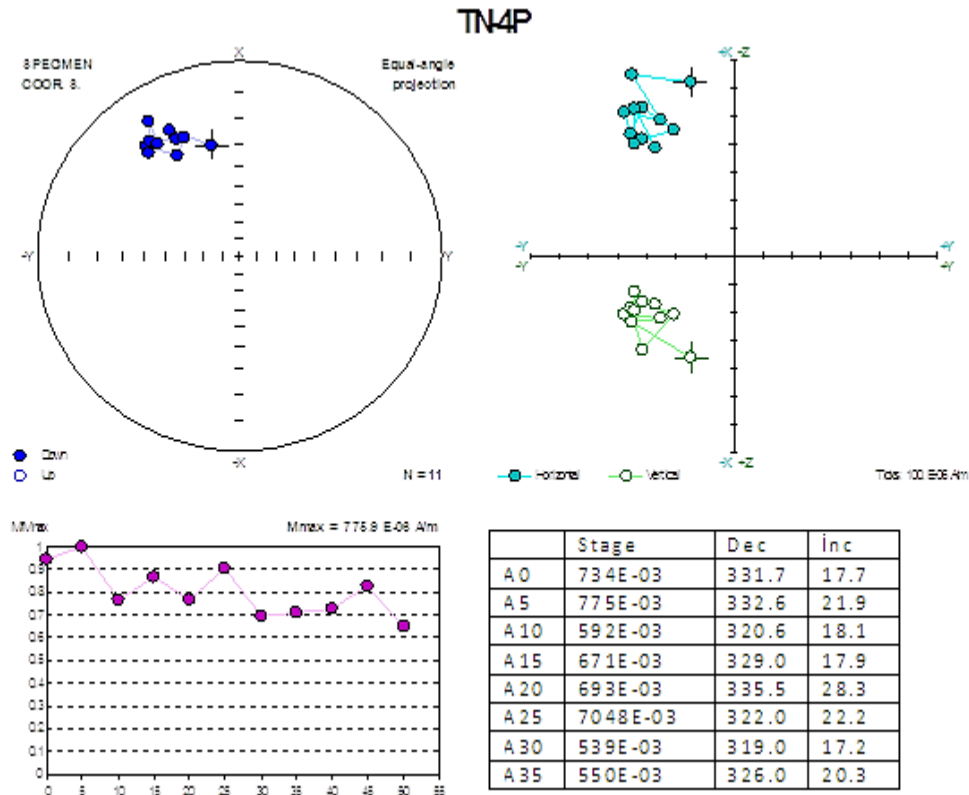


Fig. 3.1. Stereographic Trajectory of Movement for Sample No. 4 in the Tananam-Section

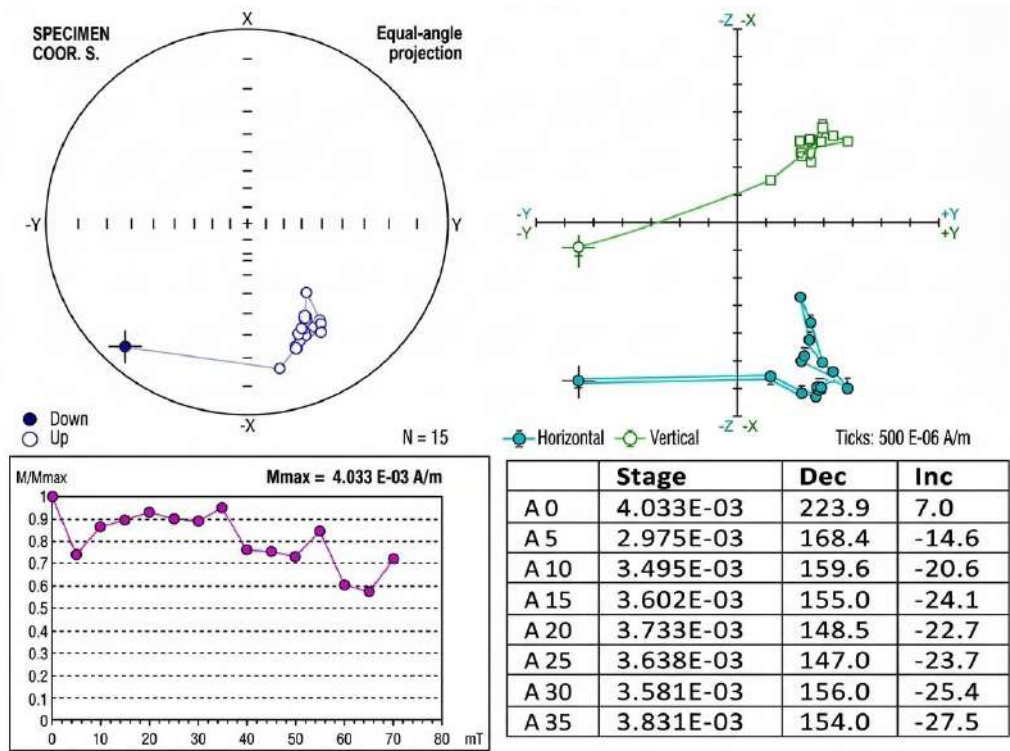


Fig. 3.2. Stereographic Trajectory of Movement for Sample No. 6 in the Nehram-Section (Trias)

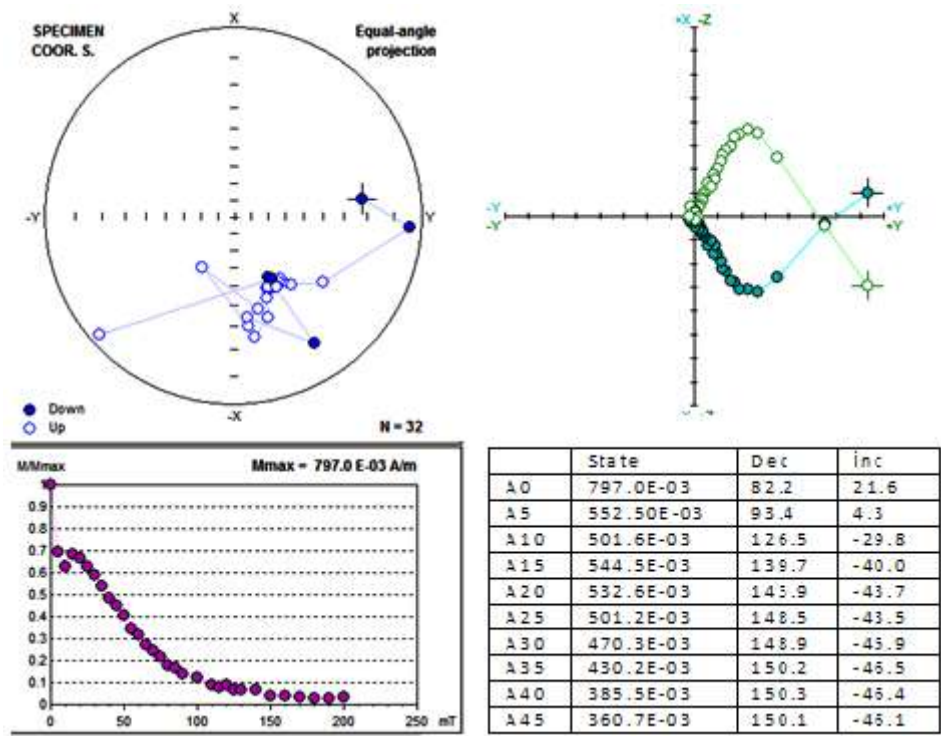


Fig. 3.3. Stereographic Trajectory of Movement for Sample No. 5 in the Nehram-Section (Trias)

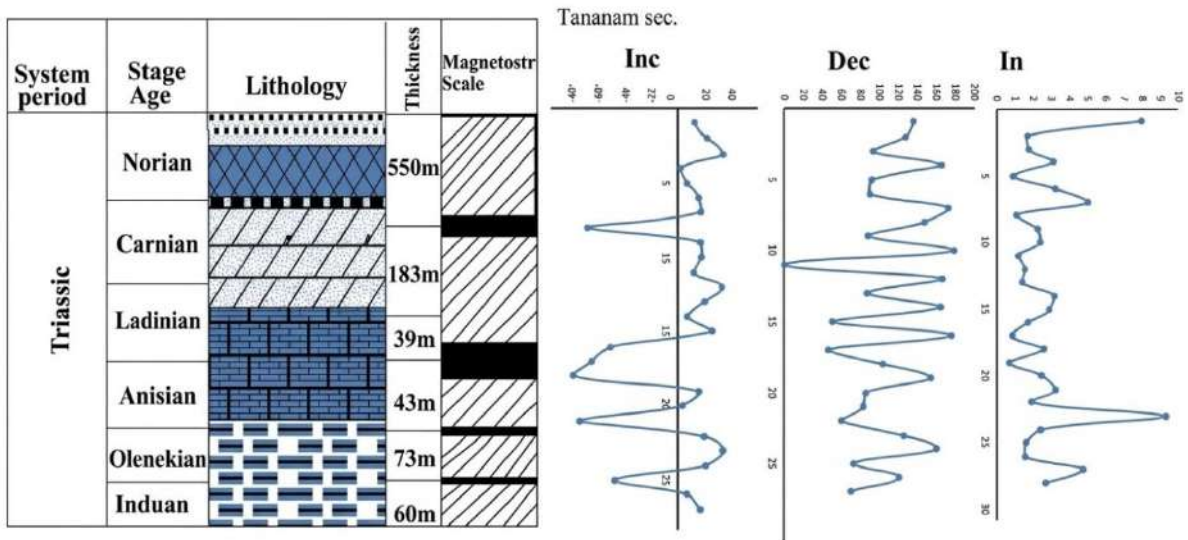


Fig. 4. Paleomagnetic Scale of Triassic-aged Sedimentary Rocks in the Tananam Cross-section

To the north of the Akhura village, the Lower Triassic sediments participate in a small synclinal fold structure and extend in a narrow strip towards the Kyurdkend area. Here, the Lower Triassic is deposited on the Upper Permian sediments and, in some places; it is associated with either the Upper Tabasaran or with the Upper Permian directly. To the north of the Akhura village, the Lower Triassic sediments again participate in a small synclinal fold structure and extend in a narrow strip towards the Kyurdkend area.

To the north of Akhura village, the Lower Triassic sediments participate in a small synclinal fold structure and extend in a narrow strip towards the Kyurdkend area. Here, the Lower Triassic rests on the Upper Permian sediments and, in places; it is associated with either the Upper Tabasaran or Upper Permian. To the north of the Akhura village, the Lower Triassic sediments again participate in a small synclinal fold structure and extend in a narrow strip towards the Kyurdkend area.

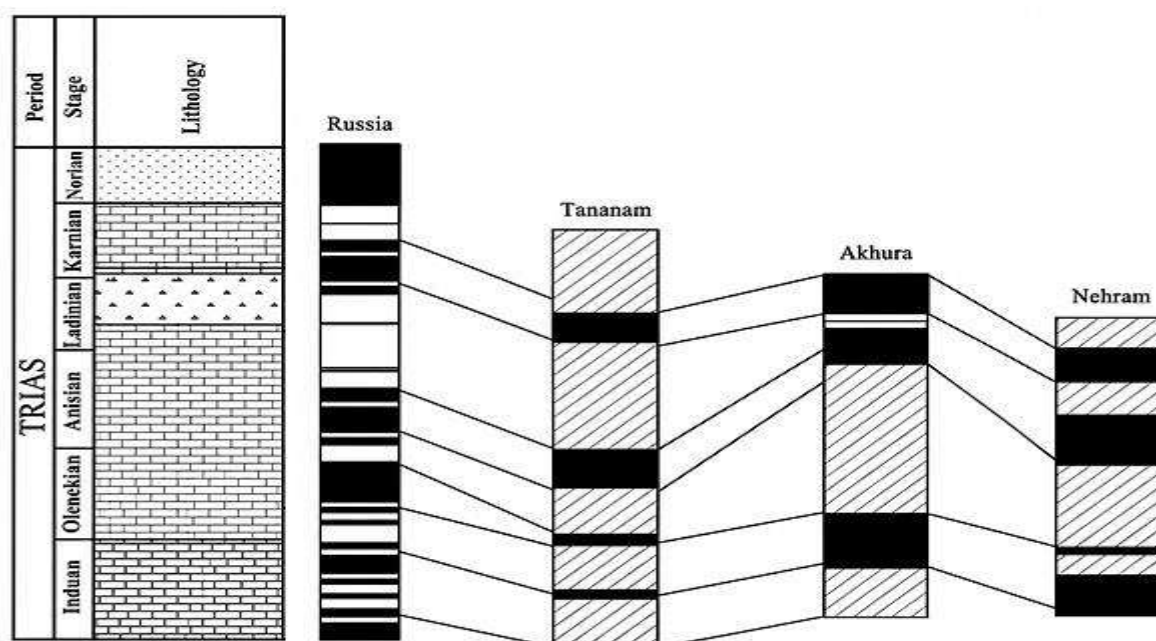


Fig. 5. Correlation of the Triassic-aged Cross-sections

Discussion

Thermal Cleaning Gives Similar Results

The majority of the studied samples demonstrate very simple demagnetization behavior. In some of them, a two-component magnetization is observed. However, in most cases, after the unstable part of the magnetization is removed by heating to 100-150°C, only one component remains (Fig. 3.1). This component corresponds to the high-temperature component observed in the two-component samples. It decreases towards the starting point in orthogonal diagrams and represents the characteristic remanent magnetization (ChRM) in both cases. The maximum blocking temperature of these ChRMs varies depending on the contacts. In samples taken from the Tananam and Akhura cross-sections, the maximum blocking temperature is typically around 600-640°C (Fig. 5), while in samples from the Tananam cross-section, ChRM disappears entirely only around 660-670°C (Fig. 3.2). Based on the maximum blocking temperature values, it can be said that the primary remanent magnetization carrier in the studied rocks is magnetite, which has been oxidized to various degrees. In all of the studied contacts, the average direction of ChRM is characterized by positive inclination and north-northeast declination (Table 1). The average direction obtained in the article for the Tananam–Akhura cross-sections aligns very well with the paleomagnetic direc-

tions presented for those cross-sections (Fig. 3). Since the bedding corrections applied for different outcrops were not significantly different, a reliable “fold test” could not be conducted. Therefore, results obtained by Nguen and Pecherski for the Triassic-aged rocks in neighboring areas are referenced. These results are almost identical to our paleomagnetic directions and confirm the Triassic age of the ChRMs isolated in the Tananam and Akhura cross-sections.

The average direction of ChRM obtained from the Central Iran zones does not statistically differ from the data we acquired. These directions significantly differ from both normal and reverse directions, and do not reflect the actual direction of the ancient geomagnetic field (Salehi et al., 2026). The similar directions of the outer values can be partially explained by the fact that at least five of them were taken from consecutive layers along the cross-section and were likely formed within a short time interval. The primary origin of the ChRM isolated in the Tananam, Akhura, and Central Iran cross-sections indicates that these rocks are suitable for paleointensity studies (Table 1). The double heating process was conducted in at least 16 stages, up to 650°C (Fig. 4). After each stage, TRM checks and magnetic susceptibility measurements were conducted. For each sample in paleointensity determination, 2.5 cm-sized two to four cubic samples were used. Some of the samples were heated in a

furnace with a residual magnetic field of less than 50 nT and processed in a device (LDA-5) that measures both stable and variable magnetic fields (Molostovski, 1985).

The Induan period (252-249 Ma years) forms the beginning of the Triassic period. And from a paleomagnetic point of view, it is considered one of the most complex stages in the history of the Earth.

$D = 238^\circ$ $Inc = 39^\circ$ $K = 10$ $\alpha_{95} = 10^\circ$
 $R = -58^\circ$ counterclockwise

Olenekian period (249-245 Ma) Tananam section:

$D = 192.9^\circ$ $Inc = 8.5^\circ$ $K = 21$ $\alpha_{95} = 7^\circ$
 $R = -40^\circ$

The Nakhchivan block was rotated in the counter-clockwise direction during this period.

Anisian period (Middle Triassic) (245-237 Ma) Paleomagnetic materials for the consist mainly of reddish carbonate and terrigenous sediments.

$D = 207^\circ$ $Inc = 20.1^\circ$ $K = 21$ $\alpha_{95} = 9.8^\circ$
 $R = -37^\circ$

Ladinian (Middle Triassic) (237-228 Ma)

During the Ladinian period of the studied Tananam section:

$D = 210^\circ$ $Inc = 7.02^\circ$ $K = 9$ $\alpha_{95} = 10^\circ$
 $R = -30^\circ$ (turned counter clockwise).

Carnian period (Upper Triassic) (228-216 Ma)

$Dor. = 139^\circ$ $Inc = 13.8^\circ$ $K = 9$ $\alpha_{95} = 13.8^\circ$
 For the Norian floor, the Eurasian ARWP

Dref = 300 is adopted.

Norian period (Upper Triassic) (216-203 Ma)

$D = 148^\circ$ $Inc = 2.73^\circ$ $K = 21$ $\alpha_{95} = 10^\circ$
 $R = Dobs-Dref$
 $R = 42^\circ$

Nakhchivan-Iranian microblocks were moving tectonically. It is widely used in regional studies between 30-90°.

The result we received corresponds to this regional model.

Results

This study is the first work conducted in the Nakhchivan region, at latitude of 39.5°N and 45.3°N, where paleomagnetic directions of the Triassic-aged sedimentary rocks have been obtained using complete demagnetization and principal component analysis (PCA) (Fig. 5). Nevertheless, the results from the Nakhchivan region show a high degree of agreement with neighboring regions and previous studies conducted on cross-sections of the same age.

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КОРРЕЛЯЦИЯ МАГНИТОСТРАТИГРАФИЧЕСКИХ ШКАЛ И ПАЛЕОМАГНИТНАЯ ХАРАКТЕРИСТИКА ТРИАСОВЫХ ОТЛОЖЕНИЙ НАХЧЫВАНСКОЙ АВТОНОМНОЙ РЕСПУБЛИКИ (АЗЕРБАЙДЖАН, ПЕРВЫЕ ДАННЫЕ)

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Резюме. В статье представлены результаты исследования мезозойских (триасовых) осадочных отложений на территории Нахчыванской Автономной Республики, посвящённые изучению горизонтальных движений земной коры и реконструкции, связанных с ними тектонических процессов. Палеомагнитные исследования были проведены на стратиграфических разрезах Ахура и Тананам, где детально изучены триасовые осадочные породы. На основе палеомагнитных данных были определены кинематические параметры тектонических блоков и величины их горизонтальных перемещений. Анализ литологических компонентов показал, что глины и мелкозернистые песчаники характеризуются наиболее устойчивой остаточной намагниченностью, крупнозернистые породы обладают метастабильными магнитными свойствами, тогда как крупнозернистые песчаники, доломиты и другие литологические разновидности отличаются неустойчивым магнитным поведением.

В процессе магнитной очистки (размагничивания) были выделены устойчивые компоненты остаточной намагниченности. В среднем их направления совпадают с направлениями намагниченности, установленными с помощью теста складчатости (fold test). В исследованных разрезах наблюдается закономерное чередование пород с нормальной и обратной магнитной полярностью. После термической и поэтапной магнитной очистки образцы, как с нормальной, так и с обратной полярностью из разрезов Ахура и Тананам приобрели единое характеристическое направление намагниченности. Это свидетельствует о синхронности естественной остаточной намагниченности (J_n) и подтверждает отсутствие вторичных компонентов намагниченности после размагничивания.

Целями настоящего исследования являлись изучение палеомагнитных свойств триасовых осадочных пород, распространённых на территории Нахчыванской Автономной Республики; определение положения северного геомагнитного полюса Земли в триасовый период; оценка горизонтальных перемещений и параметров вращения тектонических блоков; а также реконструкция геологической эволюции региона и его палеотектонического развития на основе палеомагнитных данных. Научная значимость настоящего исследования заключается в том, что палеомагнитные методы являются единственным количественным инструментом, позволяющим реконструировать палеотектоническую обстановку и оценивать относительные вращения различных геологических структур.

Настоящая работа представляет собой первое комплексное палеомагнитное исследование, выполненное в Нахчыванском регионе (39,5° с.ш., 45,3° в.д.), в котором палеомагнитные направления триасовых осадочных пород были определены с использованием полного размагничивания и метода анализа главных компонент (Principal Component Analysis, PCA). Полученные результаты хорошо согласуются с ранее опубликованными палеомагнитными данными из соседних регионов и стратиграфически сопоставимых триасовых разрезов, что подтверждает региональную согласованность и надёжность полученного палеомагнитного материала.

Ключевые слова: магнитная восприимчивость, стратиграфическое деление, геолого-геофизический анализ, разрезы Тананам, триасовый период

NAXÇIVAN MUXTAR RESPUBLİKASININ TRIAS ÇÖKÜNTÜLƏRİNİN MAQNİTOSTRATİQRAFİK ŞKALALARININ KORRELYASIYASI VƏ PALEOMAQNİT XARAKTERİSTİKASI (AZƏRBAYCAN, İLKİN MƏLUMATLAR)

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Xülasə. Məqalədə Naxçıvan Muxtar Respublikası ərazisində Mezozoy (Trias) çöküntülərinin öyrənilməsinin nəticələri, yer qabığının horizontal hərəkətləri və problemin həlli yolları təqdim olunur. Axura və Tənənəm kəsilişlərində paleomaqnit tədqiqatları aparılmış və Trias çöküntüləri öyrənilmişdir. Paleomaqnit məlumatları əsasında ilkin olaraq blokların kinematik parametrləri və onların horizontal yerdəyişmələri müəyyən edilmişdir. Oxşar nəticələr komponentlərin xarakteristikası zamanı da əldə olunmuşdur: gillər və xırdadənəli qumdaşları daha stabil, iri dənəli süxurlar metastabil, iri dənəli qumdaşları, dolomitlər və s. isə qeyri-sabitdir.

Maqnit təmizlənməsi prosesində maqnitlənmənin sabit komponentləri ayrılır. Orta hesabla onların istiqaməti kəskin üsulu ilə müəyyən edilən maqnitlənmə istiqaməti ilə üst-üstə düşür. Kəsilişlərdə düz və tərs maqnitlənməyə malik

süxurların müntəzəm növbələşməsi müşahidə olunur. Zaman və temperatur üzrə təmizlənmədən, həmçinin mərhələli maqnit təmizlənməsindən sonra Axura və Tənənəm kəsilişlərində həm düz, həm də tərs maqnitlənməyə malik süxurlar eyni istiqaməti alır. Bu, Jn-un sinxronluğunu və təmizlənmədən sonra Jn-də ikinci dərəcəli maqnitlənmə komponentlərinin olmadığını göstərir.

Bu tədqiqatın məqsədi Naxçıvan Muxtar Respublikası ərazisində aşkar edilmiş Trias çöküntü süxurlarının paleomaqnit xüsusiyyətlərini öyrənmək; bu geoloji dövrlərdə Yerin şimal geomaqnit qütbünün mövqeyini müəyyənləşdirmək; tektonik blokların üfüqi yerdəyişmələrini və fırlanma parametrlərini qiymətləndirmək; paleomaqnit məlumatlara əsaslanaraq bölgənin təkamülü və paleotektonik proseslərinin yenidən qurulması.

Apardığımız paleomaqnit tədqiqatlarının aktuallığı və əhəmiyyəti ondan ibarətdir ki, yalnız bu üsul vasitəsilə paleotektonik şəraiti müəyyən etmək və müxtəlif geoloji strukturların bir-birinə nisbətən fırlanmasını kəmiyyətcə qiymətləndirmək mümkündür.

Bu tədqiqat, tam demaqnitləşmə (maqnisizləşdirmə) və əsas komponentlərin analizi (PCA) metodlarından istifadə etməklə Trias yaşlı çökmə süxurların paleomaqnit istiqamətlərinin əldə edildiyi, 39.5° şimal enliyi və 45.3° şərq uzunluğunda yerləşən Naxçıvan bölgəsində aparılmış ilk işdir. Bununla belə, Naxçıvan bölgəsindən əldə olunan nəticələr qonşu regionlar və eyni yaşlı kəsilişlər üzərində aparılmış əvvəlki tədqiqatlarla yüksək dərəcədə uyğunluq təşkil edir.

Açar sözlər: maqnit həssaslığı, stratigrafik bölgü, geoloji-geofiziki analiz, Tənənəm kəsilişləri, Trias dövrü