ALBRIGHT DISCOVERS PUDDLES IN PARCHIN



Google Maps image of Parchin, showing the dry landscape at over 5000 feet elevation. Note the extensive erosion patterns.

In March, Gareth Porter and I debunked claims that “diplomats” had fed to AP’s George Jahn. The diplomats asserted to Jahn that they had seen satellite photos depicting activity interpreted as attempts to clean the site at Parchin where they believe Iran has carried out work aimed at developing an explosive trigger device for a nuclear weapon.

Perhaps the biggest problem with the depiction of these activities as being aimed at cleaning the site is that, as I pointed out in the post linked above, it is virtually impossible to remove all traces of radioactive materials from a site where they have been used. The Iranians were very quick to point this out as well. No amount of cleaning will remove all of the residual radioactivity from the building or surrounding soil. I also pointed out in my post that no satellite photos purporting to show this cleaning activity had yet been made public.

Yesterday, David Albright and his Institute for Science and International Security dutifully stepped up to deliver what was intended as photographic proof. From Albright’s description:

> The new activity seen in the satellite image occurred outside a building suspected to contain an explosive chamber used to carry out nuclear weapons related experiments (see figure 1). The April 9, 2012 satellite image shows items lined up outside the building. It is not clear what these items are. The image also shows what appears to be a stream of water that emanates from or near the building. Based on new information that the IAEA received, the Agency asked Iran to visit this building at the Parchin site, but Iran has not allowed a visit. IAEA Director General Yukiya Amano noted recently that the IAEA has "information that some activity is ongoing" at the Parchin site [1]. When asked if he was concerned that these activities could be associated with cleansing the site, Amano replied, "That possibility is not excluded…We cannot say for sure because we are not there." The items visible outside the building could be associated with the removal of equipment from the building or with cleansing it. The stream of water that appears to emanate from the building raises concerns that Iran may have been washing inside the building, or perhaps washing the items outside the building.

The idea that Iran would want to wash the building or its contents, presumably in order to remove radioactive contamination from trigger-building experiments, and then just allow the wash water to run onto the ground surrounding the building is laughable on its face. As I noted in my March post, the Iranians pointed out that radioactive contamination can't be eliminated from a site where such work has been carried out. Of course they would know that merely rinsing some of the radioactive material into the ground surrounding the building would

do nothing to hide it from the sensitive detection equipment IAEA would bring to an inspection.

There are two potential explanations for the water seen in the photo labeled April 9, 2012. One is that this could simply be runoff from rain and the other is that this could be from the use of the explosive tank in the synthesis of nanodiamonds. The nanodiamond explanation of use of the explosive tank was first suggested in this post by Moon of Alabama.

Rain Theory

As noted in the photo at the top of this post, Parchin sits at an average elevation of 1570 meters (5150 feet). The landscape is obviously very dry and appears to be dominated by erosion patterns created by rainwater going down the mountainsides. Albright and ISIS have placed the large label for the suspect building in a strategic spot in the April photo, making it impossible to see if there is any water coming from “above” the site of the building in the orientation the photo is presented (also “above” in the apparent direction of flow of the water stream). This is especially important because of the dark line that can be seen around the smaller building at the top in the March photo. Is the dark line trenching around the small building at the top, meant to divert runoff?

The April 9, 2012 date for the photo with the water is important. At this site, historical weather data for Parchin can be found. On April 9 and for several days leading up to it, there is no appreciable rainfall reported. However, if the date on the photo is off by a few days, then rain can enter as a possible explanation. We see that rain began late in the evening of April 11, with 1.9 mm falling from late evening through the end of the day. On the 12th, it rained all day, with an additional 4.3 mm falling. Another 3.8 mm came on top of that through mid-morning on the 13th, but there was an opening in the 9:30 to 12:30 time frame when cloud cover decreased to 9%. A photo taken during that

period very well could have shown runoff going through the area. Alternatively, more rain fell on the 13th, for a total of 5.8 mm that day and 12.0 mm for the 60 hours or so from late on the 11th through the 13th. Although this is only about a half inch, it could well lead to significant runoff in a high desert environment and could perhaps have been seen in a photo as late as the 14th, when it was clear. April is the highest rainfall month for Parchin, averaging 34 mm of rain for the month spread over an average of ten rainy days in the month.

Nanodiamond Theory

As Moon of Alabama pointed out, Vyacheslav Danilenko, whom David Albright and the IAEA accuse of helping Iran to develop an explosive trigger device, is best known for his work in the explosive creation of nanodiamonds. If the suspected large detonation chamber in the building being discussed here actually is being used in nanodiamond work, then it makes sense to take a look at what goes into such an explosion. From a figure caption in this paper in Nature Nanotechnology (free registration required for access), we get this recipe for what goes into the explosion tank:

> To synthesize nanodiamonds, explosives with a negative oxygen balance (for example a mix of 60 wt% TNT ($C_6H_2(NO_2)_3CH_3$) and 40 wt% hexogen ($C_3H_6N_6O_6$)) are detonated in a closed metallic chamber in an atmosphere of N_2, CO_2 and liquid or solid H_2O.

A major component of what goes into the chamber when nanodiamonds are being synthesized is water. Once the solids have been taken out of the water after the blast, the water has no further use and quite likely would be drained. This would make for a very good explanation of what is seen in the April photo and would not represent any sort of attempt at hiding anything. It would merely be the use of the

chamber as designed in line with Danilenko's background.

Not mentioned in Albright's analysis of the building, however, is an interesting apparent change in the roofline through the three photos presented. In the 2011 photo, we see a bright white line along the right side of the suspect building. Note that in this photo, the roof is symmetrical, extending equally to the left and right from the high point. In the March, 2012 photo, however, it appears that the roof to the right side of the high point has been extended out to cover the white line seen in 2011. Although this photo is from a slightly lower angle, the idea of the roof being extended toward the right is supported by the roof looking definitely wider on the the right side of the high point than it is on the left. The white line from 2011 may be a sidewalk, a pipeline for draining the tank or even a concrete footing for the later addition to the building. In the April photo, however, the roof is back to being symmetrical and the extended part of the building, along with the white line, appear to be gone and replaced by the "items lined up outside the building" as labeled by Albright.

At any rate, Albright and ISIS are simply not credible in their claim that water at the Parchin site is evidence of attempts to "cleanse" it. A real attempt at removing all radioactive material would entail razing the building and removing all the soil to a depth of many feet. Any attempt to wash away radioactivity would at least entail catching all of the water and removing it from the site, not allowing it to run into the surrounding soil where the radioactivity would be easy to find.