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~~(S)~~ NATIONAL RECONNAISSANCE OFFICE
WASHINGTON, D.C.

THE NRO STAFF

May 19, 1971

[Handwritten signature]
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MEMORANDUM FOR THE RECORD

SUBJECT: Visit to Congressman Mark Andrews

At the request of SAFLL I accompanied a group to Congressman Mark Andrews' office on May 18. The purpose of the meeting was to advise Congressman Andrews as to the origin of two items of space debris which had been recovered on a North Dakota farm. Several objects had fallen onto North Dakota soil over a 50 mile track some-time between April 10 and April 15. Two items were sent directly to the Congressman by one of the farmers with the understanding that the farmer would be assured of being able to retain possession following the conclusion of any necessary investigations.

The other members of the party included

[Redacted box]

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In Mr. Andrews' office it was ascertained by the FTD people that the two objects, both cold gas spheres, one about 53 inches in circumference and the other about 18 inches in circumference, were of U. S. origin. Congressman Andrews was interested in obtaining information about the nature of the spacecraft so that he could satisfactorily respond to his constituents. Although this event had not received wire-service coverage, the local papers have been giving it much attention. A Fargo, N. D. article is attached.

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Mr. Andrews has been briefed on our program as a member of the House Appropriations Committee. The Committee Staff Chairman was contacted informally by the NRO Staff prior to our visit and apprised of the fact that the mission of the spacecraft, if it were of U.S. origin, was likely a sensitive one. Mr. Andrews apparently took this fact into account for he stated that his desires were not to impinge on any classified areas but, by the same token, was in a position where he had to provide his constituents as much information as possible.

After FTD had stated with high assurance that the spheres were indeed of U.S. origin and following a brief picture taking session of Congressman Andrews, his staff and the spheres, Congressman Andrews asked me, off to the side, if I would be able to provide him with a briefing on the nature of the mission. I offered to provide him a broad description of the mission in private. After excusing the others from the room Congressman Andrews and I discussed broadly the nature of the photographic mission from which we suspect the spheres emanated. We are fairly certain since the spheres are of U.S. origin that they come from CORONA Mission 1114. That mission was launched on March 24 and was tracked in decay by NORAD on April 12. It was predicted to impact in northern Canada. Congressman Andrews expressed an appreciation for protecting the nature of our program and stated that he understood the difficulty encountered in responding to his request. I offered to provide him with as much information as possible about the Agena vehicle and assured him that we would respond to his request with all possible haste.

During the course of our informal conversation, he let it be known that he was extremely sympathetic to the military having attended West Point himself. He confided that his real problem was one of pacifying his opposition in North Dakota so as not to undermine his support of the SAFEGUARD program for the North Dakota area.

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I candidly expressed to him in private that occurrences of this nature are infrequent but that they are also finitely probable and with this system in particular there was no practical way to eliminate inadvertent failure to burn up upon re-entry. He expressed his understanding of this situation. I went on to explain that this particular program was coming to a close and that other similarly oriented mission vehicles are not quite as uncontrolled in terms of re-entry characteristics as is this vehicle.

In summary of our private conversation, I found Congressman Andrews to be extremely appreciative of the sensitivity of the situation and, on the surface, extremely supportive of our efforts and of the need to protect the secrecy of the reconnaissance activity.

Subsequent to the visit to Mr. Andrews' office, I agreed with SAFLL that we would provide the requested information through their channels to the Congressman. In summary, this situation could have been an extremely ticklish one if Congressman Andrews had not been already briefed on the program. However, as it turned out, I feel that it was a highly satisfactory meeting, although somewhat like a Max Sennett comedy with the experts using the Congressman's office as a Metals Laboratory and the attempts at "overplaying" the situation by SAFLL and the Congressman's administrative staff.

I have contacted SAFSP to enlist their aid in supplementing our Unclassified Agena data in order to assist in the formulation of the paper for Mr. Andrews.

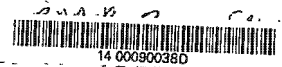
Harold Coyle
HAROLD S. COYLE, JR.
Major, USAF

1 Attachment
Newspaper Article

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SAFLLI/ [redacted] /57204/Betty/May 26

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MAY 26 1971

Dear Mr. Andrews:

Per your request, attached are details pertaining to the origin of the space fragments which fell in North Dakota on April 12, 1971. We have endeavored to provide as much unclassified information as possible. Since certain aspects of this mission are classified, we would appreciate it if you could assist in reducing speculation into the nature of the mission. Please feel free, however, to use all of the data provided in the attachment.

If we can be of further assistance to you on this matter, please let us know.

Sincerely,

[redacted] Colonel, USAF
Congressional Inquiry Division
Office of Legislative Liaison

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FACT SHEET
Attachment

Honorable Mark Andrews
House of Representatives

SAFUSS

INFORMATION FACT SHEET REGARDING ORIGIN OF SPACE
FRAGMENTS FOUND IN NORTH DAKOTA

Air Force metals' experts recently confirmed that the space fragments which fell on North Dakota in April emanated from an Agena spacecraft.

The Agena is a multi-purpose vehicle designed and built by Lockheed Missiles and Space Company of Sunnyvale, California. Both the Air Force and NASA employ the Agena. It will be remembered that Agenas have been used by NASA as docking vehicles in the Gemini program to illustrate man's ability to perform docking maneuvers in space. Other NASA related uses of the Agena have been as a relatively short-lived, high-performance booster stage for satellites and lunar and interplanetary probes. The Air Force has used the Agena for self-injecting spacecraft applications for development of spaceflight techniques and technology.

The identified fragments were cold-gas spheres used for attitude control of the spacecraft. The spheres were a part of the spacecraft launched by the Air Force's Space and Missiles Systems organization from Vandenberg Air Force Base on March 24, 1971. This vehicle carried the United Nations Registry Number 71-22A. The Space Defense Center of the North American Air Defense Command at Colorado Springs, Colorado, identified the spacecraft as Object 5059/71 in its tracking network. The spacecraft was tracked in decay by the Space Defense Center and was predicted to decay and burn-up on a track over Southern Canada during the mid morning of April 12.

Occasionally, some of the components of a naturally decaying satellite fail to burn up completely upon re-entering the atmosphere. It has been calculated by scientists, however, that the chance of one of these components landing in a populated area and causing property damage or personal injury is infinitesimally small.

The gas spheres which fell near Oakes were a part of the Agena's guidance and control system. The Agena spacecraft consists of five functional systems: structure, propulsion, electrical power, guidance and control, and telemetry. Overall the basic vehicle is 20 feet long and 60 inches in diameter. The control gas spheres are mounted in the guidance and control system on the aft equipment rack. The gas is used to provide attitude control for the spacecraft.

The Agena's engine is the Bell Model 8096 which is a turbopump-fed, dual-start, liquid bi-propellant rocket engine. The engine develops a rated thrust of 16,000 pounds in a vacuum for a period of 240 seconds. Fuel is unsymmetrical dimethylhydrazine; oxidizer is inhibited red-fuming nitric acid.

Launch configuration includes a first-stage or a combination of boosters which provide the velocity, attitude control, and discrete commands necessary to initiate the operation of the Agena. At separation of the first stage, following launch, a pyrotechnic device releases the Agena from its booster adapter. Retro rockets, mounted on the booster adapter, provide the reverse thrust necessary to reduce the velocity of the first stage. As the velocity is reduced, the Agena, continuing at an undiminished rate, leaves the adapter.

When separation has been accomplished, the Agena assumes an appropriate attitude, ignites the main propulsion system, and continues through a programmed series of events. The programmed flight may include injection into a variety of earth orbits or a trajectory into space. Attitude controls are exercised by a combination of programming, attitude sensing, propulsion thrust deflection or passive gas jets. Upon reaching the desired orbital path or space trajectory, the Agena may remain and function as an integral part of the payload, initiate payload functions and separation, or perform other desired activities.

Several drawings and schematic portrayals of the Agena spacecraft are furnished to illustrate the placement and function of the spheres which were recently identified.

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FILE INF 4-5-10

MEMORANDUM FOR RECORD

Tuesday 18 May 1971

SUBJECT: Space Debris Meeting with Congressman Andrews

1. OVERVIEW. At a meeting today with Representative Mark Andrews, (R-ND), who represents the 1st District eastern 23 counties of North Dakota, the Air Force identified two metal spheres found in North Dakota as being from a U.S. spacecraft. A photograph of a materials engineer from Wright-Patterson AFB, [redacted] examining one of the spheres with Representative Andrews will be sent to the Fargo, N.D. Forum newspaper this evening or tomorrow. Within "four or five days" SAFSS/Major Coyle promised Representative Andrews a follow-on summary with as many details as we can provide about the U.S. spacecraft and its mission — naturally within the bounds of security requirements. SAFSS will coordinate this reply with SAFOIP [redacted] then provide to SAFSS. [redacted] concluded their portion by identifying the spacecraft as U.S. origin.

2. BACKGROUND.

a. At the request of Representative Andrews, Air Force "experts" met with him in his office from 1130-1225 today to identify two metal spheres — one about twice the size of a basketball, one about half the size of a basketball — which some of his constituents had collected from their land in North Dakota. Attending the meeting were Major Bud Coyle, SAFSS; [redacted] identified as "working with Systems Command in materials"; and [redacted] Wright-Patterson AFB, identified as a "materials engineer" and working for [redacted] in this case; and [redacted] SAFOIPA. All of the above met with Representative Andrews and his administrative assistant, Mr. Van Olsen, from 1130-1200. Rep. Andrews and Major Coyle continued in private discussion from 1200-1220.

b. Major Coyle told Representative Andrews that the two spheres appeared to be from an Agena spacecraft, that he would try to obtain a schematic showing where the spheres fit, that the spheres were probably cold gas tanks storing propellant used for flight control, that he would probably not be able to provide any information about the spacecraft's specific mission.

c. Both Major Coyle and [redacted] stated that it was unusual for debris of this nature to survive re-entry, although it has happened before, e.g. a 644-pound piece of debris recently falling in Texas. They explained that both the U.S. and the Soviet Union plan whenever possible for decay to occur over the oceans or desolate areas (at which point Rep. Andrews quickly pointed out he was sure we didn't infer North Dakota to be among the latter — which we didn't). They surmised that in this case the round shapes of the two bodies undoubtedly helped them survive reentry. It was added that decay of this nature is unfortunately

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far from perfect, at times being off something like 1000 miles because exact reentry still often remains an uncontrolled event.

d. The entire meeting was quite cordial. Representative Andrews emphasized his reputation as a friend of the military, but stressed he wanted to provide his constituents with as much releasable information as possible about the space debris.

e. Admin Assistant Olsen later indicated that Mr. Chet Gebert (may be spelled with two b's), reporter with the Fargo, N.D. Forum newspaper, is the catalyst behind the space debris recovery. Olsen said Gebert had difficulty trying to get answers to his questions about the debris, so Olsen advised him to send the debris to Representative Andrews' Washington office. The attached clipping shows the great detail devoted to this subject in the Forum. Olsen added that some of the farmers recovering the debris were reluctant to part with the items, at least one of them supposedly because this was the first time anyone had ever wanted to know anything from him in his entire life. About the time Olsen asked Gebert to send the debris to Washington, the Air Force asked [redacted] of the North Dakota Air National Guard to also retrieve it. But Gebert got there first in most cases, or else the farmers simply didn't want to give it up and lose it forever; details are vague about this aspect, but Olsen maintains that the debris collectors were willing to part with the debris if it were determined to be foreign, but not if it were U.S. Olsen also confided that there is a personality conflict between Gebert and [redacted] stemming from the Air Guard's handling of an aircraft crash in Alaska some years back.

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f. Although we would prefer not to release the picture of Representative Andrews and [redacted] until the additional details are available, we did not press this point, deferring to the Congressman's wish to release the photo this evening or tomorrow indicating that further details would be available soon to summarize the event. [redacted] allowed his picture to be taken only after repeated overtures from Representative Andrews, who wanted all of us in the picture. [redacted] agreed no problem in depicting [redacted] as a "materials engineer" from WPAFB.

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g. None of the Air Force representatives indicated any need for further analysis of the materials, or any need to acquire them. The spheres will be returned to the N.D. constituents.

h. Attachment 2 is a letter from Representative Andrews providing background on retrieval of the spheres and subsequent analysis by the North Dakota State University.

i. Attachment 3 is a schematic tracing locations where debris was found; this is also provided by Representative Andrews.

3. SUMMARY. SAFSS/Major Coyle to SAFOIP, [redacted] to SAFLL/Maj [redacted] to provide additional and final details to Representative Andrews within four [redacted] Dept, USAF, SAFOIPA

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