1200 President Clinton Avenue
Little Rock, AR 72201

Inventory for FOIA Request 2006-1878-F

Records on Meteorite ALH 84001

Extent
8 folders; 177 total pages

Access
Collection is open to all researchers. Access to Clinton Presidential Records is governed by the Presidential Records Act (PRA) (44 USC 22) and the Freedom of Information Act (FOIA) (5 USC 552 as amended) and therefore records may be restricted in whole or in part in accordance with legal exemptions.

Copyright
Documents in this collection that were prepared by officials of the United States government as part of their official duties are in the public domain. Researchers are advised to consult copyright law of the United States (Title 17, USC) which governs the making of photocopies or other reproductions of copyrighted material.

Provenance
Official records of William Jefferson Clinton's presidency are housed at the Clinton Presidential Library and administered by the National Archives and Records Administration (NARA) under the provisions of the Presidential Records Act (PRA).

Processed by
Staff Archivist , 2009. Previously restricted materials are added as they are released.

Scope and Content
The materials in FOIA 2006-1878-F are a selective, not necessarily all-inclusive, body of documents responsive to the topic of the FOIA. Researchers should consult the archivist about related materials.

The materials in FOIA 2006-1878-F concern the NASA discovery of the Allan Hills meteorite, mentioned by President Clinton in a statement on August 7, 1996. Allan Hills (ALH) Meteorite 84001 was found in Allan Hills, Antarctica on December 27, 1984. ALH 84001 is beleived to be from Mars. The meteorite made worldwide headlines in 1996 when scientists announced that it might contain evidence for microscopic fossils of Martian bacteria. The discovery of this evidence of possible life on Mars prompted a response from the Clinton Administration.

The White House Office of Records Management (WHORM) Subject Files contained one responsive document. Subject file OS001 is a memo to the President regarding his statement in response to the discovery of the possible bacteria fossils on ALH 84001.

In the White House Staff and Office Files, the files of Kris Balderston in the Cabinet Affairs Office contain drafts of the President's remarks regarding ALH 84001 on August 7, 1996.

The Automated Records Management System (ARMS) Emails also contain responsive documents. These consist primarily of emails discussing the 1996 discovery of fossils on the meteorite.

The Tape Restoration Project (TRP) Emails contain a document directing the recipients to websites with photographs of the possible fossils on ALH 84001.

The NSC Cable and Email Systems also contain responsive documents. The NSC Cables contain summaries of news reports which mention the possible evidence for life on the meteroite. The NSC Emails consist of statements of the Clinton Administration's science policy and accomplishments. The discoveries related to ALH 84001 were referenced during the discussion of these achievements.

System of Arrangement

Records that were responsive to this FOIA request were found in four collection areas – Clinton Presidential Records: WHORM Subject Files, Clinton Presidential Records: White House Staff and Office Files, Clinton Presidential Records: ARMS Emails and TRP Emails, and Clinton Presidential Records: NSC Cable and Email Systems. As policy, Staff and Office Files are processed at the folder level, that is, individual documents are not selected and removed from a folder for processing. While this method maintains folder integrity, it frequently results in the incidental processing of documents that are not wholly responsive to the subject area. WHORM Subject files are processed at the document level.

The WHORM Subject file was compiled by the White House Office of Records Management and is a series of categories designed by a letter/number combination. A complete listing of the categories with detailed descriptions is provided in our research room.

The Automated Records Management System (ARMS) is a database that contains email records of the Executive office of the President. This system maintained unclassified Presidential record email. The ARMS dataset is comprised of 6 sub-series of email records called "Buckets." The buckets include NPR, OPD, POTUS, WHO, CEA, and Default. ARMS emails are arranged chronologically by creation date.

The Tape Restoration Project (TRP) is a database consisting of restored emails from the Automated Records Management System from July 1994 through June of 2000. The TRP is a database that contains email records of the Executive office of the President. This system maintained unclassified Presidential record email. The TRP dataset is comprised of 6 sub-series of email records called "Buckets." The buckets include NPR, OPD, POTUS, WHO, CEA, and Default. ARMS emails are arranged chronologically by creation date.

The following is a list of documents and folders processed in response to FOIA 2006-1878-F:

Clinton Presidential Records: WHORM Subject Files

Category	**Case Number**
OS001	Scanned: Case Number 180209SS [OA/ID 14087]

Clinton Presidential Records: White House Staff and Office Files
Cabinet Affairs
Balderston, Kris
NASA/MARS [OA/ID 11548]

Clinton Presidential Records: Automated Records Management System (ARMS) Emails
WHO [OA/ID 500,000]
[Mars Meteorite]
[08/06/1996 – 08/08/1996]

Default [OA/ID 1,100,000]
[Mars Meteorite]
[08/06/1996 – 08/08/1996]

Clinton Presidential Records: Tape Restoration Project (TRP) Emails
CEA [OA/ID 950,000]
[Mars Meteorite]
[08/08/1996]

Clinton Presidential Records: NSC Cable and Email Systems
NSC Cables
Jan 1995 – Dec 1996
[Meteorite and Mars]
[08/08/1996 – 08/12/1996] [OA/ID 510000]

NSC Emails
Exchange – Record (Sept 97 – Jan 01)
[Meteorite and Mars]
[10/29/1997 – 12/22/2000] [OA/ID 620000]

Exchange – Non-Record (Mar 97 – Jan 01)
[Meteorite and Mars]
[12/24/2000] [OA/ID 630000]

Last Modified: 4/5/2011

2006-1878-F

OPEN, Box 1 of 1

Clinton Presidential Records
WHORM—Subject File—General
OS001
180209SS [OA/ID 14087]

TO

Clinton Presidential Records
NSC Emails
Exchange-Non-Record (Mar 97-Jan 01)
[12/24/2000] [OA/ID 630000]

FOIA Number: 2006-1878-F

FOIA MARKER

This is not a textual record. This is used as an administrative marker by the William J. Clinton Presidential Library Staff.

Collection/Record Group: Clinton Presidential Records

Subgroup/Office of Origin: Records Management - SUBJECT FILE

Series/Staff Member:

Subseries:

OA/ID Number: 14087

Scan ID: 180209SS

Document Number:

Folder Title:
OS001

Stack:	Row:	Section:	Shelf:	Position:
S	86	1	6	3

180209 SS
05001

THE PRESIDENT HAS SEEN
8-7-96

THE WHITE HOUSE

WASHINGTON

August 6, 1996

MR. PRESIDENT:

In the event that you decide to comment on the NASA Mars discovery, Michael Waldman has prepared some draft remarks. This isn't on the schedule yet, but I understand that it is being considered.

Todd Stern

THE PRESIDENT HAS SEEN
8-7-96

96 AUG 6 P7:03

THE WHITE HOUSE
WASHINGTON

August 6, 1996

MEMORANDUM TO THE PRESIDENT

FROM: JACK GIBBONS

SUBJECT: Mars Meteorite Discovery

Today, NASA Administrator Dan Goldin issued a press release announcing that NASA had discovered what may be evidence that a primitive form of life once existed on Mars. I understand that he briefed you on this subject last week. If this evidence is confirmed by scientific peer review -- which remains incomplete -- it will rank as one of the most sensational discoveries in scientific history. The excitement it will generate, and the large uncertainties which still exist, will require a careful reaction from the Administration.

First of all, it is important to understand that the research leading to this discovery has still not been fully confirmed by the cautious peer review process whereby skeptical scientists examine and challenge each other's work. The review in this case will be particularly difficult given the complexity and sophistication of the research. Minute residuals of what appear to be extremely small, single-cell structures that resemble bacteria were found inside a rock over four billion years old believed to have been knocked from the surface of Mars by an impact of some kind. Identifying the origin of the materials as biological and demonstrating that the meteorite indeed came from Mars required complex equipment and expertise in many different subjects.

Even if the review confirms the claims of the NASA scientists, we have no evidence that life on Mars evolved to a more complex form or that life forms exist on Mars today. The discovery would, however, clearly increase the likelihood of finding life forms on other planets.

While caution must be exercised because reviews are incomplete, the magnitude of the discovery will cry out for a response. If nothing else, the discovery will be a major triumph for U.S. science and a confirmation of the Administration's strong support for research and development. Fortunately, we can mount a timely and

ambitious response to the discovery because of work already in planning. We can, for example, accelerate release of the comprehensive PDD on Space Policy which OSTP and NSC have ready for your signature. This document supports an ambitious program of robotic exploration of Mars. Eight Mars missions are already planned and in our budget with two scheduled for launch this Fall. One will have a robotic rover land on Mars on July 4, 1997. I'm certain that if the new discovery is confirmed NASA can reconfigure its Mars missions or add new probes to planned missions to look for further evidence of life forms of the type believed to be identified this week.

cc: Vice President Al Gore

RECORD TYPE: PRESIDENTIAL (EXTERNAL MAIL)

CREATOR: farber@central.cis.upenn.edu@INET@EOPMRX

CREATION DATE/TIME: 6-AUG-1996 22:53:00.00

SUBJECT: IP: Early Martian Life Briefing

TO: interesting-people (interesting-people@eff.org@INET@EOPMRX)
READ:NOT READ

IND_TO: Thomas A. Kalil (KALIL_T) (WHO)
READ: 7-AUG-1996 08:40:49.87

TEXT:

From: mallard@mail.arc.nasa.gov (Mark Allard)
Subject: Early Martian Life Briefing
Date: Tue, 6 Aug 1996 16:32:21 -0700

An MBone broadcast will take place 10am(PDT)/1pm(EDT) where a team of NASA and Stanford scientists will discuss their findings showing strong circumstantial evidence of possible early Martian life including microfossil remains found in a Martian meteorite. The team's findings will be published in the August 16 issue of Science magazine.
Apologies for the short notice.
Contact me at 415-604-6145 if there is a conflict or issue related to the broadcast.
M

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 6-AUG-1996 22:57:00.00

ATT BODYPART TYPE:D

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
 by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I7Z0MN0PIO0007JL@PMDF.EOP.GOV> for
 kalil_t@a1.eop.gov; Tue, 06 Aug 1996 22:53:30 -0400 (EDT)
Received: from eff.org (eff.org) by STORM.EOP.GOV (PMDF V5.0-7 #6879)
 id <01I7Z0LRY5DY001RVM@STORM.EOP.GOV> for kalil_t@a1.eop.gov; Tue,
 06 Aug 1996 22:52:56 -0700 (MST)
Received: (from daemon@localhost) by eff.org (8.7.5/8.6.6)
 id RAA01315 for interesting-people-exploder; Tue,
 06 Aug 1996 17:23:13 -0700 (PDT)
X-Sender: farber@linc.cis.upenn.edu
X-Mailer: Windows Eudora Pro Version 2.2 (32)
Precedence: list
Posted-Date: Tue, 6 Aug 1996 20:25:01 -0400
X-Proccessed-By: mail2list
========== END ATTACHMENT 1 ==========

RECORD TYPE: PRESIDENTIAL (ALL-IN-1 MAIL)

CREATOR: Margaret M. Suntum (SUNTUM_M) (WHO)

CREATION DATE/TIME: 6-AUG-1996 19:40:21.09

SUBJECT: INTERNAL TRANSCRIPT: Interview of President by Reader's Dig

TO: Lori L. Anderson (ANDERSON_L) (WHO)
READ: 6-AUG-1996 19:59:22.47

TO: Mary Ellen Glynn (GLYNN_M) (WHO)
READ:NOT READ

TO: Julie E. Mason (MASON_J) (WHO)
READ: 6-AUG-1996 19:44:29.57

TO: Michael McCurry (MCCURRY_M) (WHO)
READ: 6-AUG-1996 20:17:38.17

TO: Lorraine McHugh (MCHUGH_L) (WHO)
READ: 6-AUG-1996 19:48:22.50

TO: Darby Stott (STOTT_D) (WHO)
READ: 6-AUG-1996 20:25:03.62

TO: Margaret M. Suntum (SUNTUM_M) (WHO)
READ: 6-AUG-1996 19:40:31.09

TO: Barry Toiv (TOIV_B) (WHO)
READ: 6-AUG-1996 19:50:20.71

TEXT:
PRINTER FONT 10_POINT_COURIER
BOTTOM ODD
MORE
PRINTER FONT 12_POINT_COURIER

THE WHITE HOUSE

Office of the Press Secretary

Internal Transcript August 6, 1996

INTERVIEW OF THE PRESIDENT
BY READER'S DIGEST

The Oval Office

5:10 P.M. EDT

Q Are you having some busy days?

THE PRESIDENT: Big time.

Q Big time.

THE PRESIDENT: Yep. Big time. We're just trying to get all the work done from the last congressional session. We're getting all of it in here and I'm trying to sign all these laws before I go away on holiday, everything that they've sent out. And we've had quite a little stir around here today, as I'm sure you noticed, about the discovery of --

Q I heard about that, yes. It's exciting.

THE PRESIDENT: -- from Mars. It's very exciting.

I've taken a real interest in this work. We've done -- and NASA basically -- I'm very interested in the space program in general, but NASA has been working on Mars quite a lot in the last three years, and so I was aware of this. I think they thought it would be a secret until it was actually published, the article, in Science Magazine and everybody could get a rather dispassionate look at what the evidence does and doesn't show.

But apparently -- you know, it's very interesting, I got a briefing on it not very long ago from Mr. Goldin, and it's just interesting.

Q Yes, it certainly sounds that way.

THE PRESIDENT: At the least, it may give us some indication of how the development of Earth and Mars diverged, because one of the things these scientists believe is that our planets were very much alike for several hundred million years, and then something happened and they diverged in their development. I'm really interested in that.

Q What would the evidence consist of?

THE PRESIDENT: Apparently, there was a piece of meteorite which was very, very old which fell to Earth in Antartica, and has been on Earth for a long time. It was discovered and it has patterns in it which make them believe that it was from Mars which are consistent with things that you find on Earth. And then they believe they found a fossilized version of what may have been, in effect, a tiny microorgan, consistent with similar things found BOTTOM EVEN MORE
fossilized from Earth. So they -- and they'll put out all their findings and the scientific community will have a chance to evaluate whether they think they're right, or not.

TOP EVEN
- \p -

BOTTOM EVEN
MORE

They're being very judicious about it. I mean, nobody is making any great claims about it, but at least it's a compelling piece of scientific input.

Q Have you had a screening of Independence Day?

THE PRESIDENT: I have.

Q I was hoping you don't have the same kind of ending -

THE PRESIDENT: Bill Pullman, the man who plays the President in the moving, actually came and saw it with me. So he asked me how he was doing during the movie. (Laughter.) I told him I thought he'd done a fine job. I liked the movie a lot.

Q Mr. President, we want to thank you formally for allowing us to be here to interview you. I think you're probably pretty familiar with the format. It's very similar to what we did four years ago, and so I think we could just jump in if that's okay with you.

THE PRESIDENT: Sure.

Q Briefly, could you define the central issue of the campaign for us?

THE PRESIDENT: I think the central issue of the election is which path do Americans want to walk into the 21st century. What do you want America to look like when we begin the new century. What do you want America to look like when your children are your age, or your grandchildren are your age. I think that is the big issue, because here you have, as evidenced by the debate that went on in 1995 and 1996 here in Washington, represented by the President and the Vice President and the White House on the one hand, and Speaker Gingrich and Senator Dole on the other, you have two very different, very divergent views about what we should do as we move into the 21st century.

So to me that's the big issue, is that people -- in a way it's a happy choice for the voters because there is no guess work. You're not asking voters to take a chance on an unknown quantity. They know what I'm going to do, they know what he'll do within limits that are pretty broad.

And so I think it's a good choice for the voters because you have two very, very different views of how we should move into the next century, and I think -- how we're going to provide opportunity to all of our people; how are we going to get more responsibility from all of our people; how are we going to go forward as a community, growing closer together, not drifting further apart. And I think that's the central issue.

Q What are the greatest strengths and weaknesses of Senator Dole and Mr. Perot?

THE PRESIDENT: Well, I think Senator Dole's greatest strengths are, first of all, his genuine patriotism which I think has been manifested clearly not just in his service in the war, but in the determination he showed to overcome his war injury and to serve with such distinction in public life. That is he wanted to be in public life, he wanted to continue to give to his country. And I think that's a laudable characteristic. And he's done it now over many decades. I think that's important.

I also believe that he has shown an ability to really put the public interest first, especially in foreign policy. And I

RECORD TYPE: PRESIDENTIAL (EXTERNAL MAIL)

CREATOR: harvard94-approval@world.std.com@INET@EOPMRX

CREATION DATE/TIME: 7-AUG-1996 17:44:00.00

SUBJECT: important news

TO: harvard94 (harvard94@world.std.com@INET@EOPMRX)
READ:NOT READ

IND_TO: Sabrina Corlette (CORLETTE_S) (WHO)
READ: 8-AUG-1996 09:42:23.48

CC: trilling (trilling@LPL.Arizona.EDU@INET@EOPMRX)
READ:NOT READ

TEXT:

7 august 96

maybe most of you have heard by now of the announcment
of evidence suggesting ancient life on mars.

this is perhaps the most important announcement -- if it turns
out to be true -- of our lives. the implications are astounding.

there was a press conference this morning, and one can find
lots of details -- including great photographs of the
suspected microbes -- at the following URL:

http://cu-ames.arc.nasa.gov/marslife/index.html

in short, a group of scientists from NASA have announced that, in
studying a meteorite from mars, they have found several curious
facts, all of which can be explained (and explained most simply
and easily) by allowing for ancient microbes which lived on
mars about 3.5 billion years ago. they also have taken some
microphotographs of these suspected critters: very compelling.

to quote carl sagan, perhaps "we are not alone" anymore. please
email me (not the list) or consult the web page, CNN, or any news
source for more information. the new york times is probably
a good reference; the URL listed above is probably the best
and has the most information.

adios,

david trilling
cabot '94
trilling@lpl.arizona.edu
========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 7-AUG-1996 17:45:00.00

ATT BODYPART TYPE:D

TEXT:
RFC-822-headers:

RECORD TYPE: PRESIDENTIAL (EXTERNAL MAIL)

CREATOR: P0239C@gegpo6.geg.mot.com@INET@EOPMRX

CREATION DATE/TIME: 7-AUG-1996 19:52:00.00

SUBJECT: Re: - no subject (01I802YET8R6009RAQ) -

TO: Ryan, Denise (ryan_d@A1@CD) (WHO)
READ: 8-AUG-1996 09:37:02.85

TEXT:

Looks like my boss is working on a follow on assignment. Don't remember getting a message from you requesting a resume.

The olympics were great, but I would never attend if it was going to cost me money. Any time Team Handball is sold out and scaplers are getting $30-40 for $16 seats you know things are totally out of whack. Still it was a great time

---

>From: Denise Ryan
>To: Ryan John
>Subject: RE: - no subject (01I802YET8R6009RAQ) -
>Date: Wednesday, August 07, 1996 5:37PM
>
> Kind of reminds you of George Herbert Walker Bush. EeeeK!
> John, how about a resume? Did you get my e-mail about that? What
> do you think?
>
> I have a good story for some other time about how the President
> found out about the mars meteorite bacteria fossils.
>
> How was the Olympics.
>
>

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 7-AUG-1996 19:54:00.00

ATT BODYPART TYPE:D

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
 by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I808LT15B400AZJ9@PMDF.EOP.GOV> for
 ryan_d@a1.eop.gov; Wed, 07 Aug 1996 19:52:41 -0400 (EDT)
Received: from motgate2.mot.com (motgate2.mot.com)
 by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I808L1Y6XG001UL3@STORM.EOP.GOV> for
 ryan_d@a1.eop.gov; Wed, 07 Aug 1996 19:52:05 -0700 (MST)
Received: from pobox.mot.com (pobox.mot.com [129.188.137.100])
 by motgate2.mot.com (8.7.3/8.6.10/MOT-3.8) with ESMTP id XAA23232 for
 <ryan_d@a1.eop.gov>; Wed, 07 Aug 1996 23:49:55 +0000 (GMT)
Received: from motgeg.geg.mot.com (motgeg.geg.mot.com [192.88.158.100])
 by pobox.mot.com (8.7.3/8.6.10/MOT-3.8) with SMTP id SAA09255 for
 <ryan_d@a1.eop.gov>; Wed, 07 Aug 1996 18:52:49 -0500 (CDT)
Received: from csn3.geg.mot.com by motgeg.geg.mot.com (AIX 3.2/UCB 5.64/4.03)
 id AA12038; Wed, 07 Aug 1996 16:45:37 -0700
Received: from [137.162.17.1] by csn3.geg.mot.com (AIX 3.2/UCB 5.64/4.03)
 id AA17356; Wed, 07 Aug 1996 16:32:19 -0700
Received: by gegpo1.geg.mot.com with Microsoft Mail id

RECORD TYPE: PRESIDENTIAL (EXTERNAL MAIL)

CREATOR: harvard94-approval@world.std.com@INET@EOPMRX

CREATION DATE/TIME: 8-AUG-1996 08:04:00.00

SUBJECT: Re: important news -- Don't Believe the Hype

TO: harvard94 (harvard94@facteur.std.com@INET@EOPMRX)
READ:NOT READ

IND_TO: Sabrina Corlette (CORLETTE_S) (WHO)
READ: 8-AUG-1996 09:44:32.06

TEXT:

At 02:26 PM 8/7/96 MST, you wrote:
>
>in short, a group of scientists from NASA have announced that, in
>studying a meteorite from mars, they have found several curious
>facts, all of which can be explained (and explained most simply
>and easily) by allowing for ancient microbes which lived on
>mars about 3.5 billion years ago. they also have taken some
>microphotographs of these suspected critters: very compelling.
>
>to quote carl sagan, perhaps "we are not alone" anymore. please
>email me (not the list) or consult the web page, CNN, or any news
>source for more information. the new york times is probably
>a good reference; the URL listed above is probably the best
>and has the most information.
>
>
>adios,
>
>
>david trilling
>cabot '94
>trilling@lpl.arizona.edu

Is it really a revolutionary discovery? Or is it merely a clever tactic for NASA to increase its funding in a period of fiscal austerity. The jury is definately still out on this one.

--Brian

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 8-AUG-1996 08:05:00.00

ATT BODYPART TYPE:D

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
 by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I80Y6CP6HC00AV68@PMDF.EOP.GOV> for
 CORLETTE_S@a1.eop.gov; Thu, 08 Aug 1996 08:04:41 -0400 (EDT)
Received: from europe.std.com (europe.std.com)
 by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I80Y5OIG1400224Q@STORM.EOP.GOV> for
 CORLETTE_S@a1.eop.gov; Thu, 08 Aug 1996 08:04:08 -0700 (MST)
Received: by europe.std.com (8.7.5/BZS-8-1.0) id IAA09739; Thu,
 08 Aug 1996 08:03:25 -0400 (EDT)

RECORD TYPE: PRESIDENTIAL (ALL-IN-1 MAIL)

CREATOR: Jennifer Senan (SENAN_J) (WHO)

CREATION DATE/TIME: 8-AUG-1996 06:54:52.09

SUBJECT: TV NEWS ANALYSIS 8-7-96

TEXT:
TV NEWS ANALYSIS
Thursday, August, 8, 1996
Broadcast Date: Wednesday, August, 7, 1996
ABC WORLD NEWS TONIGHT

1. Meteorite rock from Mars shows prehistoric signs of life.
2. A space age Rosetta stone: Only trained scientists can approach the microfossils.
3. NTSB launches criminal probe of SabreTech over its handling of canisters on ValuJet.
4. TWA Flt 800: Still not enough evidence, much too soon to know the cause of crash.
5. Japan identifies source of food poisoning outbreak: Bacteria from radish stems.
6. Vascular by

□

-pass surgery, the pump, or a pill: Impotence may be treatable.

7. Russian casualties multiply as fighting in Chechnya continues.
8. Three outspoken opponents of abortion to run against Democrats in Senate races.
9. Naval Academy expels 15 Midshipmen at conclusion of investigation on drug use.
10. Oregon: Prisoner who confesses to priest, secretly taped and then convicted of crime.
11. America Online experiences technical difficulty as 6 million subscribers could not log on.
12. Dow Jones closes at 5718.67, up 22.56; NASDAQ closes at 1141.11, up 12.24.
13. 500 members of the U.S. Olympic team meet with the President and the First Lady.
14. Peter Jennings speculates on the implications life on Mars could have on the human race.

CBS EVENING NEWS

1. Discovery of fossil in Martian meteorite thrills scientific and political communities alike.
2. President Clinton predicts discovery to boost funding for exploration of Mars.
3. Sickle cell anemia treatment brings relief or dire consequences to sickest patients.
4. Experts slowly reconstruct plane in hangar; retrieved right wing evinces fiery destruction.
5. Republican leaders draw closer to compromise on antiabortion plank.
6. Antiabortion Republicans won three Senate primaries Tuesday.
7. Dow Jones up 22.51 to close at 5718.67; NASDAQ up 12.24 to close at 1141.11.
8. Dan Rather interviews NASA's administrator, Daniel Goldin.
9. Hubble Telescope returns fascinating pictures of the universe's cosmic origins.
10. Rather traces the history of space exploration for life.

11. British bookmaker slashes odds against intelligent life existing from 500

-to

-1 to 25

-to

-1.

12. Yeltsin's 2nd inaugural takes place amid his failing health and raging war in Chechnya.
13. Surprise Chechen rebel offensive surrounds Russian troops, inflicting heavy casualties.
14. New Age gurus flock to the mystical energy of the Blue Ridge in latest Baby Boomer fad.

NBC NIGHTLY NEWS

1. TWA Flight 800: Crash investigators uncover the largest piece yet.
2. Experts find possible evidence of microscopic life on Mars four billion years ago.
3. Veteran aircraft crashes into parking lot near Sacramento, killing pilot.
4. Dow up 27.56 to close at 5716.7, Nasdaq up 12.24 to close at 1141.11.
5. Contending with Dole's slippage in polls, Republicans scramble for a platform.
6. Possibility of previous life on Mars delights NASA's director of the Viking Project.
7. British book changes its odds of life in space from 1/500 to 1/25.
8. $18 million Medicare handbook outrages seniors who call it wasteful use of tax dollars.
9. The First Family says thank you to the US Olympic athletes at the White House.
10. NBC praises three inspiring women for their altruistic achievements.

ABC:

Meteorite rock from Mars shows early prehistoric signs of life. (1st story)

Anchor Peter Jennings said that scientists are calling this the most spectacular discovery since human beings began looking up. Correspondent Ned Potter reported that according to NASA scientists, the deposits found on the meteorite rock could be the residue of a bacteria. (VISUAL 1) Potter reported that a NASA scientist said this "could be fossils of primitive cells, the remains of Martian life." Potter said NASA has its critics and admits the findings are not conclusive. (VISUAL 2) Potter said there was still a lot of questions left unanswered such as, "If there was life on Mars three and

-a

-half billion years ago what happened to it?" Potter said that President Clinton would call a National Space Summit by the end of the year. (VISUAL 3)

VISUALS:

1.Clip of Daniel Goldin, NASA Administrator, at a NASA press conference: "I had difficulty sleeping because of the thoughts of what this could mean...We are now on the door step to the

RECORD TYPE: PRESIDENTIAL (EXTERNAL MAIL)

CREATOR: harvard94-approval@world.std.com@INET@EOPMRX

CREATION DATE/TIME: 8-AUG-1996 07:59:00.00

SUBJECT: Goodness me.

TO: Harvard Class of 94 Mailing List (harvard94@facteur.std.com@INET@EOPMRX)
READ:NOT READ

IND_TO: Sabrina Corlette (CORLETTE_S) (WHO)
READ: 8-AUG-1996 09:43:26.45

TEXT:
I just had my mind thoroughly blown by an article on the New York Times web server (www.nytimes.com), the first three paragraphs of which I excerpt below:

Scientists studying a meteorite that fell to Earth from Mars have identified organic compounds and certain minerals that they conclude "are evidence for primitive life on early Mars."

The discovery of the first organic molecules ever seen in a Martian rock is being hailed as startling and compelling evidence that at least microbial life existed on Mars long ago, when the planet was warmer and wetter. The molecules found in the rock, which left Mars some 15 million years ago, are being described as the fossil trace of past biological activity.

In a statement issued Tuesday, as unofficial word of the discovery spread, NASA Administrator Daniel Goldin confirmed that scientists had "made a startling discovery that points to the possibility that a primitive form of microscopic life may have existed on Mars more than three billion years ago."

Somebody wake Will Smith!

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 8-AUG-1996 08:00:00.00

ATT BODYPART TYPE:D

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I80XYGZNGG008132@PMDF.EOP.GOV> for CORLETTE_S@a1.eop.gov; Thu, 08 Aug 1996 07:59:07 -0400 (EDT)
Received: from europe.std.com (europe.std.com)
by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I80XXRO6YO00224Q@STORM.EOP.GOV> for CORLETTE_S@a1.eop.gov; Thu, 08 Aug 1996 07:58:33 -0700 (MST)
Received: by europe.std.com (8.7.5/BZS-8-1.0) id HAA09197; Thu, 08 Aug 1996 07:58:53 -0400 (EDT)
Precedence: bulk
X-Authentication-warning: europe.std.com: daemon set sender to harvard94-approval using -f
========== END ATTACHMENT 1 ==========

RECORD TYPE: PRESIDENTIAL (EXTERNAL MAIL)

CREATOR: harvard94-approval@world.std.com@INET@EOPMRX

CREATION DATE/TIME: 8-AUG-1996 14:10:00.00

SUBJECT: martian life

TO: harvard94 (harvard94@world.std.com@INET@EOPMRX)
READ:NOT READ

IND_TO: Sabrina Corlette (CORLETTE_S) (WHO)
READ: 8-AUG-1996 14:11:36.59

CC: trilling (trilling@LPL.Arizona.EDU@INET@EOPMRX)
READ:NOT READ

TEXT:

8 august 96

subject: "Search for Past Life on Mars: Possible Relic Biogenic Activity in Martian Meteorite ALH84001"

i wish to respond to brian grossman's

~Is it really a revolutionary discovery? Or is it merely a clever tactic for
~NASA to increase its funding in a period of fiscal austerity. The jury is
~definately still out on this one.
~
~ --Brian

and jason kim's

~I was at the press conference at NASA HQ this afternoon and I did not
~personally find the evidence to be "very compelling." Another Sagan
~quote used at the conference was that "Extraordinary claims require
~extraordinary evidence" and there is a serious dearth of evidence at the
~present time to accompany all the hype about this rock. They didn't even
~determine whether it has amino acids yet. Comets have been shown to carry
~prebiotic amino acids, yet nobody makes big press releases or grand
~conjectures about life in the universe based on that research.

comments, in a slightly long-winded way. i address this to the list because maybe others are interested in commenting as well.

first, is this announcement revolutionary?

i say yes -- if true. which is a hedge i wrote in my original statement too. define "revolutionary": 1) Of, pertaining to, or bringing about a political or social revolution. 2) Characterized by or resulting in radical change: _a revolutionary discovery_. (_the american heritage dictionary_)

consider the second definition. i would guess that -- once again, IF TRUE -- the discovery of life on mars would affect several major religious and philosophical idealogies vis-a-vis humankind's place in the universe. we would no longer be the only life, a special and unique 'creation.' a radical change, indeed. [btw, CBS

nterviewed the vatican observatory (tucson branch) last
c, asking what the pope's take was and what the theological
lications of this discovery -- IF TRUE -- are. have not yet
ard what the vatican replied.]

in fact, i again assert that the discovery that life is not unique to the earth would redefine our relation to the universe. this is a 'social revolution,' i would say. so, yes, it is -- IF TRUE -- a revolutionary discovery.

is the announcement merely a cry for funding? 'merely,' no. it is an announcement made because some people (like NASA) thought it would be important to announce. will there be cries for funding to (continue to) investigate this and similar problems? yes. as marc kuchner implied, this in itself is not bad. if the funding agencies, acting theoretically on behalf of their funding agencies a.k.a. the american taxpayers, feel that this research is worth supporting -- perhaps because of its potentially huge implications -- then continued funding will be granted.

in no way is it expected to be a something for nothing game, of course. there is a finite amount of money. already, some people around here [lunar and planetary lab and department of planetary sciences at u of arizona] are lamenting that the proposed pluto flyby mission will be scrapped in favor of more intense martian life searches. other people think this is a great idea!

secondly, and more briefly, is the evidence compelling?

well, i guess thats a subjective term. is the evidence conclusive? not at all. according to the 'scientific method,' we are supposed to be skeptics. so the fact that jason is not convinced is great -- healthy for the scientific discourse -- etc etc. i was skeptical at the beginning of the press conference, and much more excited and closer to convinced at the end of the press conference. now im simply jealous that jason got to be there!

however, the beauty of science and scientific discovery is that it tends to be self-correcting. the paper is already out; people can read it, think on it, do their own research, write their own papers confirming or denying this idea. ultimately, new facts will be discovered, facts which will either convince those unconvinced, or else drive mckay et al into the realm previously occupied by the cold fusion scientists.

so, is it compelling? you decide. you can find the paper

"Search for Past Life on Mars: Possible Relic Biogenic Activity in Martian Meteorite ALH84001"

at

http://www.aas.org/science/mars/924/924.html

or else wait for the hardcopy (next week's issue of _science_). read it for yourself and decide!

thanks for reading. this is a subject which is quite obviously near and dear to me -- and also a lot of fun and quite exciting! comments and thoughts are welcome.

...s,

...avid trilling
cabot '94
trilling@lpl.arizona.edu

[the original message, including marslife URL with links
to the photos, is attached below.]

==========

7 august 96

maybe most of you have heard by now of the announcment
of evidence suggesting ancient life on mars.

this is perhaps the most important announcement -- if it turns
out to be true -- of our lives. the implications are astounding.

there was a press conference this morning, and one can find
lots of details -- including great photographs of the
suspected microbes -- at the following URL:

http://cu-ames.arc.nasa.gov/marslife/index.html

in short, a group of scientists from NASA have announced that, in
studying a meteorite from mars, they have found several curious
facts, all of which can be explained (and explained most simply
and easily) by allowing for ancient microbes which lived on
mars about 3.5 billion years ago. they also have taken some
microphotographs of these suspected critters: very compelling.

to quote carl sagan, perhaps "we are not alone" anymore. please
email me (not the list) or consult the web page, CNN, or any news
source for more information. the new york times is probably
a good reference; the URL listed above is probably the best
and has the most information.

adios,

david trilling
cabot '94
trilling@lpl.arizona.edu

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 8-AUG-1996 14:11:00.00

ATT BODYPART TYPE:D

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
 by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I81AXTG7680002Q8@PMDF.EOP.GOV> for
 CORLETTE_S@a1.eop.gov; Thu, 08 Aug 1996 14:10:26 -0400 (EDT)
Received: from europe.std.com (europe.std.com)

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: owner-press-release-gov@venus.hq.nasa.gov@INET@LNGTWY (owner-press-release

CREATION DATE/TIME: 6-AUG-1996 16:52:09.00

SUBJECT: Statement from Daniel S. Goldin, NASA Administrator

TO: Memphis A. Norman@eop (Memphis A. Norman@eop [OMB])
READ:UNKNOWN

TEXT:
Laurie Boeder
Headquarters, Washington, DC August 6, 1996
(Phone: 202/358-1898)

RELEASE: 96-159

STATEMENT FROM DANIEL S. GOLDIN, NASA ADMINISTRATOR

"NASA has made a startling discovery that points to the possibility that a primitive form of microscopic life may have existed on Mars more than three billion years ago. The research is based on a sophisticated examination of an ancient Martian meteorite that landed on Earth some 13,000 years ago.

The evidence is exciting, even compelling, but not conclusive. It is a discovery that demands further scientific investigation. NASA is ready to assist the process of rigorous scientific investigation and lively scientific debate that will follow this discovery.

I want everyone to understand that we are not talking about 'little green men.' These are extremely small, single-cell structures that somewhat resemble bacteria on Earth. There is no evidence or suggestion that any higher life form ever existed on Mars.

The NASA scientists and researchers who made this discovery will be available at a news conference tomorrow to discuss their findings. They will outline the step-by-step "detective story" that explains how the meteorite arrived here from Mars, and how they set about looking for evidence of long-ago life in this ancient rock. They will also release some fascinating images documenting their research.

-end-

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I7YNLY5MBK008T37@PMDF.EOP.GOV>; Tue,

06 Aug 1996 16:41:07 -0400 (EDT)
Received: from venus.hq.nasa.gov (venus.hq.nasa.gov)
by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I7YNL9H7AS001NR4@STORM.EOP.GOV>;
Tue, 06 Aug 1996 16:40:33 -0700 (MST)
Received: from localhost (daemon@localhost) by venus.hq.nasa.gov (8.7.1/8.7.1)

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: owner-press-release-gov@venus.hq.nasa.gov@INET@LNGTWY (owner-press-release

CREATION DATE/TIME: 6-AUG-1996 16:42:04.00

SUBJECT: NASA Briefing Wednesday on Discovery of Early Martian Life

TO: Memphis A. Norman@eop (Memphis A. Norman@eop [OMB])
READ:UNKNOWN

TEXT:
Donald Savage
Headquarters, Washington, DC
(Phone: 202/358-1727)

August 6, 1996

James Hartsfield
Johnson Space Center, Houston, TX
(Phone: 713/483-5111)

David F. Salisbury
Stanford University, CA
(Phone: 415/723-2558)

NOTE TO EDITORS: N96-53

NASA BRIEFING WEDNESDAY ON DISCOVERY OF POSSIBLE EARLY MARTIAN LIFE

A team of NASA and Stanford scientists will discuss its findings showing strong circumstantial evidence of possible early Martian life, including microfossil remains found in a Martian meteorite, at a news conference scheduled for 1:00 p.m. EDT, August 7, at NASA Headquarters, 300 E. St. SW, Washington, DC. The team's findings will be published in the August 16 issue of Science magazine.

Panelists will be:

- Dr. Wesley Huntress, Jr., NASA Assoc. Administrator for Space Science, Washington, DC
- Dr. David McKay, principal author, NASA Johnson Space Center (JSC), Houston, TX
- Dr. Everett Gibson, NASA JSC, Houston, TX
- Dr. Richard N. Zare, Professor of Chemistry, Stanford University, CA
- Kathy Thomas-Keprta, Lockheed-Martin, JSC, Houston, TX
- Dr. William Schopf, Professor, Department of Earth and Space Sciences, Univ. of California, Los Angeles

The briefing will be carried live on NASA TV with two-way question-and-answer capability for reporters covering the event from participating NASA centers. Audio of the broadcast will be available on voice circuit at the Kennedy Space Center by calling 407/867-1260.

NASA Television is broadcast on Spacenet 2, transponder 5, channel 9, C-Band, located at 69 degrees West longitude, with horizontal polarization. Frequency will be on 3880.0 megahertz, with audio on 6.8 megahertz.

- end -

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: owner-press-release-gov@venus.hq.nasa.gov@INET@LNGTWY (owner-press-release

CREATION DATE/TIME: 7-AUG-1996 17:18:19.00

SUBJECT: Mars Meteorite Images Available via Internet

TO: Memphis A. Norman@eop (Memphis A. Norman@eop [OMB])
READ:UNKNOWN

TEXT:
David E. Steitz
Headquarters, Washington, DC
(Phone: 202/358-1730)

August 7, 1996

RELEASE: I96-6

MARS METEORITE IMAGES AVAILABLE VIA THE INTERNET

Photographs that support today's briefing at which a team of NASA and Stanford scientists will discuss their findings showing strong circumstantial evidence of possible early Martian life, including microfossil ramains found in a Martian meteorite, are available via the Internet. Real time audio of today's briefing also will be available from these sites.

The Internet World Wide Web URLs are:

http://www.jsc.nasa.gov/pao/flash

http://cu-ames.arc.nasa.gov/marslife

http://rsd.gsfc.nasa.gov/marslife

- end -

NASA press releases and other information are available automatically by sending an Internet electronic mail message to domo@hq.nasa.gov. In the body of the message (not the subject line) users should type the words "subscribe press-release" (no quotes). The system will reply with a confirmation via E-mail of each subscription. A second automatic message will include additional information on the service. NASA releases also are available via CompuServe using the command GO NASA.
========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I8030Z3P6800AN2V@PMDF.EOP.GOV>; Wed,

07 Aug 1996 17:13:07 -0400 (EDT)
Received: from venus.hq.nasa.gov (venus.hq.nasa.gov)
by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I80308MPOO0020KZ@STORM.EOP.GOV>;
Wed, 07 Aug 1996 17:12:32 -0700 (MST)
Received: from localhost (daemon@localhost) by venus.hq.nasa.gov (8.7.1/8.7.1)

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: nsfnews@nsf.gov@INET@LNGTWY (nsfnews@nsf.gov@INET@LNGTWY [UNKNOWN])

CREATION DATE/TIME: 7-AUG-1996 15:51:31.00

SUBJECT: Life on MARS -- Part 2

TO: Sarah G. Horrigan@EOP (Sarah G. Horrigan@EOP [OMB])
READ:UNKNOWN

TEXT:
MEDIA ADVISORY
August 7, 1996
PA/M 96-32

LIFE ON MARS ?

Findings that suggest signs of primitive life may have been found on a Martian meteorite will be published in the journal Science August 16. The National Science Foundation supports the U.S. Antarctic Program investigators who found the meteorite. Additionally, the Chairman of the National Science Board, NSF□2s governing body, is an author of the Science paper.

Contacts include:

7 Bill Cassidy, University of Pittsburgh. Cassidy was the principal investigator of the meteorite collection team in Antarctica in1984 when the meteorite was found.

7 Ralph Harvey, Case Western University. Harvey is the current principal investigator of the Antarctic meteorite collection team.

7 Richard Zare, National Science Board Chairman and Stanford University. Zare is a chemist and one of the authors of the Science paper.

7 Herman Zimmerman, NSF program manager and paleoclimatologist. Zimmerman is the program manager who funded the meteorite collection efforts.

For more information contact:
Lynn Simarski, Mary Hanson or Beth Gaston
(703) 306-1070
email: lsimarsk@nsf.gov or mhanson@nsf.gov or egaston@nsf.gov

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I7ZZW9ADW00099AJ@PMDF.EOP.GOV> for horrigan_s@a1.eop.gov; Wed, 07 Aug 1996 15:43:48 -0400 (EDT)
Received: from note1.nsf.gov by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I7ZZVG29QG001ZCP@STORM.EOP.GOV> for horrigan_s@a1.eop.gov; Wed,

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: nsfnews@nsf.gov@INET@LNGTWY (nsfnews@nsf.gov@INET@LNGTWY [UNKNOWN])

CREATION DATE/TIME: 7-AUG-1996 14:36:54.00

SUBJECT: Media Advisory -- Life on Mars

TO: Sarah G. Horrigan@EOP (Sarah G. Horrigan@EOP [OMB])
READ:UNKNOWN

TEXT:
MEDIA ADVISORY
August 7, 1996
PA/M 96-31

LIFE ON MARS

Richard Zare, co-author of the report that suggest signs of primitive life may have been found on a Martian meteorite, will discuss the scientific discovery at a National Science Foundation event. Zare is the chairman of the National Science Board, NSF□2s governing body and is also a chemist at Stanford University.

Who: NSB Chairman Richard Zare
What: Discussion of Life on Mars

When: noon, Thursday August 8

Where: National Science Foundation - Room 375
4201 Wilson Blvd., Arlington (Ballston Metro Stop)
(Check in at second-floor security desk)

For more information contact:
Mary Hanson or Beth Gaston
(703) 306-1070
email: mhanson@nsf.gov or
egaston@nsf.gov

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I7ZXEN02MO008VWB@PMDF.EOP.GOV> for horrigan_s@a1.eop.gov; Wed, 07 Aug 1996 14:32:20 -0400 (EDT)
Received: from note1.nsf.gov by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I7ZXDVMXQA001YYD@STORM.EOP.GOV> for horrigan_s@a1.eop.gov; Wed, 07 Aug 1996 14:31:46 -0700 (MST)
Received: from (localhost) by note1.nsf.gov with SMTP id AA29234 (5.65c/IDA-1.4.4 for <horrigan_s@a1.eop.gov>); Wed, 07 Aug 1996 14:10:30 -0400

RECORD TYPE: FEDERAL (NOTES MAIL)

CREATOR: owner-press-release-gov@venus.hq.nasa.gov@INET@LNGTWY (owner-press-release

CREATION DATE/TIME: 8-AUG-1996 03:19:06.00

SUBJECT: Meteorite Yields Evidence of Primitive Life on Early Mars

TO: Memphis A. Norman@eop (Memphis A. Norman@eop [OMB])
READ:UNKNOWN

TEXT:
Donald L. Savage
Headquarters, Washington, DC
(Phone: 202/358-1727)

August 7, 1996

James Hartsfield
Johnson Space Center, Houston, TX
(Phone: 713/483-5111)

David Salisbury
Stanford University, Palo Alto, CA
(Phone: 415/723-2558)

RELEASE: 96-160

METEORITE YIELDS EVIDENCE OF PRIMITIVE LIFE ON EARLY MARS

A NASA research team of scientists at the Johnson Space Center (JSC), Houston, TX, and at Stanford University, Palo Alto, CA, has found evidence that strongly suggests primitive life may have existed on Mars more than 3.6 billion years ago.

The NASA-funded team found the first organic molecules thought to be of Martian origin; several mineral features characteristic of biological activity; and possible microscopic fossils of primitive, bacteria-like organisms inside of an ancient Martian rock that fell to Earth as a meteorite. This array of indirect evidence of past life will be reported in the August 16 issue of the journal Science, presenting the investigation to the scientific community at large for further study.

The two-year investigation was co-led by JSC planetary scientists Dr. David McKay, Dr. Everett Gibson and Kathie Thomas-Keprta of Lockheed-Martin, with the major collaboration of a Stanford team headed by Professor of Chemistry Dr. Richard Zare, as well as six other NASA and university research partners.

"There is not any one finding that leads us to believe that this is evidence of past life on Mars. Rather, it is a combination of many things that we have found," McKay said. "They include Stanford's detection of an apparently unique pattern of organic molecules, carbon compounds that are the basis of life. We also found several unusual mineral phases that are known products of primitive microscopic organisms on Earth. Structures that could be microsopic fossils seem to support all of this. The relationship of all of these things in terms of location - within a few hundred thousandths of an inch of one another - is the most compelling evidence."

"It is very difficult to prove life existed 3.6 billion years ago on Earth, let alone on Mars," Zare said. "The existing standard of proof, which we think we have met, includes having an accurately dated sample that contains native microfossils, mineralogical features characteristic of life, and evidence of complex organic chemistry."

"For two years, we have applied state-of-the-art technology to perform these analyses, and we believe we have found quite reasonable evidence of past life on Mars," Gibson added. "We don't claim that we have conclusively proven it. We are putting this evidence out to the scientific community for other investigators to verify, enhance, attack -- disprove if they can -- as part of the scientific process. Then, within a year or two, we hope to resolve the question one way or the other."

"What we have found to be the most reasonable interpretation is of such radical nature that it will only be accepted or rejected after other groups either confirm our findings or overturn them," McKay added.

The igneous rock in the 4.2-pound, potato-sized meteorite has been age-dated to about 4.5 billion years, the period when the planet Mars formed. The rock is believed to have originated underneath the Martian surface and to have been extensively fractured by impacts as meteorites bombarded the planets in the early inner solar system. Between 3.6 billion and 4 billion years ago, a time when it is generally thought that the planet was warmer and wetter, water is believed to have penetrated fractures in the subsurface rock, possibly forming an underground water system.

Since the water was saturated with carbon dioxide from the Martian atmosphere, carbonate minerals were deposited in the fractures. The team's findings indicate living organisms also may have assisted in the formation of the carbonate, and some remains of the microscopic organisms may have become fossilized, in a fashion similar to the formation of fossils in limestone on Earth. Then, 16 million years ago, a huge comet or asteroid struck Mars, ejecting a piece of the rock from its subsurface location with enough force to escape the planet. For millions of years, the chunk of rock floated through space. It encountered Earth's atmosphere 13,000 years ago and fell in Antarctica as a meteorite.

It is in the tiny globs of carbonate that the researchers found a number of features that can be interpreted as suggesting past life. Stanford researchers found easily detectable amounts of organic molecules called polycyclic aromatic hydrocarbons (PAHs) concentrated in the vicinity of the carbonate. Researchers at JSC found mineral compounds commonly associated with microscopic organisms and the possible microscopic fossil structures.

The largest of the possible fossils are less than 1/100 the diameter of a human hair, and most are about 1/1000 the diameter of a human hair - small enough that it would take about a thousand laid end-to-end to span the dot at the end of

is sentence. Some are egg-shaped while others are tubular. In appearance and size, the structures are strikingly similar to microscopic fossils of the tiniest bacteria found on Earth.

The meteorite, called ALH84001, was found in 1984 in Allan Hills ice field, Antarctica, by an annual expedition of the National Science Foundation's Antarctic Meteorite Program. It was preserved for study in JSC's Meteorite Processing Laboratory and its possible Martian origin was not recognized until 1993. It is one of only 12 meteorites identified so far that match the unique Martian chemistry measured by the Viking spacecraft that landed on Mars in 1976. ALH84001 is by far the oldest of the 12 Martian meteorites, more than three times as old as any other.

Many of the team's findings were made possible only because of very recent technological advances in high-resolution scanning electron microscopy and laser mass spectrometry. Only a few years ago, many of the features that they report were undetectable. Although past studies of this meteorite and others of Martian origin failed to detect evidence of past life, they were generally performed using lower levels of magnification, without the benefit of the technology used in this research. The recent discovery of extremely small bacteria on Earth, called nanobacteria, prompted the team to perform this work at a much finer scale than past efforts.

The nine authors of the Science report include McKay, Gibson and Thomas-Keprta of JSC; Christopher Romanek, formerly a National Research Council post-doctoral fellow at JSC who is now a staff scientist at the Savannah River Ecology Laboratory at the University of Georgia; Hojatollah Vali, a National Research Council post-doctoral fellow at JSC and a staff scientist at McGill University, Montreal, Quebec, Canada; and Zare, graduate students Simon J. Clemett and Claude R. Maechling and post-doctoral student Xavier Chillier of the Stanford University Department of Chemistry.

The team of researchers includes a wide variety of expertise, including microbiology, mineralogy, analytical techniques, geochemistry and organic chemistry, and the analysis crossed all of these disciplines. Further details on the findings presented in the Science article include:

* Researchers at Stanford University used a dual laser mass spectrometer -- the most sensitive instrument of its type in the world -- to look for the presence of the common family of organic molecules called PAHs. When microorganisms die, the complex organic molecules that they contain frequently degrade into PAHs. PAHs are often associated with ancient sedimentary rocks, coals and petroleum on Earth and can be common air pollutants. Not only did the scientists find PAHs in easily detectable amounts in ALH84001, but they found that these molecules were concentrated in the vicinity of the carbonate globules. This finding appears consistent with the proposition that they are a result of the fossilization process. In addition, the unique composition of the meteorite's PAHs is consistent with what the scientists expect from the fossilization of very primitive microorganisms. On Earth, PAHs virtually always

...cur in thousands of forms, but, in the meteorite, they are ...ominated by only about a half-dozen different compounds. The simplicity of this mixture, combined with the lack of light-weight PAHs like napthalene, also differs substantially from that of PAHs previously measured in non-Martian meteorites.

* The team found unusual compounds -- iron sulfides and magnetite -- that can be produced by anaerobic bacteria and other microscopic organisms on Earth. The compounds were found in locations directly associated with the fossil-like structures and carbonate globules in the meteorite. Extreme conditions -- conditions very unlikely to have been encountered by the meteorite -- would have been required to produce these compounds in close proximity to one another if life were not involved. The carbonate also contained tiny grains of magnetite that are almost identical to magnetic fossil remnants often left by certain bacteria found on Earth. Other minerals commonly associated with biological activity on Earth were found in the carbonate as well.

* The formation of the carbonate or fossils by living organisms while the meteorite was in the Antarctic was deemed unlikely for several reasons. The carbonate was age dated using a parent-daughter isotope method and found to be 3.6 billion years old, and the organic molecules were first detected well within the ancient carbonate. In addition, the team analyzed representative samples of other meteorites from Antarctica and found no evidence of fossil-like structures, organic molecules or possible biologically produced compounds and minerals similar to those in the ALH84001 meteorite. The composition and location of PAHs organic molecules found in the meteorite also appeared to confirm that the possible evidence of life was extraterrestrial. No PAHs were found in the meteorite's exterior crust, but the concentration of PAHs increased in the meteorite's interior to levels higher than ever found in Antarctica. Higher concentrations of PAHs would have likely been found on the exterior of the meteorite, decreasing toward the interior, if the organic molecules are the result of contamination of the meteorite on Earth.

Additional information may be obtained at 1 p.m. EDT via the Internet at

http://www.jsc.nasa.gov/pao/flash/

-end-

========== ATTACHMENT 1 ==========
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
RFC-822-headers:
Received: from storm.eop.gov (storm.eop.gov)
by PMDF.EOP.GOV (PMDF V5.0-4 #6879) id <01I80NW2104G00ATE6@PMDF.EOP.GOV>; Thu,

08 Aug 1996 03:10:51 -0400 (EDT)
Received: from venus.hq.nasa.gov (venus.hq.nasa.gov)
by STORM.EOP.GOV (PMDF V5.0-7 #6879) id <01I80NVAOXTI0025IB@STORM.EOP.GOV>;
Thu, 08 Aug 1996 03:10:13 -0700 (MST)
Received: from localhost (daemon@localhost) by venus.hq.nasa.gov (8.7.1/8.7.1)

Cable

PREC: PRIORITY
CLASS: UNCLASSIFIED
LINE1: PAAUZYUW RUEHBYA3567 2250722-UUUU--RHEHAAA.
LINE2: ZNR UUUUU ZZH
LINE3: P 120722Z AUG 96
LINE4: FM AMEMBASSY CANBERRA
OSRI: RUEHBY
DTG: 120722Z AUG 96
ORIG: AMEMBASSY CANBERRA
TO: RUEHC/SECSTATE WASHDC PRIORITY 4366
RHEHAAA/WHITE HOUSE WASHDC PRIORITY
RUEHWL/AMEMBASSY WELLINGTON PRIORITY 7153
RUEHJA/AMEMBASSY JAKARTA PRIORITY 2346
RUEHPT/AMCONSUL PERTH PRIORITY 7318
RUEHBN/AMCONSUL MELBOURNE PRIORITY 1194
RUEHDN/AMCONSUL SYDNEY PRIORITY 3759
RUEHIA/USIA WASHDC PRIORITY 3727
RHHMUNA/USCINCPAC HONOLULU HI//USIA// PRIORITY
RUERMMA/PMCMIDEMII ABERDEEN PROVING GROUND MD PRIORITY
RUHVPAC/HQPACAF HICKAM AFB HI//CC/XP/PAI// PRIORITY
RUWTNOK/USCINCSPACE PETERSON AFB CO//POLAD// PRIORITY
RUEHPM/AMEMBASSY PORT MORESBY PRIORITY 7272
RUEHKO/AMEMBASSY TOKYO PRIORITY 0607
RUEKJCS/SECDEF WASHDC PRIORITY
INFO: ////
SUBJ: Media Reaction US-Australia Security
China Trade US Election Russia Mars

TEXT:

UNCLAS SECTION 01 OF 04 CANBERRA 003567

USIA

USIA FOR EA, I/GEA, I/RFW - CAPIE POLK, D/P, R/MR,
EU, B/TV; STATE FOR EAP/ANZ; STATE PLEASE PASS
USTR; STATE FOR SIS/O; SECDEF FOR USDP/ISA

E.A. 12958 N/A
SUBJECT: Media Reaction US-Australia Security
China Trade US Election Russia Mars

U.S.-AUSTRALIA SECURITY ALLIANCE

1. "China takes a hard line on U.S. pact"

The national, conservative Australian (8/12) had an editorial comment which read, "The People's Daily specific criticism of the Australia-U.S. defense arrangements -- that they indicate a continuance of Cold War thinking and are part of an attempt to encircle or contain China -- is nonsense....

partner.... The past week has seen a series of dramatic turnarounds for Mr. Dole, who reversed his decades-old aversion to unfunded tax cuts and was forced by religious conservatives to abandon a message of political tolerance he wanted to send on the abortion issue in San Diego. Mr. Kemp has long been seen as a candidate of national stature, but the surprise at his selection stems from the well-known bad blood between the two men."

8. "Strong running mate likely to outshine Dole"

In a San Diego byliner, the Washington correspondent for the national, business-oriented Australian Financial Review (8/12) filed, "In choosing long-time rival Jack Kemp to be his running mate, struggling Republican president contender Bob Dole has done what few White House hopefuls have dared. He has picked a vice-presidential candidate who threatens to outshine him.... (H)is surprise selection of the widely popular Mr. Kemp is set to brighten the gloomy outlook of delegates gathering in San Diego for the Republican National Convention.... In what observers are dubbing the oddest presidential ticket since Kennedy-Johnson, the big test may be whether the independently minded Mr. Kemp can stick to all of the Dole script."

RUSSIA

9. "Yeltsin puts Lebed in the Chechnya hot seat"

The Moscow correspondent for the national, business-oriented Australian Financial Review (8/12) filed, "President Boris Yeltsin showed that while his heart might be giving him trouble, his sense of mischief is as health as ever. Before leaving for a holiday of unknown duration, he appointed his new security chief Alexander Lebed, envoy to Chechnya. With deputies in the Duma howling for heads to roll over the loss to the separatists last week of the center of Grozny, Yeltsin has made it likely that the former general will end up as stained by this dirty war as everyone else in his entourage.... By his appointment, Yeltsin is saying that criticism is easy but finding solutions is hard. It may be said in Lebed's defense that he had nothing to do with starting the war, but that hardly matters how: the point is that he has been put immediately in charge of finding a way to end it."

METEORITE DISCOVERY/MARS

10. "A crowded universe"

The liberal Sydney Morning Herald (8/10)

editorialized, "No matter that the tiny bacteria-like shapes might be no more than accidental formations of dried mud. No matter that the scientists' enthusiasm might have got the better of
UNCLAS SECTION 04 OF 04 CANBERRA 003567

USIA

USIA FOR EA, I/GEA, I/RFW - CAPIE POLK, D/P, R/MR, EU, B/TV; STATE FOR EAP/ANZ; STATE PLEASE PASS USTR; STATE FOR SIS/O; SECDEF FOR USDP/ISA

E.A. 12958 N/A
SUBJECT: Media Reaction US-Australia Security China Trade US Election Russia Mars

them a few months before the next NASA Expedition to Mars and been fueled by their concern to justify continued funding for space research. For Americans, the question raised by this speculation are practical as well as philosophical. If these questions are to be pursued with research, it is the American taxpayers who will be paying. So far, the scientists are doing well. President Clinton seems won over. He calls the speculation a discovery and says it is another vindication of America's space program.' He promised funding to ensure the program can put its full intellectual power and technological prowess behind the search for further evidence of life on Mars.'"GANGSTEAD ACTING

SECT: SECTION: 01 OF 04
<^SECT>SECTION: 02 OF 04
<^SECT>SECTION: 03 OF 04
<^SECT>SECTION: 04 OF 04

SSN: 3567
<^SSN>3567
<^SSN>3567
<^SSN>3567

TOR: 960812032727 M2353612
<^TOR>960812032813 M2353613
<^TOR>960812032859 M2353614
<^TOR>960812032859 M2353615

DIST:
SIT: PRITCHARD
SIT: NSC