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TOPO-CADASTRAL WORKS REGARDING THE REALIZATION OF THE GAS DISTRIBUTION NETWORK IN CONSTANTIN DAICOVICIU

AUTHORS: Student: Paunescu Roxana-Denisa,
***COORDINATOR:* Adrian ȘMULEAC[1]; Mihai SIMON[1]**
University of Agricultural Sciences and Veterinary Medicine, "Regele Mihai I al Romaniei", Timisoara, specialization: Cadastre and Geodesy, IV

***Abstract:**. The research presented in this paper took place in Constantin Diacoviciu commune, Peștere locality, Caras-Severin county in order to obtain the technical reception documentation for obtaining the OCPI approval with the aim of: Establishing natural gas distribution. To perform this work, the SOKKIA GSR 2700 IXC dual frequency equipment was used and the data processing was performed with the Carlson SurvCE software. In addition to Glonass tracking capability, the GSR2700 ISX includes support for the new L2c and L5 GPS signals. The system also offers many additional enhancements, including improved RTK performance, seamless GPS network support with GSM and GPRS / NTRIP, refined multipath migration, and multiple Bluetooth connectivity options. The system is wireless and easy to configure and works in basic and rover modes. The receiver has a display panel and provides sound notification in the field. These notifications are available in several generic languages and tones. The measurements were performed entirely by satellite technology through the Real Time Kinematic (RTK) procedure, receiving corrections from the permanent GNSS Resita station. In the topo-cadastral field - a concern of more than two millennia of people to measure and study the shape and size of our planet - new problems are constantly emerging, problems whose solution must be provided by current and future geodetic engineers.*

• Introduction

• The geodetic network of compaction and lifting is made by triangulation, trilateration, polygonometric road networks or by satellite recordings (Russu A., 1982). They are created to ensure the number of points required for detailed topographic and cadastral measurements. The points of the geodetic lifting networks are determined by forward intersections, retro-intersections, combined intersections, polygonometric routes, with the use of points from the geodetic support and compaction network. The procedure applies exclusively to works for the extension of natural gas systems for connection. The works for making the connections to the system and the works for making the use installations are not subject to the provisions of the Procedure, because they are supported from the applicant's own funds. The works for the extension of the natural gas systems that are provided as the task of the operators within the service concession contracts are carried out by the operators from own funds, considering that the feasibility studies prepared in advance, for the purpose of concession of the service, highlights their economic efficiency.

• Points of entry / exit into / from the natural gas transmission system At the point of entry into the natural gas transmission networks, the system user delivers, by contract, natural gas to the transmission networks of the adjacent systems and starts the transmission of natural gas through the networks. natural gas transmission.

• At the point of exit from the natural gas transmission networks, the system user takes over, by contract, natural gas from the natural gas transmission network to the adjacent systems and completes the natural gas transmission from the transmission system.

• Material and method

• The research presented in this paper was carried out in the commune of Constantin Daicoviciu (Cavaran) located in Caraș-Severin county (figure 1), being located southwest of the Poiana Rusca mountains, in the Timiș meadow at the contact of two depressions, formed by Constantin villages. Daicoviciu (residence), Maciova, Mâtnicu Mare, Peștere, Prisaca and Zăgujeni.

• All the villages have accessible connections with the commune center, as well as between them. The geographical location of Constantin Daicoviciu commune has wide implications on its development in all aspects and the way of life of the population.

• In the documentation phase of the work, the existing situation was analyzed, according to the data and documents held by the owner, in relation to the existing elements in the field and updated information was requested from the Caras-Severin OCPI database. DJ 608 connects Constantin Daicoviciu and Pestere localities.

• The methods used to execute the topo-cadastral work are the following: to determine the coordinates of the points that define the building that is the subject of this documentation and other existing planimetric details in the area of interest, in order to define the cadastral boundaries of the building we used GPS RTK methods service

• The measurements were performed entirely by satellite technology through the Real Time Kinematic procedure ", receiving corrections from the Permanita GNSS Station RESIȚA (RESI).

• ***RESI permanent station***

• *X=426168.097*

• *Y=256908.054*

• *H=256.109*

Fig.1- Area studied

Fig.2-GPS Sokkia GSR 2700 IXC

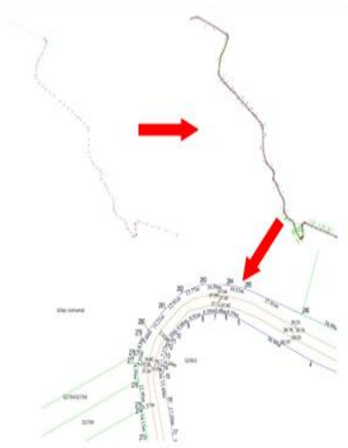
• Results and discussions

• Following the measurements, the following stages were elaborated:

• The first stage that was the basis for the elaboration of the topo-cadastral documentation regarding the realization of the gas distribution network, was, the unloading of the measurements (figure 4) and the processing of the raw data (figure 5).

• Following the processing and processing of raw data, the Topographic Plan was made, which will be the basis for the preparation of topo-cadastral documentation, being presented in Fig.6

• The next step was to frame the building in the area, this method was designed in the following topographic plan which is illustrated in Figure 7.



• Fig.5-Data processing

Fig .6-Topographic plans

Fig.7-Area layout plan

• Conclusions

• *In conclusion, regarding the activity of connection to the natural gas networks of public interest, its main objective was to carry out an evaluation on the competitive mechanisms through which the activities carried out in order to connect the users to the natural gas distribution networks are contracted.*

• *Analyzing the stages of the connection procedures to the natural gas networks, contained in the aforementioned regulations, it emerged that, at present, they have a high degree of similarity. Thus, there is currently a risk that a large part of the natural gas distribution operators will want to continue to carry out, with their own staff, the design, execution and verification activities for the realization of the connection installations. The measurements are made in a short period of time and with a high temporal resolution.*

• *. Thus, one could analyze, evaluate and effectively monitor the proposed programs of measures and the results obtained from the implementation of efficiency measures. The presentation of data in uniform formats will provide operators with a precise and easy to understand synthesis and the analysis of an annual monitoring of programs of measures to improve the efficiency of their networks, proposed by gas operators, and the possibility of adopting appropriate measures to achieve national objectives in the field.*

• *So, it follows from the above that natural gas networks are efficient in everyday life and necessary for everyone.*