

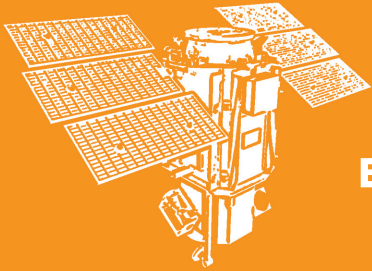


Satellite Sentinel Project

ALERT: HUMAN SECURITY THREAT

BOMBARDMENT: EVIDENCE OF AERIAL AND ARTILLERY ATTACKS IN THE NUBA MOUNTAINS

30 JUNE 2011



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PREPARED BY



Harvard
Humanitarian
Initiative

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Satellite Sentinel Project's (SSP) analysis of DigitalGlobe satellite imagery has found evidence supporting multiple reports that Sudan Armed Forces (SAF) are conducting aerial and artillery bombardment in the Nuba Mountains region of South Kordofan, Sudan.

Fixed wing aircraft consistent with an Antonov-24/26, Yak-40, and two SU-25K Frogfoot ground attack aircraft can be seen at El Obeid airbase as of 28 June. Five helicopters, including four consistent with Hind helicopter gunships, are visible as well.

Each plane is within flying range of recently bombed and strafed targets in South Kordofan and is consistent with the types of planes reported to be involved in the attacks. Planes consistent with SU-25K ground attack aircraft were visible above Kauda on 14 and 23 June, as shown in photographs taken there at the time. A McClatchy Newspapers report dated 16 June cites unnamed aid workers who claim helicopter gunships chased displaced people in the Nuba Mountains.

Fighting positions, including at least two that were constructed after 7 June, are visible around Dilling, including several possible mortar and artillery emplacements. Recently built and reinforced fortifications, including checkpoints, six vehicles consistent with armored reconnaissance vehicles, three vehicles consistent with main battle tanks, and six heavy transport trucks are also visible at Dilling.

RECENT REPORTS OF AERIAL AND ARTILLERY BOMBARDMENT

After initial hostilities in South Kordofan began on 5 June 2011, at least 18 aerial attacks by SAF aircraft in the region have been publicly reported between 7 June and 29 June 2011. The actual number of airstrikes is not known and may be much higher. The towns and villages targeted include Kauda, Kadugli, Dilling, Heiban, Umm Dorain, Umm Serdiba, Saraf el-Gamos, Gumala, Kurchi, and Talodi. Several of these locations have been attacked more than once, and some have been attacked repeatedly - twice a day in some instances. While the number of casualties is unknown, there are numerous reports of civilians, including women and children, being killed, wounded, and displaced by the aerial attacks.

SAF artillery attacks reportedly began in the Nuba Mountains on or around 7 June 2011. Areas targeted by shelling allegedly include Kadugli, Kauda, and Heiban. Unconfirmed reports allege that Sudan People's Liberation Army (SPLA) forces have been engaged in mortar attacks in and around Kadugli.

FINDINGS

- Four fixed-wing aircraft, including one plane consistent with an Antonov-24/46 and two SU-25K ground attack aircraft, and five helicopters, including four consistent with Hind gunships, are present at El Obeid airbase as of 28 June.
- Newly built and recently reinforced fighting positions, including some which potentially contain artillery, are present in and around Dilling. Checkpoints are also visible.

CONCLUSIONS

- The types of planes present at El Obeid SAF airbase support allegations that Antonov and ground strike fighters are bombarding targets in South Kordofan.
- The presence of both artillery units and positions consistent with mortar and artillery firing positions support allegations of artillery bombardment in South Kordofan.

ABOUT THE PROJECT

Satellite Sentinel Project conducts regular, intensive monitoring of Sudan to assess the current human security situation and identify potential threats to civilians.

Analysis prepared by Harvard Humanitarian Initiative. Imagery and additional analysis provided by DigitalGlobe. Cover image of bomb fragment in Gumala provided courtesy of the Enough Project.



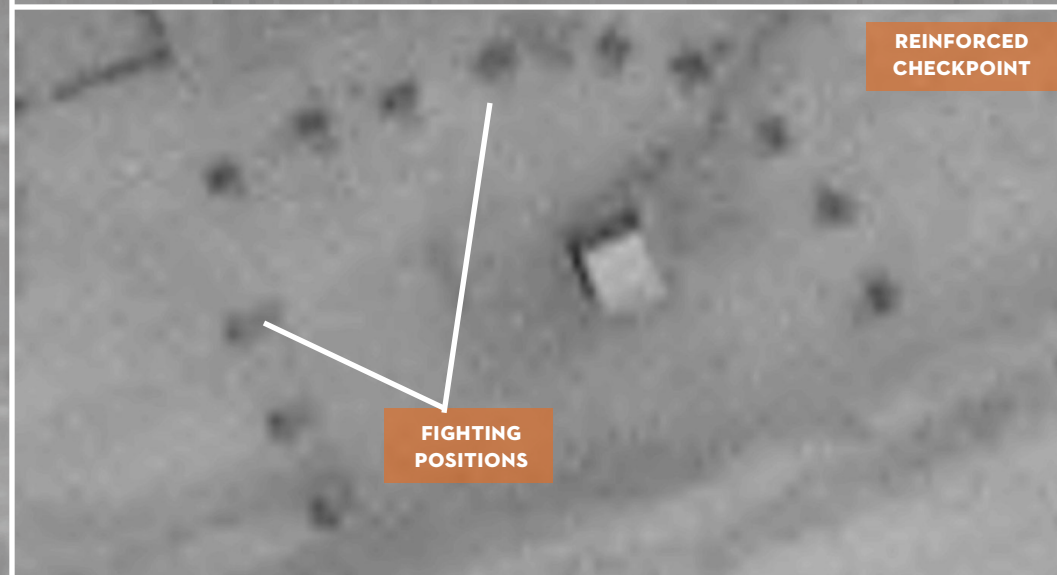
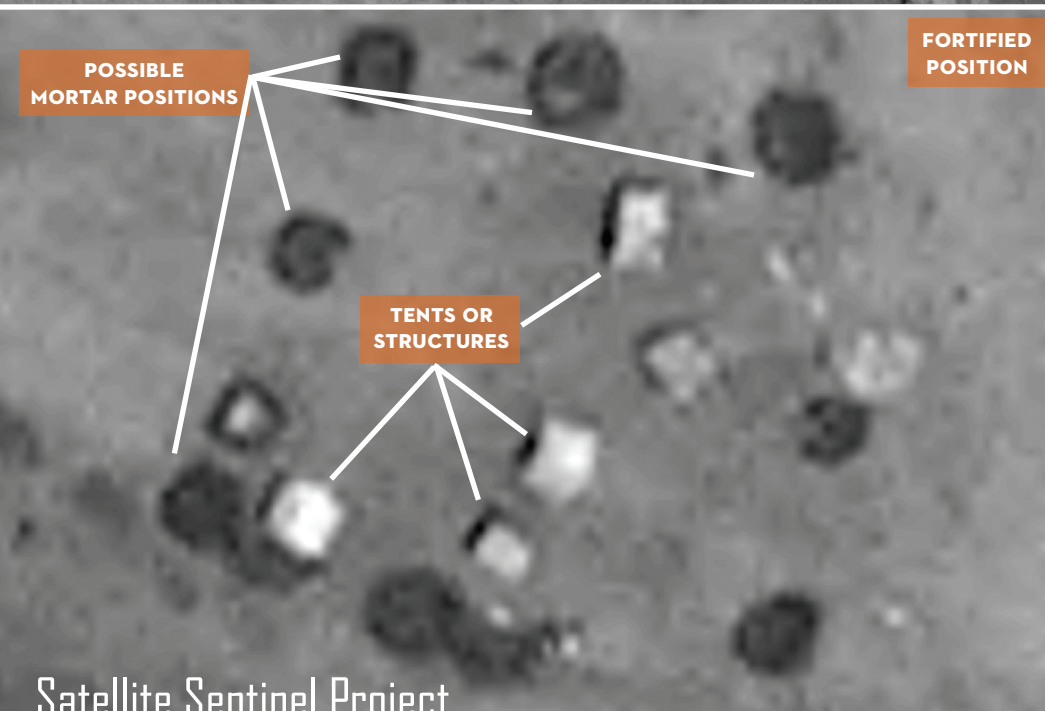
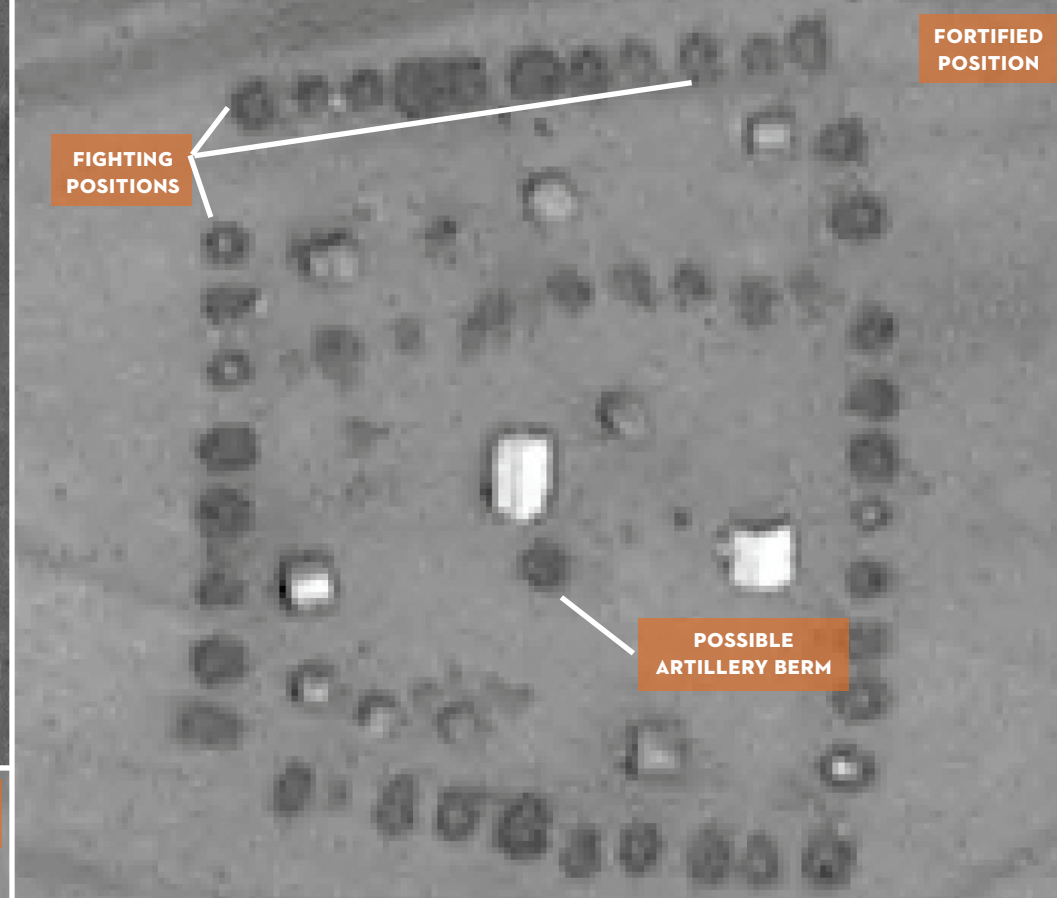
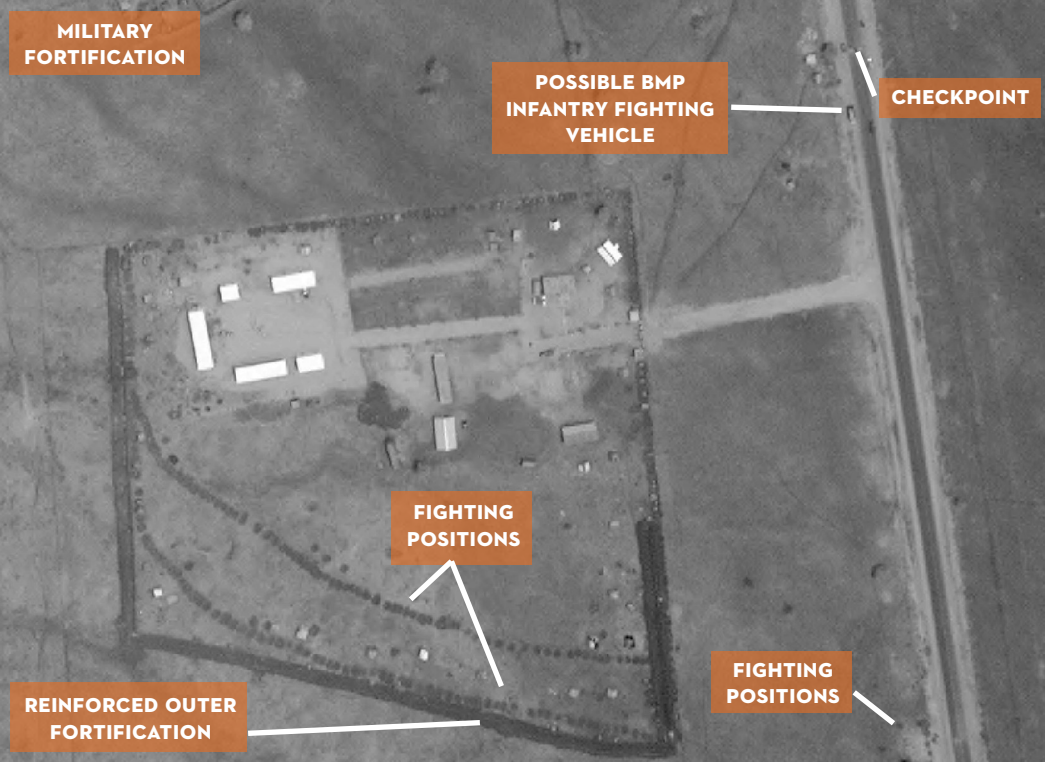
BOMBARDING THE NUBA

Ground reports and photographs from civilians in the Nuba Mountains confirm that Sukhoi-25K Frogfoot (SU-25K) aircraft consistent with those seen at the SAF-controlled airbase at El Obeid have intentionally bombed civilians in Kauda and elsewhere.

The SU-25K, often misidentified as MiG fighters by the local population in Sudan, is a ground attack plane capable of firing missiles, dropping bombs, and engaging in low-altitude, close-range combat with ground units.

With the external fuel tanks visible in these photographs, the SU-25K has a combat range of 500km, allowing aircraft of this type to potentially attack the Nuba Mountains if based at El Obeid.





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SAF FIGHTING POSITIONS, CHECKPOINTS SURROUNDING DILLING | DILLING, SOUTH KORDOFAN

27 JUNE 2011 | FIG 3



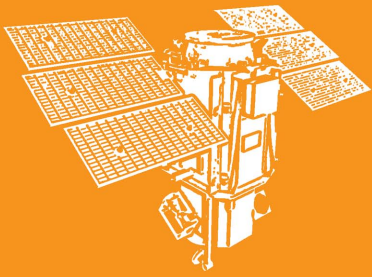
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27 JUNE 2011 | FIG 4
TANKS AND NEW FIGHTING POSITION AT SAF BASE | DILLING, SOUTH KORDOFAN



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ABOUT THE PROJECT AND THE PARTNERS

THE WORLD IS WATCHING BECAUSE YOU ARE WATCHING.

The Satellite Sentinel Project – conceived by George Clooney – combines satellite imagery analysis and field reports with Google's Map Maker technology to deter the resumption of war between North and South Sudan. The project provides an early warning system to deter mass atrocities by focusing world attention and generating rapid responses on human rights and human security concerns.

This project is the result of an unprecedented collaboration between Not On Our Watch, the Enough Project, Google, DigitalGlobe, the Harvard Humanitarian Initiative, and Trellon, LLC.

The project works like this: Commercial satellites passing over the border of northern and southern Sudan are able to capture possible threats to civilians, observe the movement of displaced people, detect bombed and razed villages, or note other evidence of pending mass violence.

Google and Trellon design the web platform for the public to easily access the images and reports. Harvard Humanitarian Initiative provides system-wide research and leads the collection, human rights analysis, and corroboration of on-the-ground reports that contextualizes the satellite imagery. The Enough Project contributes field reports, provides policy analysis, and, together with Not On Our Watch, and our Sudan Now partners, puts pressure on policymakers by urging the public to act. DigitalGlobe provides satellite imagery and additional analysis.

The Satellite Sentinel Project marks the first sustained, public effort to systematically monitor and report on potential hotspots and threats to security along a border, in near real-time (within 24-36 hours), with the aim of heading off humanitarian disaster and human rights crimes before they occur.

Not On Our Watch – co-founded by Don Cheadle, George Clooney, Matt Damon, Brad Pitt, David Pressman, and Jerry Weintraub – has provided seed money to launch the project. To support the Satellite Sentinel Project, donate at www.satsentinel.org.

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