

Geologists need view from orbit

Scientists from the Belarusian State University's Geography Department have not especially planned the release of their *Cosmo-Geological Methods of Finding Mineral Deposits* monograph to coincide with the imminent launch of the Belarusian satellite but view it as a good sign. The thesis is a guide for geologists using satellite photographs of the Earth

By Denis Dovlatov

"We've studied the remote sensing systems of the Belarusian craft, so we know that the data it will gather will prove useful in studying the Earth's depths, in the search for mineral resources," explains the Head of the Belarusian State University's Dynamic Geology Department, Doctor of Geographic Sciences, Professor Valery Gubin. "Like the best foreign satellites, the Belarusian craft has two removable systems: providing 2m and 10m resolution."

Our Belarusian geologists already have experience of working with space data, analysing geological sites photographed by various satellites. Some photos show 'dislocation by glacier' — whereby



Deputy Directors of BelNIPIneft Boris Dubinin (left) and Piotr Povzhik near the map of new oilfield

the movement of ancient glaciers significantly changed the face of the Earth, forming long valleys in which sand and gravel accumulated. Glaciers often broke rocks, transporting them great distances — now called 'erratic blocks'. These can be seen easily from space and are of great interest to geologists.

Analysis of space data also helps in the search for oil deposits, since those immense gla-

ciers not only pushed rocks but also pressed hydrocarbons from the depths — distributing them across vast areas. The Pripyat oil and gas fields are the result of glacial movement, so it's reasonable to suppose that further reserves may yet be discovered.

A BSU report on the cosmo-geological search for mineral resources was presented to scientists from the National Academy of Sciences' United Institute of

Informatics Problems, which has played a leading role in creating the Belarusian remote sensing system. Simultaneously, the BSU reported on promising sites which may yield mineral deposits (in Belarusian Poozerie).

Naturally, the main aim of the satellite is not to search for deposits but to gain a true aerial view of the country. This will aid in compiling new geological maps (the previous pictures — taken over

40 years ago — used an obsolete approach). Moreover, the satellite will allow cosmic monitoring of the geological environment: potassium salt mining areas can experience subsidence over mines, marshes are being formed, and we do have some seismic activity. Territories situated close to large pits also deserve attention, as the level of ground water is affected and water erosion is common.

"Space geology offers a new approach to studying the Earth's crust and searching for mineral deposits," says Prof. Gubin. "We study territory, viewing sites of interest from a practical and scientific point of view. For example, our shots depict large features on the Earth's crust — formed about 4 billion years ago: 'nuclears'. They can have a diameter of several hundred kilometres and are only noticeable from space. We've discovered a similar Polesie ring structure in the south of the country, with the help of space pictures. It needs thorough study as, about 300m years ago, it influenced the formation of the Pripyat paleorift, playing an important role in the formation of sites which are now promising sources of oil."

Other areas due to be studied are the Turov Depression (in the Pripyat Graben), which is difficult to penetrate with geo-physical equipment due to its marshes. The Orsha Depression, the suture zone of the Pripyat Graben and Ukrainian Shield are also to be studied, in addition to depths in the north of the country. Many geological objects are likely to reveal their secrets after being photographed from space.

Synagogue to return to its original appearance

One of Europe's oldest synagogues being reconstructed in centre of Grodno

By Iosif Pimenovsky

The majestic synagogue was built by Italian architect Santi Gucci — in Bolshaya Troitskaya Street, in 1578. Being wooden, it was twice burnt by fire, leading to a new stone structure being constructed exactly 110 years ago. The Synagogue closed in 1940 and, half a century later, was transferred to the Jewish community of Grodno. Sadly, funds for restoration have only just become available, so only the roof and floor have previously received attention, alongside the water supply and sewage system. Fortunately, the unique prayer hall, magnificent stucco work and decorative finishes remain in reasonable condition. The lack of central heating makes it cold in winter but services still continue, whatever the temperature.

In recent years, there have been several attempts to start



Reconstruction of synagogue in Grodno

complete reconstruction of the building, but lack of funds always called a halt to proceedings. The situation is now different, so the synagogue may return to its original appearance by the end of the

year, becoming not only a place for prayer but a tourist attraction. It is to have a library, a computer room, meeting rooms and a museum detailing the history of Grodno's Jewish community.

Master gets down to work with pleasure

By Vladimir Ivenkov

Villagers of Zhorovka, in Lyuban District, know how to build cathedral in a week

Nikolay Starikovich's house often receives visitors needing something mended, as he likes to help. The villagers admire his unusual candlesticks and other items made from everyday items. They wonder how a simple farmer, who graduated from construction college, has such a gift.

Nikolay smiles and says that it is a blessing in disguise. He was ill for a long time and couldn't work but was tired of idleness, which inspired him to try his neighbour's hobby of making a small house from the matches. Over the past three decades, he's perfected his skill at creating wonderful things from 'rubbish'. He's proud of his tiny models of churches, made of ordinary matches, paper and multi-coloured telephone cable. Some have found their way to Moscow, Poland and, even, Holland.

I look in surprise at a tiny model of Kiev's St. Sophia's Cathedral, asking, "What's needed

to create this beauty?" He replies, "Inspiration, a hundred boxes of matches and a week of hard work. I've made a special mechanism for making crosses from wire. Cutting and fitting matches is the most time-consuming process. At first, my hands ached a lot but I became used to it..."

Inspiration is his major talent. Young people sometimes ask for lessons and Nikolay is happy to oblige but few stay the course, lacking patience. Pensioner Starikovich loves his work though, finding that it raises his spirits. He comes home, picks up a knife and matches and whatever is troubling him gives way to creativity and fine work. It's restful to the soul. His tiny churches seem to inspire his soul with faith, grace, inspiration and peace.

Not long ago, Nikolay Starikovich's work found appreciation from residents of the district centre, at an exhibition-contest entitled *Veteran's Hands Can Do Anything*. Nikolay returned with a diploma and prize and with a powerful incentive for new work: subtle and spiritual.