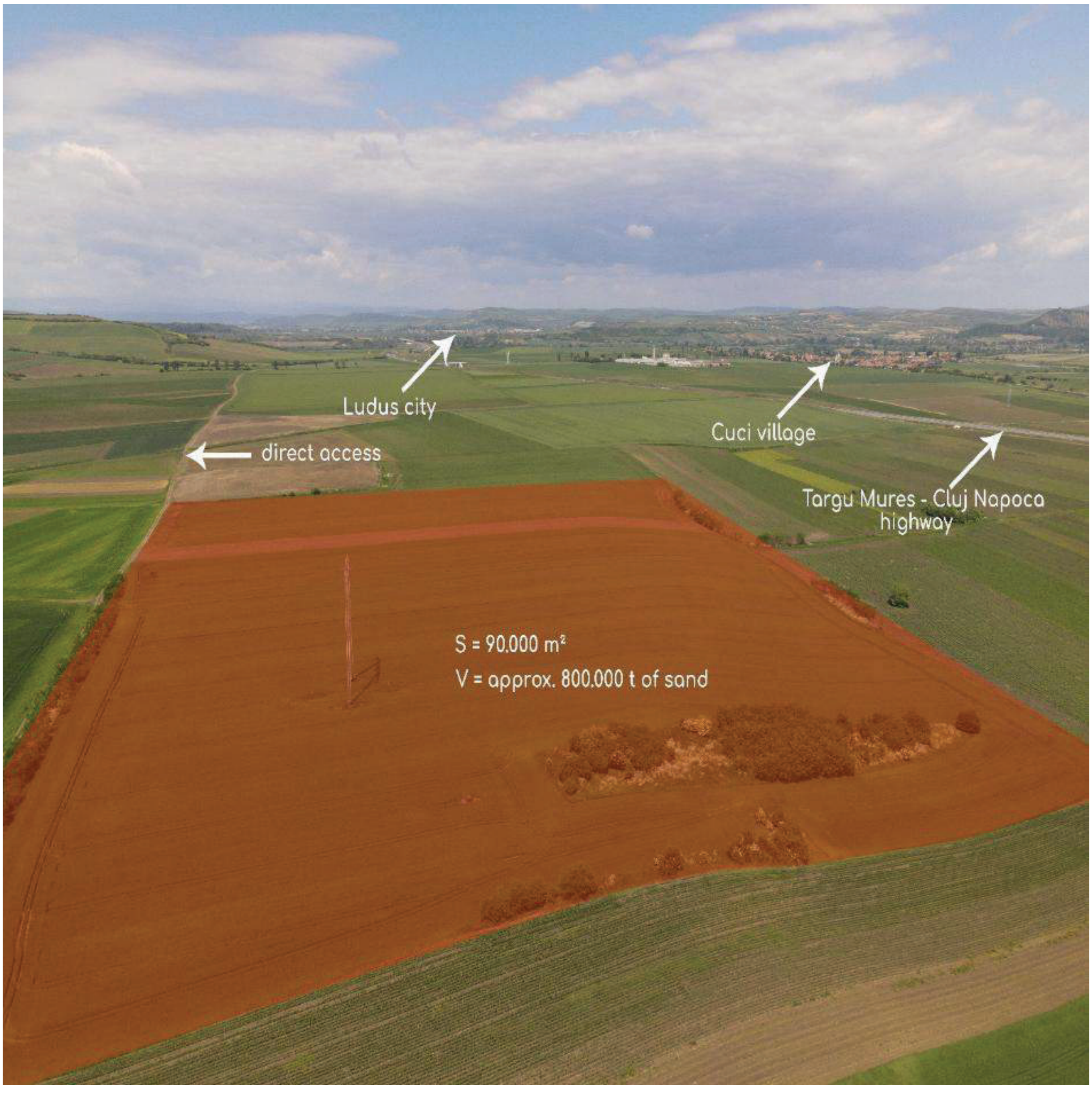
Cuci sand deposit geo-location *46.443479, 24.178826*, at a height of 300m above sea level, a surface of 9ha incorporating a resource of approx. *800,000* metric tons of high-grade sand for the construction industry. It falls under the fine quality of construction sands which are found near river banks and streams. This sand is white-gray and is one of the fine-graded sands used in the construction of buildings. They are mainly used in concrete and masonry work. They can also be used for RCC, plastering, and many other brick or block works. This sand consists of a smoother texture and a better shape of grains. The river or natural sand demands very less water. River sand, since naturally obtained, is cheaper than silica or manufactured sands. It is a naturally occurring fine granulation material with a nominal size of fewer than 5 millimeters with a high percentage of fines on the 75 micron sieve. It is used in plastering walls that offer a top-notch finish. It’s fine particles make the walls smoother and stronger from the core. As a result, it holds wall colours more prominently for years. However, fine sand is used with coarse sand to make the walls more concrete and withstand heavy building structures.

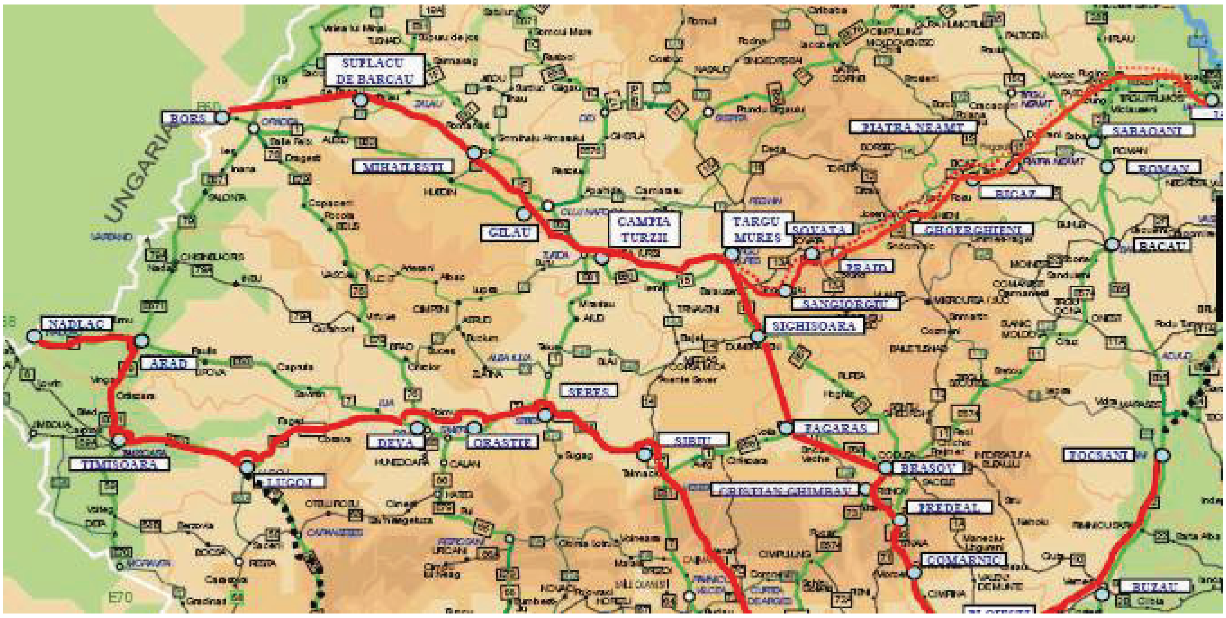


12B. fig. – Cuci sand deposit location

Neaua Sand Deposit (Thesaur Ownership): 360m -540m elevation

The primary sand resource of Thesaur, designated as the Neaua Silica Sand Quarry, is situated geomorphologically in the central region of Transylvania, within Mureș County. This location is precisely on the northern flank of the Târnavelor plateau, positioned between the Niraj and Târnava Mică rivers. The quarry is strategically located on the left bank of the Neaua stream, encompassing altitudinal coordinates ranging from 360 to 540 meters above sea level, indicative of a hilly terrain.

The proximal urban centers to the Neaua Silica Sand Quarry include Târgu Mureș (approximately 30 kilometers), Sovata (approximately 30 kilometers), Târnăveni (approximately 45 kilometers), and Sângeorgiu de Pădure (approximately 5 kilometers). Infrastructure developments significantly enhance the logistical accessibility of the quarry. The ongoing construction of the North Transylvanian Highway is situated approximately 25 kilometers from the quarry as of 2023. Furthermore, the planned Târgu Mureș - Iași highway, projected to be completed by 2026, will be constructed approximately 10 kilometers from the quarry site, thereby augmenting the quarry's connectivity and potential for efficient material transportation (*refer to Figure 13 for spatial details*).

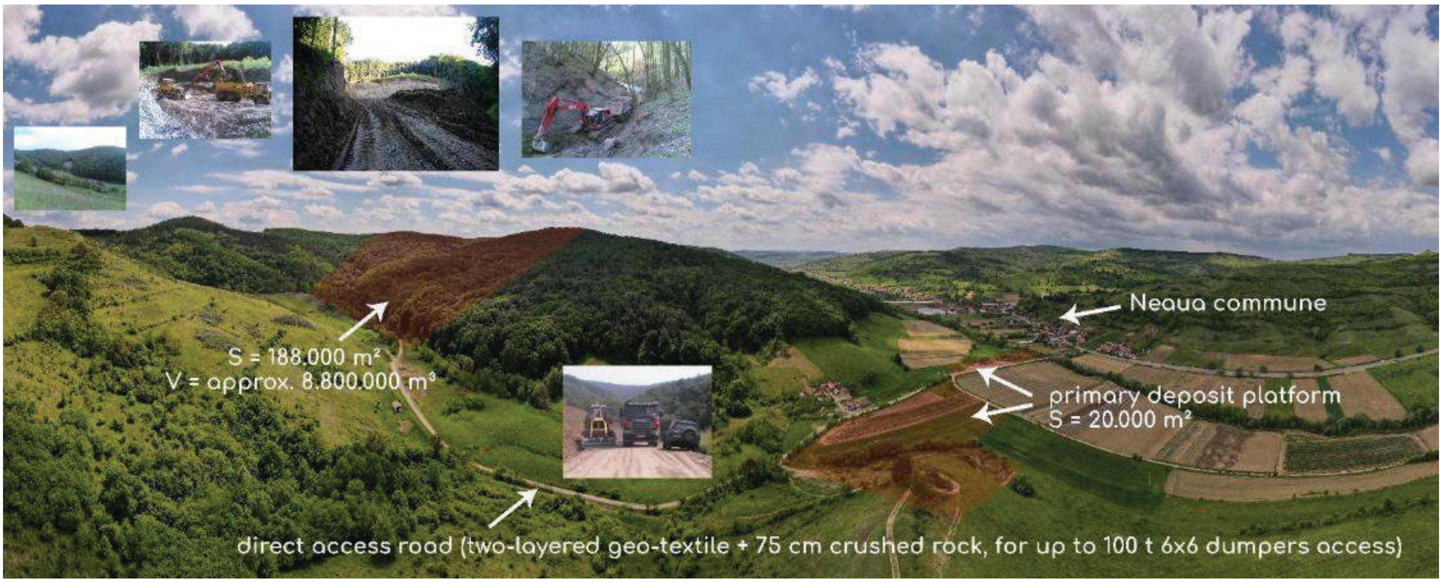


13. fig. – Romanian highways network

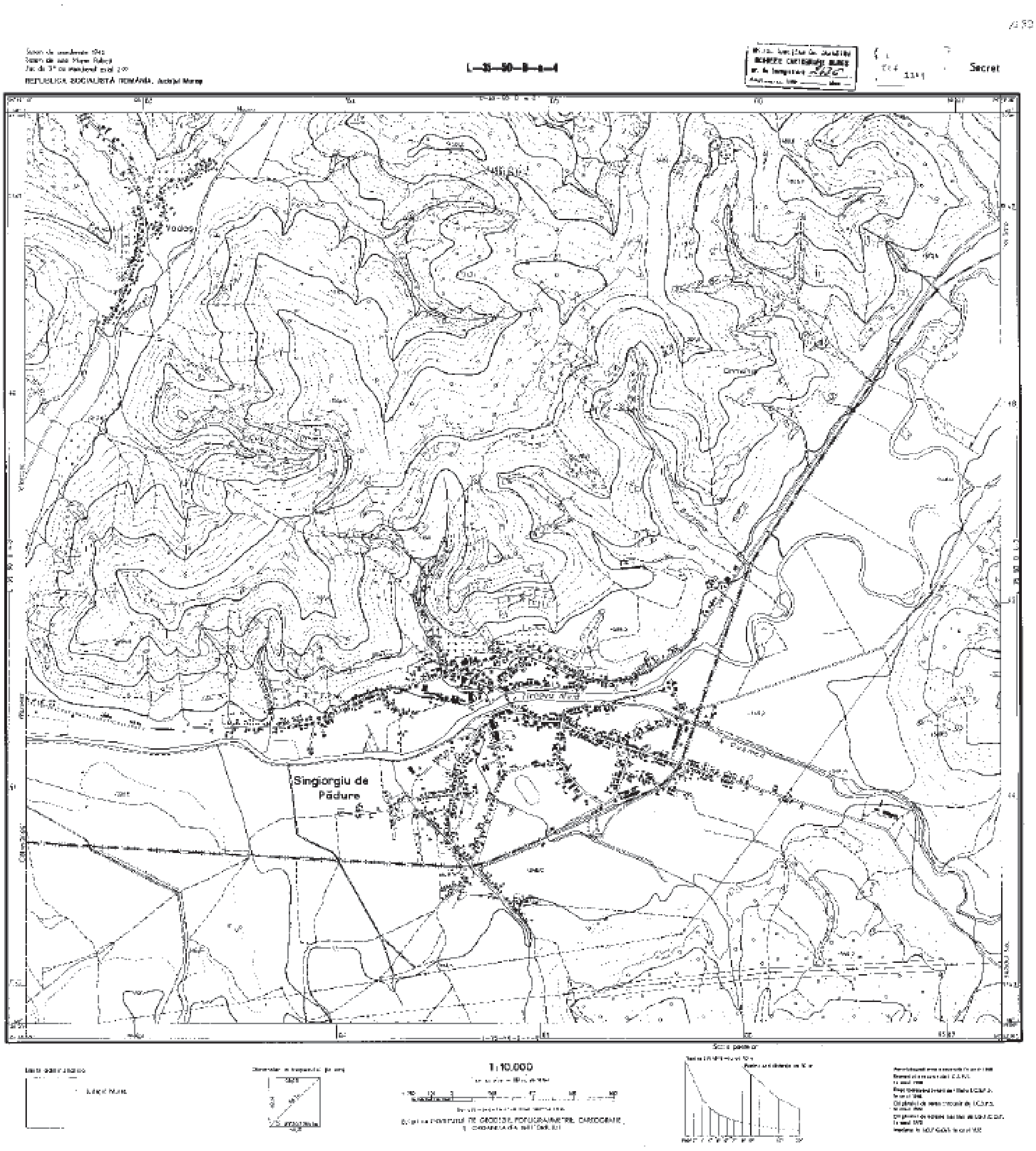
The Neaua sand deposit exhibits an altitudinal range from 360 to 540 meters above sea level, encompassing an approximate total area of 47 hectares (*of which 21ha explored*). Conservative estimates of the sand resource, as delineated by the 2007 geological report and reviewed by the 2023 Void & Quarry Modelling conducted by preeminent industry experts SMinPro (Austria) and RockOptions (United Kingdom), are as follows:

- **Silica Sand:** The volumetric estimate for the silica sand layers within the deposit stands at *16,000,000 cubic meters*, translating to approximately *31,200,000 net metric tons*.
- **Clay:** The volumetric estimate for the clay layers within the deposit is quantified at *2,800,000 cubic meters*, equivalent to approximately *5,500,000 net metric tons*.

These estimates reflect a methodical review and analysis of the available geological information for the site, limited by land ownership boundaries and reasonable geotechnical assumptions, providing a good degree of accuracy in the quantification of the available mineral resources.

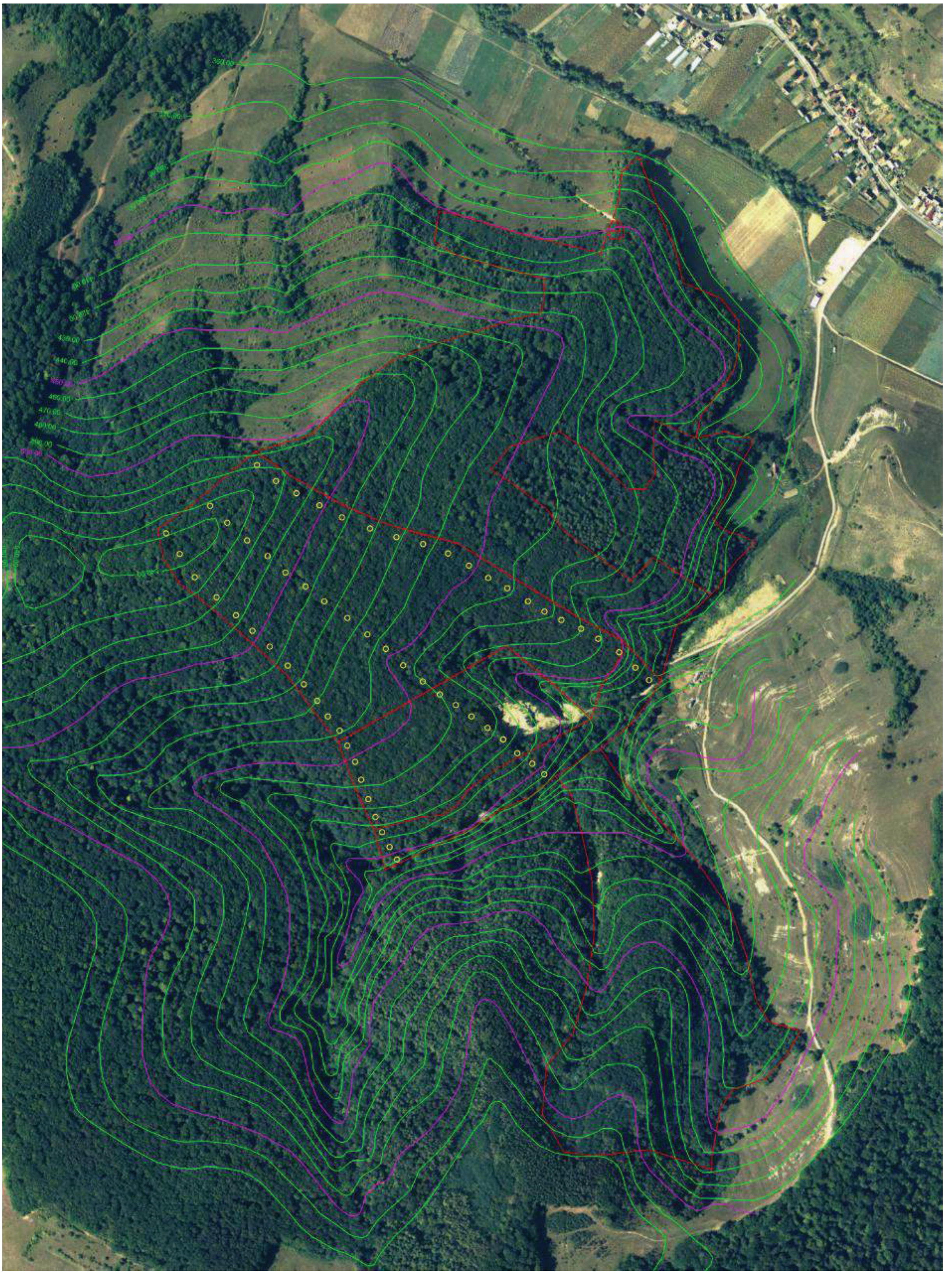


14. fig. – Neaua sand deposit location



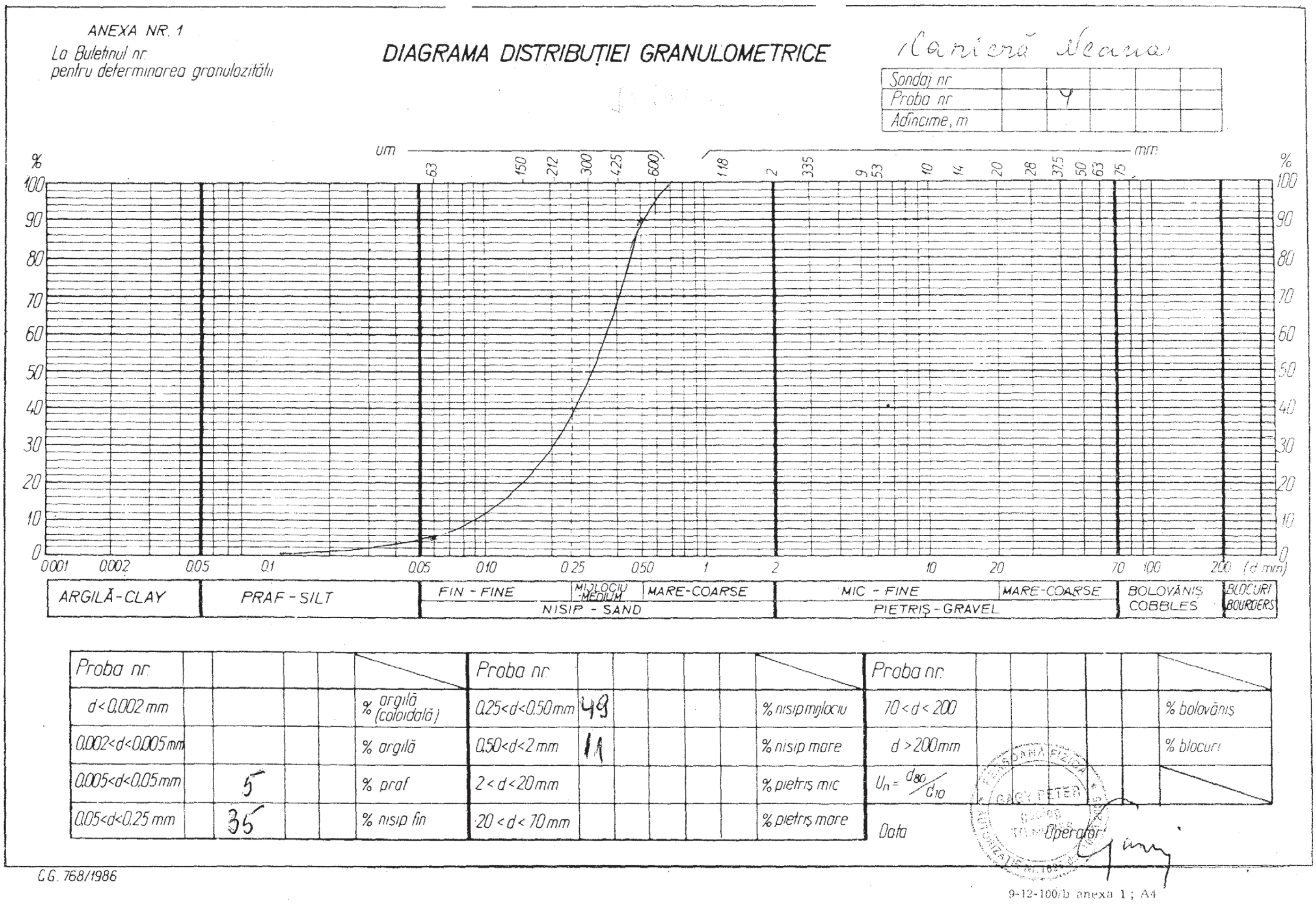
15. fig. – Neaua sand deposit geological altitude curves

The geological profile of the Neaua quarry has been delineated through a comprehensive topographical study encompassing the entire area, integrated with a geological assessment of the stratigraphic column of the deposit, as documented in the 2007 geological report. This assessment involved a systematic series of 60 geological drillings, each reaching a depth of 6 meters and covering c.21 hectares of the deposits 47 hectares. The borehole collar positioning, as presented below, facilitated the determination of a relatively continuous vertical profile of the deposits stratigraphy.



The granulometric distribution of the Neaua sand deposit exhibits considerable variability, as illustrated in *Figure 16*. The sand is predominantly composed of fine particles, ranging in size from 0.05 to 0.50 mm, which significantly enhances its intrinsic value. The deposit, comprising interbedded units of sand and clay, stratified into distinct layers of varying thickness.

2007 Geological studies determined that the average thickness of the discrete sand layers is approximately 3.3 meters (minimum reported thickness 0.80m and maximum reported thickness 5.40m). In certain areas, sand layers with a thickness of up to 20 meters are observable to the naked eye. This clear stratification and substantial layer thickness facilitate efficient extraction processes and underscore the deposit's economic potential.



16. fig. – Neaua specific Particle Size Distribution Diagram

(Grain size analysis** is a typical laboratory test conducted in the soil mechanics field. The purpose of the analysis is to derive the particle size distribution of soils. The analysis is conducted via two techniques. **Sieve Grain Size Analysis** is capable of determining the particles' size ranging from 0.002 mm to 200 mm. Any categorization of grains larger than 100mm will be conducted visually whereas particles smaller than 0.075 mm can be distributed using the **Hydrometer Method**. The test is carried out with the utilization of a set of sieves with different mesh sizes. Each sieve has squared shaped openings of a certain size. The sieve separates larger from smaller particles, distributing the soil sample in 2 quantities. The grains with diameters larger than the size of the openings are retained by the sieve, while smaller diameter grains pass through the sieve. The test is conducted by placing a series of sieves with progressively smaller mesh sizes on top of each other and passing the soil sample through the stacked sieve "tower". Therefore, the soil particles are distributed as they are retained by the different sieves. A pan is also used to collect those particles that pass through the last sieve.**)

The analysis of the physical and chemical composition of the sand was carried out, first by the ***Faculty of Mining of the University of Petrosani***. The tests were carried out by ***Prof. Dr. Ing. Nicolae Ungureanu***. According to the published official sample bulletins, Neaua Sand Particle Size Distribution and afferent quantities in (*%*) are as follows:

Size (mm)	***0.002 - 0.005***	***0.005 - 0.050***	***0.050 - 0.250***	***0.250 - 0.500***	***0.500 - 2.000***	***2.000 - 20.000***
1. Sample	1%	7%	41%	34%	16%	1%
2. Sample	2%	6%	37%	40%	15%	-
3. Sample	-	6%	33%	42%	19%	-
4. Sample	-	5%	35%	49%	11%	-

1. Sample

Proba nr			Proba nr			Proba nr		
d<0.002 mm		% argilă (coloidală)	0.25<d<0.50 mm	34	% nisip mijlociu	70<d<200		% bolovăniș
0.002<d<0.005 mm	1	% argilă	0.50<d<2 mm	16	% nisip mare	d>200 mm		% blocuri
0.005<d<0.05 mm	7	% praf	2<d<20 mm	1	% pietriș mic	$U_n = \frac{d_{60}}{d_{10}}$		
0.05<d<0.25 mm	41	% nisip fin	20<d<70 mm		% pietriș mare	Data	Operator	

2. Sample

Proba nr			Proba nr			Proba nr		
d<0.002 mm		% argilă (coloidală)	0.25<d<0.50 mm	40	% nisip mijlociu	70<d<200		% bolovăniș
0.002<d<0.005 mm	2	% argilă	0.50<d<2 mm	15	% nisip mare	d>200 mm		% blocuri
0.005<d<0.05 mm	6	% praf	2<d<20 mm		% pietriș mic	$U_n = \frac{d_{60}}{d_{10}}$		
0.05<d<0.25 mm	37	% nisip fin	20<d<70 mm		% pietriș mare	Data	Operator	

3. Sample

Proba nr			Proba nr			Proba nr		
d<0.002 mm		% argilă (coloidală)	0.25<d<0.50 mm	42	% nisip mijlociu	70<d<200		% bolovăniș
0.002<d<0.005 mm		% argilă	0.50<d<2 mm	19	% nisip mare	d>200 mm		% blocuri
0.005<d<0.05 mm	6	% praf	2<d<20 mm		% pietriș mic	$U_n = \frac{d_{60}}{d_{10}}$		
0.05<d<0.25 mm	33	% nisip fin	20<d<70 mm		% pietriș mare	Data	Operator	

4. Sample

Proba nr			Proba nr			Proba nr		
d<0.002 mm		% argilă (coloidală)	0.25<d<0.50 mm	49	% nisip mijlociu	70<d<200		% bolovăniș
0.002<d<0.005 mm		% argilă	0.50<d<2 mm	11	% nisip mare	d>200 mm		% blocuri
0.005<d<0.05 mm	5	% praf	2<d<20 mm		% pietriș mic	$U_n = \frac{d_{60}}{d_{10}}$		
0.05<d<0.25 mm	35	% nisip fin	20<d<70 mm		% pietriș mare	Data	Operator	

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MINERALOGICAL-PETROGRAPHIC ANALYSIS BULLETIN

Sample no. 4 (four)
Sampling (harvesting) place: the hilly area of Neaua commune
Geological structure: terrace deposits originating from the Quaternary (middle and late Pleistocene).

I. MACROSCOPIC ANALYSIS

1. Rock type: sedimentary, epiclastic (detritic), psamo-siltite (arenite-siltite).
2. Structure: non-homogeneous (psamitic and siltstone), SR (subrounded), SA (subangular), R (rounded) and A (edgy-angular),
3. Texture: mechanical, torrential.
4. Color: white-light gray
5. Components: subrounded, rounded, subangular and angular quartz grains, fine powders and crystals of calcite, rare fine lamellae of muscovite and sericite, sporadic lithic fragments
6. Acid reaction: calcium carbonate reacts strongly with diluted hydrochloric acid (HCl).

II. MICROSCOPIC ANALYSIS

1. The structure of the components: psammitic (arenitic) and siltitic (siltitic) for quartz, siltitic for calcite and lepidoblastic for lithic fragments.
2. The texture of the components: the unstratified and poorly sorted microtexture of torrential type, shale (oriented) for the lithic fragments.
3. The mineralogical composition of the constituent components:

- quartz, calcite, sericite, muscovite, heavy minerals. Quartz, graphite, chlorite, sericite – in the lithic components.

3.1. The quartz (SiO_2) in this sample has a higher rolling degree. Subangular and subrounded granules predominate. As in the other analyzed samples, it is the predominant mineralogical component (80 – 90%). From the granulometric point of view, the medium sort (0.5 – 0.25 mm) predominates over the fine (0.25 – 0.125 mm). Clean quartz grains are in approximately equal proportion to those covered by calcitic powder and sporadically by limonitic films.

3.2. Calcite ($CaCO_3$) is also in this sample in a significant percentage (7 – 17 %). Crustal and free calcite from the rock mass is very finely crystallized (0.125 – 0.065 mm).

3.3. The lithic fragments do not exceed 2% of the total components and consist of quartz-sericite phyllites represented by subrounded and subangular tabular shapes, frequently covered by carbonate powder.

3.4. The micas (muscovite and sericite) consist of fine lamellae (0.25 – 0.125 mm) and do not exceed 1% of the rock composition.

4. Name of the rock: POLYMICTIC QUARTZ-CALCITIC SAND.

Analyst:
Prof.univ.dr.ing. UNGUREANU NICOLAE

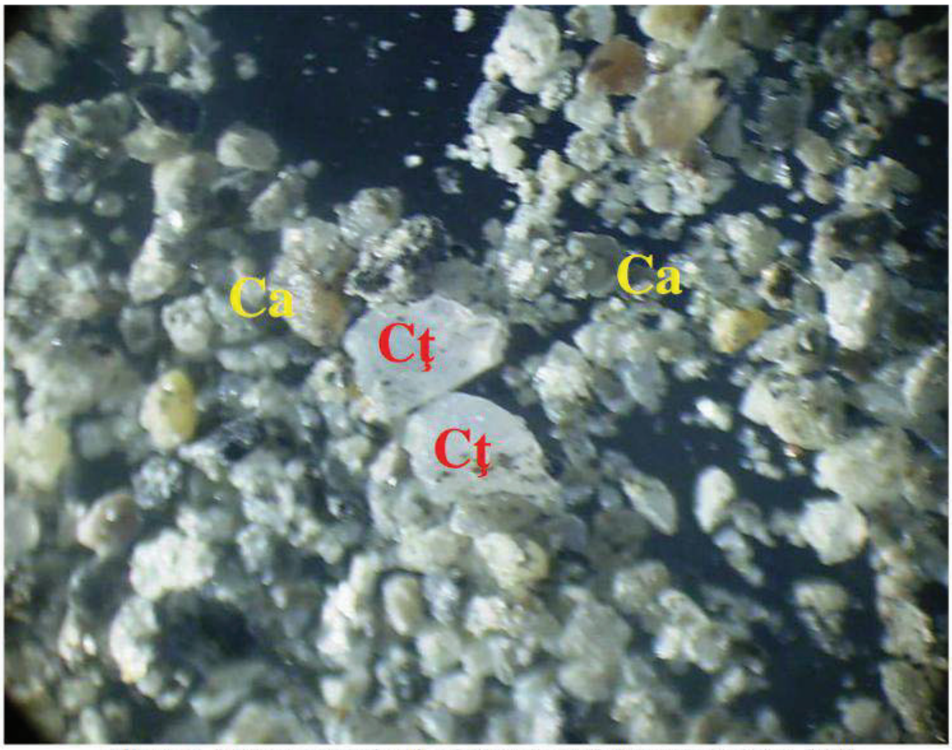

Photo no. 4 Quartz covered with calcite crusts and clean quartz grains. (x10)
Ca – Calcite; Cţ – Quartz

Antal Noémi, authorized translator, Furtunei street, no. 15, Târgu – Mureş locality, Mureş county, Romania, phone no. 0040-753-836.816, with the authorization Nr. 21093/06.07.2010 - Ministry of Justice, certify this translation's conformity with the original text redacted in Romanian language, which has been seen by me.

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TÂRGU MUREŞ - ROMÂNIA

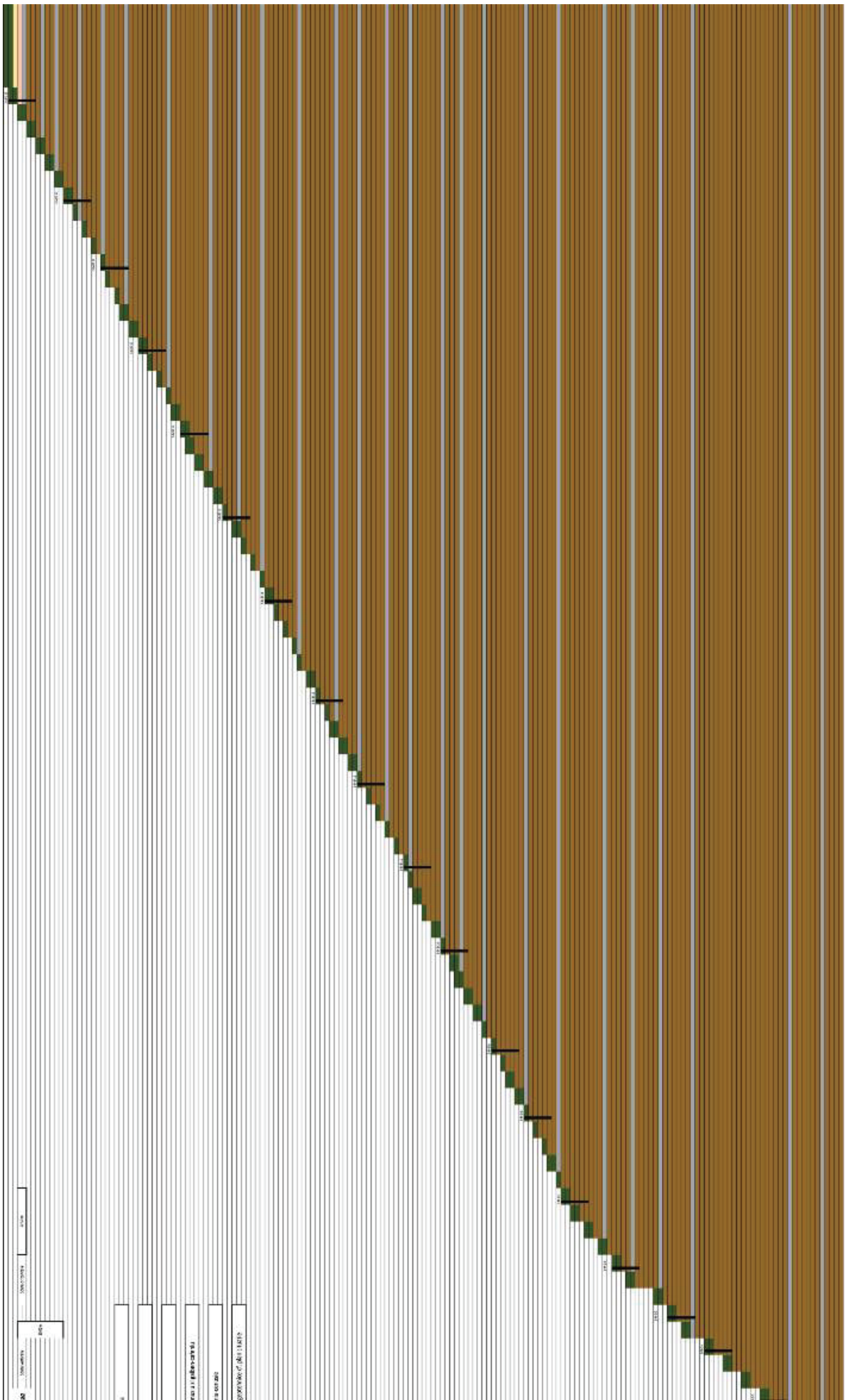
The Neaua Silica Sand deposit is situated in a hilly region, with elevation differences ranging from 360 to 540 meters above sea level, indicative of terrace deposition during the Middle and Late Pleistocene epochs, as per detailed analyses. The overburden layer, consisting of surface cover earth and humus, varies in thickness from 0.50 to 2.90 meters and is characterized by low-quality forest vegetation.

In 2007, comprehensive assessment studies were performed over an area of 9,000 square meters for testing purposes. These studies facilitated the obtaining of the necessary integrated environmental and extraction permits. Subsequent activities included logging, removal of overburden and extraction of raw sand, as documented in *Figures 17 and 18*.

17. fig. - Neaua sand quarry – 9.000 m2 pilot project for testing purposes

18. fig. Neaua sand quarry – 9.000 m2 pilot project for testing purposes

The designated extraction area contains an estimated extractable amount of about 31.2 million tons of quartz containing sand. The maximum annual extraction capacity, constrained by the silica sand washing and processing plant, is planned at a max. of 1,314,000 tons, equivalent to 150 tons per hour (tph). In addition to quartz containing sand, the processing phase yields significant quantities of potentially highly valuable by-products. The primary by-product by quantity is clay, with an estimated resource of approximately 5.5 million metric tons.



19. fig. – Neaua assumed horizontal layering (2007 geological report extract)