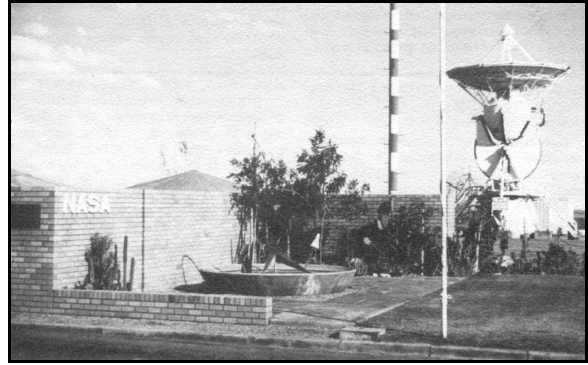




Vol 1 June 2003

THE TRACKERS

C R O N I C L E



Welcome to the first issue of The Trackers
CROnicle.

It has been a long time since 1994, when it was first suggested that “someone” produce a regular newsletter for those associated with the Carnarvon NASA Tracking Station during its short lifespan of 11 years.

Now that 2004 is approaching I felt that the first newsletter might be even more appropriate to accompany a solicitation for attendees at a 35th anniversary dinner to be held in Perth WA on Saturday 24th July 2004.

Sadly, I hear all too often of those who have passed on. Not only those who worked at the station but townspeople with whom we associated in our daily lives. I guess it is the recognition of the rapidly passing years and my own mortality that has spurred me on to sitting down to produce a regular newsletter.

Provisionally, depending on support and availability of suitable material and funds, I am planning on a quarterly issue. For those with internet access I will make the newsletter available online and in a downloadable form.

So, it is all contributions welcome and I look forward to renewing old acquaintances next year.

Terence (Terry) Kierans
Editor

PO Box 93
QUINNS ROCKS WA 6030

email:tkierans@virtualservices.com.au

OTC and The Great Carnarvon Sanitary Napkin Shortage

This, apparently true, item was unearthed while searching for material for this newsletter.

It is reproduced here, unedited; I have no knowledge of any of the characters mentioned.

“**Roland Ayo** told me about the Great Carnarvon Sanitary Napkin Shortage while we were having a drink or two at Bill Newman’s farewell and I urged him to put it in print for all time. Here it is in his own words. OTC has always been full of innovative people even if the women of Carnarvon did have to suffer as a result of this bit of smart thinking.

Robert Brand

Roly's story:

How Install Purchased all the Sanitary Towels in Carnarvon WA

My first install in OTC was to Western Australia. Barry Thomson led the team that was to Remove the Ground Equipment from the caravans to the new building, and for the first time OTC was to run and

joint rigid wave guide from the NASA Sugar Scoop Antenna to the Ground Equipment room. The complete job ran for 89 days, September through to November 1970.

Tradesmen had under gone training at Marrickville and jigs had been developed for the precision cutting and methods to sweat the waveguide to its termination. Measurements of return loss would be the final arbitrary as to the jointing success. Everything had to be perfectly clean and the pressure was on for us to better the loss figures that NEC had predicated.

The wave guide arrived from Japan protection with plastic covers at each end. Each bit was measured, cut to size, terminated and installed in the trench. There was a nagging doubt as to how could we be sure that each W/G was perfectly clean after fabrication.

Some one came up with the idea to pull through waste cotton, much like the way one cleans a gun barrel, but

could you be certain that the cotton rag was perfectly clean before use and that all the rag had actually come out without leaving any lint behind?

I don’t know who thought of the method, but there we were at the Chemist in the shopping centre buying all his stock of Sanitary Towels on petty cash.

On site, each towel was used twice. Pulled through then folded and pulled through again and discarded. The amount of dirt that was removed was astonishing — the ST being the perfect size for both the 6 and 4 Ghz W/G runs.

The next day Barry was attempting to explain to the Station Manager why OTC install had found it necessary to purchase the entire stock of STs in Carnarvon.

Incidentally we dramatically improved the loss figures for the W/G Runs.

Roland Ayo.

Tradesman at the time”

David R. Scott, Commander of the Apollo 15 mission:

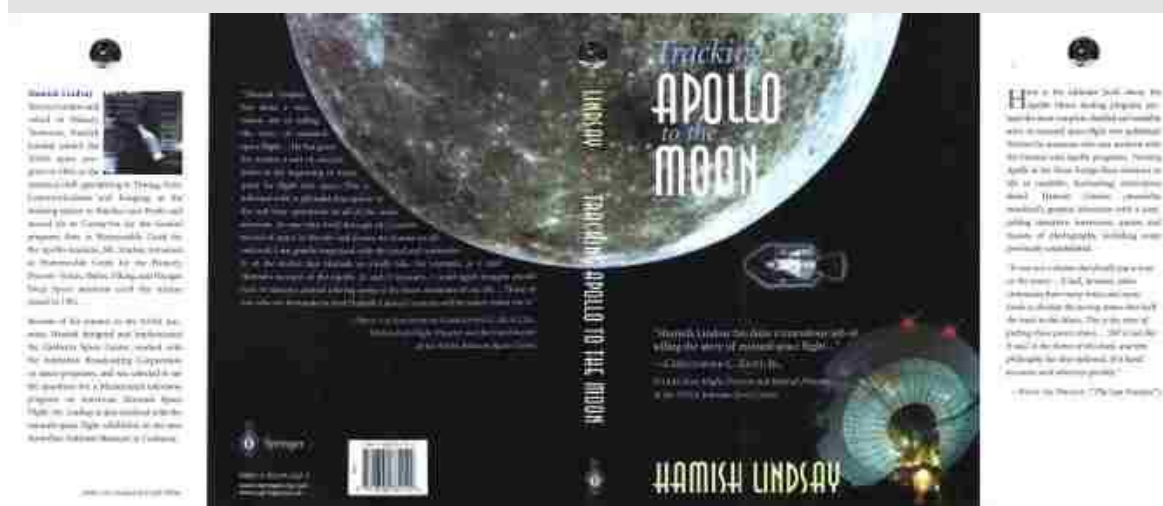
"For when I look at the moon I do not see a hostile, empty world. I see the radiant body where man has taken his first steps into a frontier that will never end."

National Geographic, Volume 144, No 3, September, 1973.

Reproduced from "Tracking Apollo to the Moon" by Hamish Lindsay —ISBN: 1-85233-212-3

TRACKING APOLLO TO THE MOON

By Hamish Lindsay



Picture reproduced from the website of John Saxon, formerly at Honeysuckle Creek

Hamish Lindsay was one of the “old originals” back in 1964.

From personal experience I know that he worked long and hard to produce this book and get it into print.

It has received wide acclaim from such renowned personages as Chris C. Craft and Buzz Aldrin.

“This is perhaps the most complete, detailed and readable story of manned space-flight ever published. Beginning with the historical origins of the dream of walking on the Moon, Tracking Apollo to the Moon is the complete story of manned spaceflight, from the earliest Mercury and Gemini flights through to the end of the Apollo era. In readable, fascinating detail, Hamish Lindsay—who was directly involved in all three programs—chronicles mankind’s greatest

adventure with a great narrative, interviews, quotes and masses of photographs, including some previously unpublished. As well as bringing the history of these missions to life Tracking Apollo to the Moon serves as a detailed reference for space enthusiasts and students. Having seen the manuscript, the Smithsonian requested two copies of the finished book, and Buzz Aldrin asked for five!”

From the review on the Springer website at:
<http://www.springer-ny.com/detail.tpl?cart=98591675338680&ISBN=1852332123>

FROM THE FOREWORD BY CHRISTOPHER C. KRAFT, JR.

"Hamish Lindsay has done a marvelous job of telling the story of manned spaced flight... He has given his readers a sort of encyclopedia of the beginning of man's quest for flight into space."

.....

WE'LL BE THERE

I/we plan/do not plan (*delete as applicable*) to attend the dinner to celebrate the 35th anniversary of the Apollo 11 landing to be held in Perth WA on Saturday 24th July 2004.

Number attending

Name(s)

Change of details

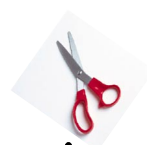
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Quinns Rocks, WA 6030

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Vol 1 September 2003

THE TRACKERS

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There's good news, and bad news.

The good news, first, is that so far we have nearly 60 registering their intent to attend next year's anniversary dinner. It isn't too late to add your names, there is a form on the back page.

The bad news—I am unable to subsidise the cost of printing and distributing this newsletter, but I know from the responses I have received, that it is welcomed and wanted.

So, if you want to continue to receive The Trackers CRONicle, I need to solicit from you the princely total sum of \$AU11.00 (inc. \$1.00 GST), per year for four issues. This will apply whether you receive your copy by snail mail or e-mail, and will cover you to Vol 2 June 2004. You will find a subscription form on page 7 of this issue. No GST for overseas subscribers.

You will have noted that I have been able to double the size of the newsletter to make it even more worthwhile. Suggestions for content, and items for inclusion will be gratefully considered.

This month marks the 37th anniversary of Gemini XI—there is a lengthy article relating to this mission inside.

It is also the 35^h anniversary of the Russians sending the first cargo of earth life forms around the moon, in Zond 5.

Terence (Terry) Kierans
Editor

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Gemini XI

12–15 September 1966

Launched 12th September 1966.
Landed 15th September 1966.
Flight duration 2 days 23 hours
17 minutes 8 seconds.



Crew—Charles “Pete” Conrad
and Richard Gordon.
44 orbits.

The primary objectives of Gemini XI were:

- 1) To achieve a first orbit rendezvous and docking with the Agena Target Vehicle.
- 2) Accomplish two Extra-vehicular Activity (EVA) tests.
- 3) Perform docking practice, docked configuration manoeuvres, tethered operations and parking of the Agena target vehicle.
- 4) Demonstrate an automatic re-entry.
- 5) Eight scientific experiments
 - Synergistic effect of zero-g and radiation on white blood cells.
 - Synoptic terrain photography.
 - Synoptic weather photography.
 - Nuclear emulsions.
 - Airglow horizon photography.
 - UV astronomical photography.
 - Gemini ion wake measurement.
 - Dim sky photography.
- 6) Four technological experiments were also on board.

Gemini 11 was the ninth crewed Earth-orbiting spacecraft of the Gemini series, carrying astronauts Charles “Pete” Conrad and

Richard Gordon on a three-day orbital mission.

The countdown-to-launch began on schedule on September 9, 1966, but it did not finish that way. After the booster was fuelled, the launch crew detected a pinhole leak in the first stage oxidizer tank, which had to be fixed. Launch was reset for September 10.

Trouble for the second scheduled send-off cropped up in a different area and much later in the countdown. Conrad and Gordon had completed the required rituals and headed toward pad 19 and their spacecraft when they heard that the Atlas (which would launch the Gemini Agena Target Vehicle), only 1,800 metres away, was having a problem with its autopilot. When the delay had stretched to an hour, the launch was postponed for two more days.

On 12 September 1966, Conrad and Gordon arrived at the pad and stepped into their seats

exactly on time. The hatches were closed but they soon had to reopen Conrad’s. He suspected that some oxygen was leaking from his side of the cabin. He was right. When the hatch had been fixed, the countdown went on.



At 8:05 a.m., the Atlas carrying the Agena roared into action launching the target for the crew of Gemini XI. If ever two pilots waited anxiously for the starter’s gun to crack, Conrad and Gordon did. For the first objective to be met (a first-orbit rendezvous with

(Continued on page 5)

We who inhabit the Earth dwell like frogs at the bottom of a pool. Only if man could rise above the summit of the air could he behold the true Earth, the world in which we live.

Socrates, c.410BC

Reproduced from “Tracking Apollo to the Moon” by Hamish Lindsay —ISBN: 1-85233-212-3

What Are They Doing Now?

As a result of a suggestion by Trevor Housley, we will be running a regular column on this subject.

I don't have much material available for this issue so please feel free to send me any information you have, or can acquire.

I shall also be happy to pass on requests for regaining contact with lost colleagues and friends.

Max Beresford

Worked with Invensys Energy Systems but now retired in Sydney.

Geoff Broom (Alias the Yeti.)

Resident in New Zealand and seems to spend time travelling the Pacific Islands with his wife Lyn.

Ed Goldsmith

Retired to a southern suburb

of Canberra. Will be travelling Australia with his wife Jacqui in their newly acquired caravan.

John Harmsen

Now working with Invensys Energy Systems, and living in Perth with his wife Lyn.

John Horn

Living in a retirement village in Sydney.

Ray Jacomb

Returned to the UK with his wife Audrey.

Dennis Jones

Living in Canada with wife Pat.

Susanne Dennings nee Vaux

Working hard in the environmental arena and a leading light in the Malleefowl Preservation Group.

More next issue.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know details. Thank you.

Ed.

Max Beresford
Michael Billings
Barry Campbell
Mike Ferguson
Anne Harvey

Peter Headford
Peter Kent
Tom Lysaght
Don McLelland
Frank Parkinson

Stewart Sands
Ron Sargeant
Ian Shardlow
Jean Spokes
Alex Stevenson

Jack Stewart
Jack Thompson
Barbara Vernon
Jim Wilcox
Lyn Willis

?



We appear to be celebrating some event or other in the crew room, but what?

Can anyone help?

From other photographs taken around the same time one Ed Fendell was also present; if that helps jog any memories.

Carnarvon Tracking Station

1964—1974

Over the years many of us have written to various organisations and officials regarding recognition of the part Carnarvon played in the lead up to, and, the Apollo missions.

The letter reproduced here was written last year by Joan Teraci. Sir

I read with interest in today's "West Australian", 31st August 2002. On page 41, written by Carmelo Amalfi. "SPACE PLAN TARGETS TOURISTS."

How sad the town of Carnarvon still has not recognised the history that took place at the Carnarvon Tracking Station 1964 - 1974.

Carnarvon Tracking Station did exist and played a very important part in sending "Man to the Moon". Carnarvon was fortunate enough to have several Astronauts' visit the town during the early 60s.

Since 1989 I have been asking for a "plaque" to be placed near the gates at the original site at Brown's Range. Unless it has happened in the last few months, it still has not been done.

I have written to the Shire President, the Tourist Bureau, and have had replies from them, but still no plaque has been erected. I have even left a voice mail message for a Mr Blurton (last November) to return my call, still with no avail. I was told at the Tourist Bureau he was the person to speak to.

I took my two Grandsons to the Tourist Bureau and enquired if there was a bus trip that took tourists to the OTC dish, which holds many pieces of memorabilia from the Carnarvon Tracking

Station. I had hoped to show them some of the history their Grandfather participated in, along with several pieces of memorabilia we have personally donated, but we couldn't even see this; we were told it was closed!

When locals use the Swimming Pool I wonder if they realise that a large amount of money was donated by the Carnarvon Tracking Station, to help fund this pool?

Compliments however; I was very fortunate indeed to view the memorabilia at the Carnarvon Civic Centre, commemorating the 60th Anniversary of the HMAS Sydney held in November last year.

I sincerely hope it will not take the Shire of Carnarvon, 60 years for a plaque to be placed near or by the gates, at Brown's Range. Perhaps someone might even approach the local politician for an Australian Flag to be placed back on the flagpole, and even get an American Flag for the other flagpole, this way at least people might be enlightened that it was not OTC who was responsible for this piece of history, but the Carnarvon Tracking Station.

I have followed this with a letter to the incumbent President of the Rotary Club of Carnarvon, dated 30 July 2003, with a copy to the Hon. Wilson Tuckey who responded with several helpful suggestions, on which I am acting.

Dear Mr Aughey

We are rapidly approaching the year 2004, during which the 35th anniversary of the first lunar landing will be celebrated.

On behalf of those who worked at the NASA Tracking Station between 1964 and 1974 and the associated townspeople, I would like to suggest, that your club undertakes a project that is long overdue and of historical significance to the town in particular, and the tourist industry in general.

This project would involve a tourist style signpost on the highway opposite the entrance to the original site on Brown's Range and a plaque on a plinth at the base of the flagpole on the site itself.

The signpost would state, "Site of the original Carnarvon NASA Tracking Station, 1964-1975". The plaque could bear the words, "This plaque marks the site of the Carnarvon NASA Tracking Station, from which the signal was transmitted to fire the rockets that set Apollo 11 on its journey to the moon in July 1969".

For many years some townspeople, and many of those who worked at the tracking station have been writing letters to the Shire President and the Tourist Bureau endeavouring to get some form of recognition of what was achieved in Carnarvon during those years, to no avail.

Too many tourists leave the town believing that the OTC dish marks the site of the NASA Tracking Station. I believe that it behoves an organisation such as yours to correct this misapprehension.

I trust that your project committee will deem this to be a worthwhile venture, and look forward to hearing from you in the affirmative.

There has to date, been no reply.

Gemini XI ctd.

(Continued from page 2)



the Agena) they had to launch the Gemini spacecraft within two seconds of the launch of the Agena. It was the shortest launch window in the Gemini program.

Launch occurred on September 12, 1966 at 9:42:26.5 a.m. EST just a half second into the two-second period.

The Titan booster shoved Gemini XI toward a first-orbit rendezvous with near-perfect accuracy. At booster separation, when debris could be seen out the window. Gordon had warned himself not to look, but temptation got the better of him for a brief instant.

After five spacecraft manoeuvres were made to adjust their orbit, the Agena, whose blinking lights they had been watching in the darkness, flashed into the sunlight over the Pacific and almost blinded them. The crew scrambled for sunglasses, then Conrad jockeyed the spacecraft to within 15 metres of the target's docking cone. Over the coast of California, only 85 minutes after launch, rendezvous in the first orbit was achieved consuming less fuel than expected.

The Gemini XI crew now had an

opportunity to do something else that NASA had wanted for a long time - docking and undocking practice. Each man pulled out and drove back once in daylight and once in darkness. It was easy - much easier, Conrad said, than in the translation and docking trainer on the ground. For the first time, a co-pilot was given the chance to dock with a target vehicle. After six hours of hard but frustration-free work, Conrad and Gordon powered down the spacecraft systems, ate a meal and soon got a "Good Night" salutation from the ground. For eight hours, they dozed and rested, awaking, as Gordon said, "bright-eyed and bushy-tailed."

The only complaints the pilots had were about their dirty windows. Dirty windows had plagued all Gemini flights. Conrad had asked if Gordon could wipe his window when he went outside. He was told he could rub half the command pilot's window with a dry cloth and bring the rag back for testing.

Conrad and Gordon napped and rested a while longer, then started their next major task—preparation for Extravehicular Activity (EVA). Four hours before they were to open the hatch, the crew began to get their suits ready for the vacuum environment. They had practiced this so many times on the ground, Conrad said, that they soon realized they did not need all that time. Within 50 minutes, the gear was ready and running.

Briefly, the two men considered asking the Flight Director to let Gordon go out a revolution early. But they decided to keep on schedule.

At last it was almost time to open the hatch. Gordon began putting a sun visor on his faceplate

which turned out to be a much bigger chore than anticipated. Conrad finally got the left side fastened, but he could not reach across Gordon to fasten the other side. Gordon wrestled with the right snap for five minutes and finally got it fastened, cracking the visor in the process. He was thoroughly winded before he got out of his seat. But he opened the hatch and stood up at 24:02 hours ground elapsed time exactly on schedule.

As expected, everything in the spacecraft that was not tied down began to float upward and outward—including Gordon. Conrad grabbed for a strap on the leg of Gordon's suit and held him in the seat.

Gordon then deployed a handrail, installed a camera and handed an experiment in to Conrad.

The first challenge was to attach the Agena to the Gemini capsule by a 30-metre tether. Gordon pushed himself forward to the target and grabbed some fixed handrails to pull himself astride the spacecraft nose.

What had been relatively easy in zero-g airplane flight training had become a monumental task. In practice sessions in zero-g aircraft flights, Gordon had been able to accomplish the tasks with his feet and legs wedged between the docking adapter and the spacecraft to hold himself in place, leaving his hands free. But this did not seem to work so well in the actual conditions of space. All he could do was hold on with one hand and try to operate the tether clamp with the other. He struggled for six minutes, finally securing the line. To Conrad it was obvious that Gordon was running out of steam. With his

(Continued on page 6)

Gemini XI—ctd.

face streaming with sweat and his eyes stinging, Gordon groped blindly about.

As the pilot inched his way back to the hatch area, Conrad helped him as much as he could. They then discussed whether Gordon should go to the adapter and get the manoeuvring gun stored there. His right eye was still burning, and Conrad could see just how exhausted his pilot was. The power tool evaluation became a casualty on Gemini XI as it had been on VII. The command pilot soon told the ground that he had “brought Dick back in . . . He got so hot and sweaty, he couldn’t see.” Gordon’s EVA was ended and the hatch closed. It had been open 33 minutes, instead of the planned 107.

Because Conrad and Gordon were surrounded by so much loose gear, they opened the hatch an hour later and jettisoned all the umbilical extravehicular equipment.

As the Gemini flights progressed, each successive pilot continued to be amazed that the simplest tasks were so much harder than expected. “Gene Cernan warned me about this, and I took it to heart”, Gordon later said. “I knew it was going to be harder, but I had no idea of the magnitude”. Apparently the supporting engineers had no idea, either, since they still had not provided satisfactory restraints to help the crews.

The extreme exhaustion of past EVA pilots had sometimes adversely affected the rest of the mission, but Gordon’s did not.

The next day, Conrad and Gordon skipped breakfast to get the cabin ready before the hard shove in their midsections sent them upstairs. They wanted

things buttoned up as though for re-entry. So they suited themselves, closed their faceplates, and stowed everything they could.

In the 26th revolution around the earth, Conrad triggered the firing signal to the Agena’s main engine and fired it for 26 seconds. Since they faced the Agena, the acceleration forced the crew forward onto the seat harnesses. They watched the great round ball of Earth recede becoming the first humans to ever view the Earth as a sphere (from an altitude of 1374.1 km or 853.87 miles. A record altitude for an astronaut mission that would stand until Apollo 8 went to the Moon.) After two orbits the Agena was fired again for 22.5 seconds to lower the Gemini-Agena back down Over the United States in the 28th revolution, Conrad used the Agena to lower the apogee of the orbit. Firing for 23 seconds decreased speed and lowering the spacecraft. Another mission objective could be stamped “achieved”.

Conrad and Gordon ate a quick meal and began preparations for the next EVA. In revolution 29, above Madagascar, Gordon opened the hatch and watched the sunset. Gordon stood on the spacecraft floor, held down by a short tether. This allowed him to forget about maintaining body position and left both hands free for his tasks. He mounted cameras in brackets without any difficulty. And conducted photographic experiments “Most enjoyable”, he said of his two-hour stand-up period. So relaxed and well oriented was he that the monitoring physicians reported, “From a medical viewpoint, the stand-up EVA was relatively uneventful”.

Passing over the United States the crew marvelled at the view of their home area—Houston. They passed quietly across Florida and out over the Atlantic. With the photos taken, the EVA ended and Gordon re-entered the capsule. Both astronauts were fatigued, but this time their fatigue stemmed mainly from concentration on an experiment.

The crew rested and discussed the next major mission event—the tethered vehicle exercise.

Over the tracking station in Hawaii, the crew separated the two vehicles. When the tether between them was taut, Conrad rolled the Gemini spacecraft and blipped the thrusters to begin the slow cartwheel motion. A 38-degree-per-minute rotational rate was obtained and remained steady throughout the night side pass and it was then increased to a 55-degree-per-minute rate. This caused a slight artificial “gravitational acceleration” within the capsule, the first time such artificial gravity was demonstrated in space.

The second rendezvous in Gemini XI, like the first, took only one orbit. Manoeuvres were made and Gemini docked with Agena again. Twelve minutes later, the crew broke away from the Agena for the last time. Conrad later said, “We made the three-foot per second retrograde burn and left the best friend we ever had”. Gordon added, “We were sorry to see that Agena go. It was very kind to us.”.

Conrad suggested that the Flight Director might send up a tanker—the crew would be happy to refuel, remain in orbit, and do some more work. But while this air-to-ground joking was going on, the crew was getting ready to land.

(Continued on page 7)

Gemini XI—conclusion

(Continued from page 6)

There was only one significant event left before Conrad and Gordon wrapped up their mission. A secondary objective called for the crew to make an automatic re-entry. The commanders of other Gemini flights had flown their spacecraft down from 120,000 metres. This had enabled them to make corrections up to 550 kilometres downrange and 50 kilometres cross range. Conrad, however, would not fly the spacecraft with his hand controller in conjunction with computer directions; the spacecraft would follow these commands automatically.

On September 15, 1966, after 70:41 hours of flight and in the 44th revolution of Earth, the



retro-rockets fired. Conrad and Gordon watched the computer closely. It certainly seemed to be working right. Conrad then disengaged his hand controller and put the system on automatic.

On several occasions, the spacecraft displayed an almost human characteristic, hesitating before accepting its orders. But the system recovered quickly and performed

beautifully, using a minimum of the re-entry system's control fuel.

The accuracy of automatic re-entry was thoroughly demonstrated when the spacecraft landed within 4.6 kilometres of the U.S.S. Guam, the prime recovery ship, a sea-going platform for helicopters. The crew and spacecraft floated down to its landing, after 71:17 hours elapsed time.

All primary objectives had been accomplished and the last docking with Agena had been added to the mission plan due to the favourable fuel supply.

*Reproduced courtesy:
Richard F Gordon Jr.
<http://www.dickgordon.com/>*

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Signed

Date

.....

WE'LL BE THERE

I/we plan/do not plan (*delete as applicable*) to attend the dinner to celebrate the 35th anniversary of the Apollo 11 landing to be held in Perth WA on Saturday 24th July 2004.

Number attending

Name(s)

Change of details

E-mail address

Please return completed form, by 31st October 2003, to

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Vol 1 December 2003

THE TRACKERS

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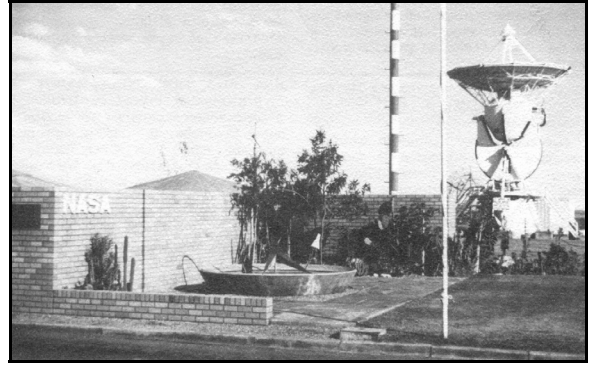
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December marks the anniversary of four manned space flight missions:

Gemini VI-A	December 15-16 1965
Gemini VII	December 4-18 1965
Apollo 8	December 21-27 1968
Apollo 17	December 7-19 1972

Chimp Enos missed out on a December trip by two days.

The Apollo 8 mission, occurring as it did over the Christmas period, features in this issue of the CRONicle.

Bookings for the 35th Anniversary dinner are approaching the mid-seventies and negotiations are underway regarding the venue and cost. Details, and a provisional menu, should be available for the next newsletter.

Subscriptions to this newsletter are below target. If you know of anyone who isn't receiving a newsletter, please suggest that they subscribe. It is only due to the generosity of a few ex-trackers in making donations that I have been able to continue.

Terence (Terry) Kierans
Editor

CROtrak
PO Box 93
QUINNS ROCKS WA 6030

email: crotrak@virtualservices.com.au

Apollo 8

21—27 December 1968

Flight duration —
6 days 3 hours 0 minutes 42 seconds

Crew —
Frank Borman, commander
James Lovell, command module pilot
William Anders, lunar module pilot

10 lunar orbits in 20 hours 10 minutes 13 seconds

Apollo 8 was the first mission to take humans to the Moon and back.

An important prelude to actually landing on the Moon was testing the flight trajectory and operations for getting there and back. Apollo



8 did this and achieved many other firsts including the first manned mission launched on the Saturn V, first manned launch from NASA's new Moonport, first pictures taken by humans of the Earth from deep space, and first live TV coverage of the lunar surface.

MISSION EVENT LIST AND TIMELINE

EVENT	DATE & TIME (WST)	MISSION TIME
Launch	December 21 20:51:00	00:00:00
Earth orbit insertion	21:32:35	00:11:35
Translunar injection	23:41:37	02:50:37
Lunar orbit insertion	December 24 17:59:20	69:08:20
Transearth injection	December 25 14:10:16	89:19:16
Splashdown	December 27 23:51:42	147:00:42

ORBITING THE MOON CHRISTMAS EVE

"Longest four minutes I ever spent", said Lovell during the burn, in a comment recorded but not broadcast in real time. At 69 hours 15 minutes Apollo 8 went into lunar orbit, whereupon Anders said, "Congratulations, gentlemen, you are at zero-zero". Said Borman, "It's not time for congratulations yet.

Dig out the flight plan."

Unaware of this conversation, Mission Control buzzed with nervous chatter. Carr began seeking a signal to indicate that the astronauts were indeed in orbit: "Apollo 8, Apollo 8, Apollo 8." Then the voice of Jim Lovell came through calmly, "Go ahead, Houston."

Mission Control's viewing-room spectators broke into

cheers and loud applause. Apollo 8 was in a 168.5 by 60 mile orbit on this day before Christmas. "What does the old Moon look like from 60 miles?" asked CapCom. "Essentially gray; no color," said Lovell, "like plaster of paris or a sort of grayish beach sand." The craters all seemed to be rounded off; some of them had cones

(Continued on page 5)

What Are They Doing Now?

Alan Gilham

Residing in the UK. Retired at the standard age of 65 after working with Marconi and several large UK companies ending up in medical electronics with India and Israel as his sales territories. Seems to have spent his

retirement years travelling all over the Mediterranean, Syria and Jordan, India, Tibet, Bhutan, Canada, the US and Australia, (see article p4).

Lorraine Sartori (nee Rooney)

Living in Geraldton WA

and working at the Australian Defence Satellite Communications Station 30 kms east of Geraldton.

During her 12+ years with the DoD she has worked with ex-CRO trackers Bill Brooke, Rob Frost, and John Rudkin.

More next issue.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know details. Thank you.

Ed.

Max Beresford
Michael Billings
Mike Ferguson
Anne Harvey

Peter Headford
Peter Kent
Don McLelland
Frank Parkinson

Stewart Sands
Ron Sargeant
Jean Spokes
Alex Stevenson
Jack Stewart

Jack Thompson
Barbara Vernon
Colin Winrow
Jim Wilcox
Lyn Willis

It is with much regret that I report that Lewis Wainwright passed away late in October 2003.

The only photograph I could find was the one taken when John Glenn visited the tracking station in 1967.

Prior to his appointment to the position of Station Director at Carnarvon, Lewis was the Station Director at Muchea.

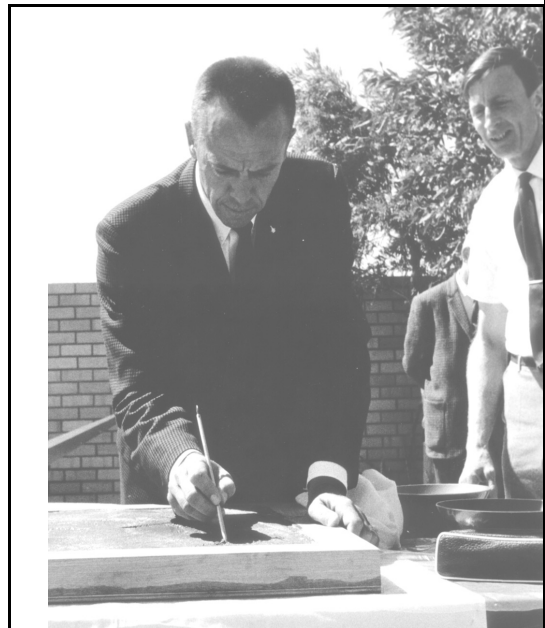
He wrote to me in July—

"Thanks for the Trackers CRONicle and your effort to keep the Crotrackers gathering occasionally. I am sorry I cannot expect to join you next year, but hope that those who are able to take part enjoy the friendship and reminiscences.

Good luck

Lewis"

Our sympathies are extended to his family; I know that many will mourn his passing.



Carnarvon Revisited

Contributed by Alan Gilham.

Who could ever forget that first drive from Perth to Carnarvon taken in November 1965. We watched the scenery change from farmlands to semi-arid desert scrub, through Geraldton and Northampton and over the dry river beds of the Murchison and Wooramel then sighting the antennas of the tracking station on Brown's Range and into the town of Carnarvon.

The town was reminiscent of the American wild west with wide streets and veranda fronted buildings bearing such names as Wesfarmers, Fongs, and of course the Port Hotel where Tom Lysaght used to play his trumpet on Saturday nights.



Photograph: Terry Kierans

The wide streets came in useful when a Carnival was organised and Ben Ryan, Geoff Broom, Leo Overington and others constructed a flying saucer as part of the parade.

The activity at the tracking station was hectic in those early days with an American team and ourselves getting

the Unified 'S' Band system up and running, conducting Star tracks to verify antenna readings and accuracy.

Our neighbours at that time in Babbage Island Road were Viv and Maria Batty and Jim and Alison Gregg; further down the road lived Terry Kierans and Ben Ryan.

We left Carnarvon in November 1967 and returned to the UK little thinking that we would ever return.

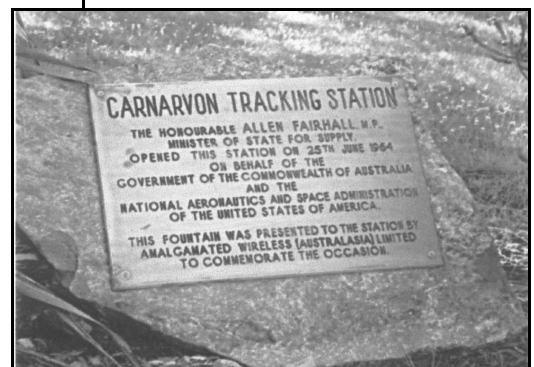
In October 1997 we retraced our journey from Perth to Carnarvon and what a difference 30 years make. The climate seemed much wetter and the bush land much more lush, farmland and fences stretched further north beyond Northampton. The river crossings had been elevated and there were no longer any mobs of kangaroos hanging around, in fact all we saw were a few emus despite spending the night camping near the Wooramel.

There were no antennas to be seen on Brown's Range, in fact there was nothing to be seen, the whole tracking station had been bulldozed to the ground as well as the OTC site. The town of Carnarvon had also had a face-lift; gone were the verandas and the wide

streets, instead there were tree filled central reservations in the streets and the old stores had gone and were replaced by modern versions, we couldn't even find Fitz's newsagents. Talking to the petrol station owner I discovered that John Fletcher was in the local church but we weren't able to contact him.

We returned to Perth on the new (to us) Brand Highway calling in on the new town of Cervantes visiting the Pinnacles desert at the same time. In Perth we caught up with Jim and Alison Gregg and Paul Dench and family.

It is a pity that the tracking station seems to have been completely erased with not even a commemorative stone on the old site, but memories cannot be erased.



Photograph: Alan Gilham

By the way we found the original CRO plaque now mounted near to the Moon Rock cafe in Tidbinbilla.

Apollo 8 ctd.

(Continued from page 2)

within them; others had rays. Anders added: "We are coming up on the craters Colombo and Gutenberg. Very good detail visible. We can see the long, parallel faults of Goclenius and they run through the mare material right into the highland Material."

During the second egg-shaped orbit the astronauts produced the Moon on black-and-white television (color would not come until Apollo 10). It proved to be a desolate place indeed, a plate of gray steel spattered by a million bullets. "It certainly would not appear to be an inviting place to live or work", Borman said later.

On the third revolution the SPS engine fired nine seconds to put the spacecraft into a circular orbit, 60.7 by 59.7 miles, where it would stay for sixteen hours longer (each orbit lasted two hours,

as against one and one-half hours for Earth).

At 8:40 p.m. the astronauts were on television again. First, they showed the half Earth across a stark lunar landscape. Then, from the other unfogged window, they tracked the bleak surface of the Moon. "The vast loneliness is awe-inspiring and it makes you realize just what you have back there on Earth", said Lovell. The pictures aroused great wonder with an estimated half billion people vicariously exploring what no man had ever seen before.

"For all the people on Earth," said Anders, "the crew of Apollo 8 has a message we would like to send you." He paused a moment and then began reading:

In the beginning God created the Heaven and the Earth.

After four verses of Genesis, Lovell took up the reading:

And God called the light Day and the darkness he called Night.

At the end of the eighth verse Borman picked up the familiar words:

And God said, Let the waters under the Heavens be gathered together unto one place, and let the dry land appear; and it was so. And God called the dry land Earth; and the gathering together of the waters He called seas; and God saw that it was good.

The commander added: "And from the crew of Apollo 8, we close with good night, good luck, a Merry Christmas, and God bless all of you—all of you on the good Earth."

It was a time of rare emotion. The mixture of the season, the immortal words, the ancient Moon, and the new technology made for an extraordinarily effective setting.

The preceding article is reproduced from "Apollo Expeditions to the Moon", edited by Edgar M Cortright and courtesy NASA History Office. The material was adapted by Calvin Hamilton and included at his website <http://www.solarviews.com>.

Mission Summary

Apollo 8, the first flight to take men to the vicinity of the Moon, was a bold step forward in the development of a lunar landing capability. With only minor problems, all spacecraft systems operated as intended, and all primary mission objectives were successfully accomplished. Crew performance was admirable throughout the mission. The navigation techniques developed for translunar and lunar orbital flight proved to be more than adequate to maintain required accuracies for lunar orbit insertion and trans-Earth injection. Communications and tracking at lunar distances were excellent in all modes.

FPQ6



*FPQ6 Installation—1964
Photograph: Hamish Lindsay*

Contributed by Ron Burgess

This story is to do with the calibration of the Radar prior to routine procedures awaiting Woomera Control.

At Woomera FPS-16 Radar we used a Met balloon and an

aluminium sphere. Hydrogen was used in those days.

We spent our day shifts out at Red Lake, down range. The program was Black Knight G to A rocket. It was dreary out there where the curvature of the earth was the main attraction. But once a year the hairy grubs would come by, nose to tail in strings, travelling East to West.

At that time the Russians had launched a BIOS sphere, and lost it, possibly in Australia.

Well, public opinion at the time was fearful of the germs that may arrive from space. Now that was a real threat and the cause of great concern. So a bored few techs set out to run a balloon and sphere to calibrate the FPS-16. One bright soul decided to fill a

sphere with the hairy grubs, seal it and printed in red “CCCP”, and a number on the sphere. Away went the balloon and travelled about 80 NM before LOS.

Nothing more was thought of it until several months later.

Two plain clothed jokers turned up for lunch in the marquee where we normally ate. As everyone started to return to their sites the Radar people were instructed to stay back.

The leader of the two (ex-Canberra we were told) gave us a firm warning that due to the consequences of the discovery of what was thought to be the Russian BIOS landing in the N.T., and the discovery that it was a hoax, meant we could all have our security rating revoked, if they could find out who did it.

WE’LL BE THERE

I/we plan/do not plan (***delete as applicable***) to attend the dinner to celebrate the 35th anniversary of the Apollo 11 landing to be held in Perth WA on Saturday 24th July 2004.

Number attending

Name(s)

Change of details

E-mail address

Please return completed form, by 31st May 2004, to:

CRO Trackers

PO Box 93

Quinns Rocks, WA 6030

Australia

Please include a stamped, self-address, business-size envelope to assist in defraying costs. Thank you.

...and THE SAGA CONTINUES

A while back Joe McGrade wrote to me asking for permission to reprint the September CRONicle article relating to lack of recognition of the part Carnarvon played in the lead-up to, and, the Apollo missions.

I was only too pleased to agree, feeling that the additional, targeted, publicity would only help the cause.

Unfortunately—and that is putting it mildly—his editor of the “Carnarvon Community News” decided that a picture of the OTC dish was essential to dress up the

article, thus compounding the problem we have.

I have had it explained to me that there is no chance of a sign being erected at what was the entrance to the NASA tracking station. The reason being is that the sign would be a target for local “sharpshooters”.

However, according to “Carnarvon Voice”, in the October 17 issue of the “Carnarvon Community News”, an OTC Dish Tourism Concept Plan has received approval in principal (sic).

A funding application states, inter al, “...the heritage value of this site of national significance...and has the last ‘Casshorn Gain Antenna’ (sic)...it heralded Australia’s launch into the information technology age”

In no way do I wish to denigrate the parts played by the OTC, but I do wish that half the effort would be put, by the same bureaucracy, into recognising the NASA Tracking Station and the part it played in creating history.

The Editor

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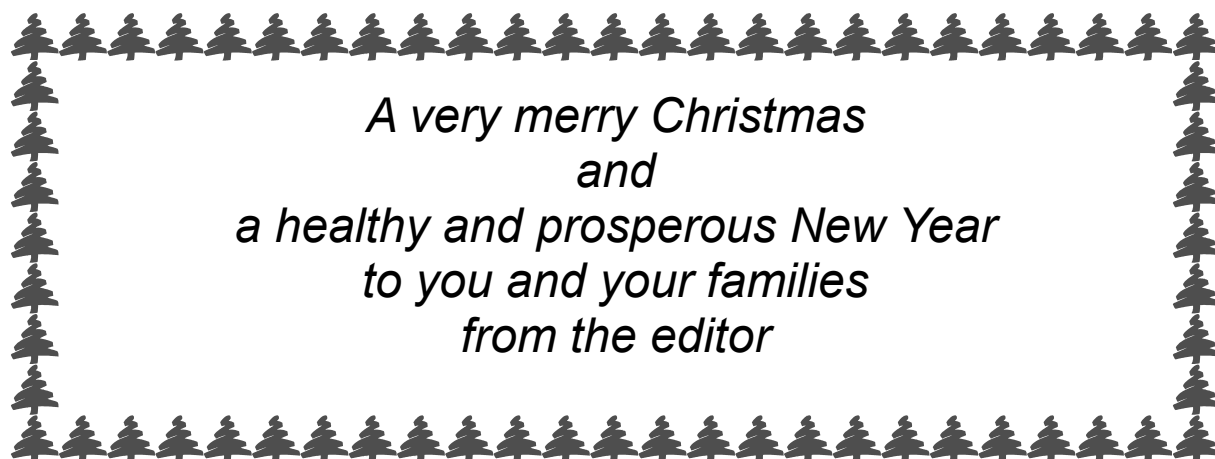
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Date:



NASA FOUNTAIN
CARNARVON TRACKING STATION
W. A.



*A very merry Christmas
and
a healthy and prosperous New Year
to you and your families
from the editor*

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Vol 1 March 2004

The Trackers

C R O N I C L E



March marks the anniversary of four manned space flight missions:

Vokshod 2	March 18-19	1965
Gemini III	March 23	1965
Gemini VIII	March 16	1966
Apollo 9	March 3-14	1969

The late Pete Conrad was CapCom at Carnarvon for the Gemini III mission.

The flight of Vokshod 2, whilst marking the first ever EVA, nearly ended in disaster. A manually controlled reentry was performed because of a malfunction of the automatic orientation devices for the retrofire, and the spacecraft landed in a pine forest far north of the target area. After locating the spacecraft, one day was required to cut through the forest and bring the crew out on skis.

The Apollo 9 mission features in this issue of the CRONicle.

Subscriptions levels to this newsletter are still lower than hoped for. If you know of anyone who isn't receiving a newsletter, please suggest to them that they subscribe. Thank you

Terence (Terry) Kierans
Editor

CROtrak
PO Box 93
QUINNS ROCKS WA 6030

email:crotrak@virtualservices.com.au

Apollo 9

3—13 March 1969

Flight duration —
10 days 1 hours 0 minutes 0 seconds

Crew —
James A. McDivitt, commander
David R. Scott, command module pilot
Russell L. Schweickart, lunar module pilot

Altitude: 192km x 190km 152 earth orbits

Perhaps the most ambitious NASA manned space mission to date.

Apollo 9 was the first space test of the third critical piece of Apollo hardware — the lunar module. For ten days, the astronauts put all three Apollo vehicles through their paces in Earth orbit, undocking



and then redocking the lunar lander with the command module, just as they would in lunar orbit. For this and all subsequent Apollo flights, the crews were allowed to name their own spacecraft. The gangly lunar module was “Spider,” the command module “Gumdrop.”

MISSION EVENT LIST AND TIMELINE

EVENT	DATE & TIME (WST)		MISSION TIME
Launch	March 3	24:00:00	00:00:00
Splashdown	March 14	01:01:00	241:00:00

MISSION HIGHLIGHTS

First manned Apollo docking; first docked SPS burn; first Apollo EVA; first manned Apollo undocking; first manned LM to CSM docking.

Astronauts Schweickart and Scott performed a space walk, and Schweickart checked out the new Apollo spacesuit, the first to have its own life support system rather than being dependent on an umbilical connection to the spacecraft. Apollo 9 gave proof that the Apollo spacecraft was up to the task of orbital rendezvous



Apollo 9 crew

and docking. The performance of both the spacecraft and its subsystems was nearly flawless,

and all mission objectives were met. The Apollo 9 mission qualified the launch vehicle, the lunar landing spacecraft, the portable life support system backpack and the flight control techniques designed for manned lunar landing flights.

(Continued on page 4)

What Are They Doing Now?

Alan Hickmott

Since Carnarvon we have moved around quite a bit. First to the Fleet Air Arm base at Nowra, NSW, until AWA lost the contract in 1977. I got a transfer to AWA Sydney where I was working with familiar faces; Roger McMurtrie, Col Fullarton, and Col Smith manager.

After the bush Sydney was terrible and we decided to go back to the bush and applied for a job at Mount Isa Mines. Much to my surprise I had a call from John Riolfo who was with Sperry Univac at the mine. He heard of my application from ex-Q6 member Brian Davies who was with the mine electronics section. So I joined Sperry Univac instead of the mine staff.

In 1982 I was transferred to the State Government site in Brisbane and met up with Alec Stevenson (Acq-Aid) who applied for the managers job, which nobody wanted, and got it. In 1987 Sperry was taken over by Burroughs Corp., and I was site manager until Christmas 1993 when they decided to get rid of staff aged 50 and over. I went into a semi-retirement for a few months on the southern end of the Gold Coast. When a friend offered me casual work I jumped at it as I was rather bored at the time and I did that until I had to have a heart bypass in '97.

Norma bought this computerised embroidery sewing machine at this time so I had to teach her computer operation which she

quickly caught on to. She makes children's dresses which are given to the Red Cross and other charities to sell. I now have two computers to keep going and I also act as Norma's secretary, answering emails from all over the world.

Retirement is certainly not boring!

Well there is a potted resume of my movements for the last 30 years. It is amazing how many people I have met from the tracking industry. In Brisbane, apart from Alec Stevenson, I worked with a couple of people from Honeysuckle Creek.

I'll pass on your details if you want to get in touch with Alan — or anyone else for that matter — Ed.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know details. Thank you.

Ed.

Max Beresford
Michael Billings
Anne Harvey
Peter Headford

Peter Kent
Don McLelland
Frank Parkinson
Stewart Sands

Ron Sargeant
Jean Spokes
Alec Stevenson
Jack Stewart

Jack Thompson
Barbara Vernon
Colin Winrow
Lyn Willis

CORRECTION

In the December issue, the photograph accompanying the item about Lewis Wainwright was incorrectly referred to as being of John Glenn.

It was of course of Alan Shepard.

Thank you to Lewis' son Paul for pointing it out — and my apologies. The correct caption has now been applied to the original.

Apollo 9 ctd.

From the Apollo 9 press kit.

The Saturn V launch vehicle with the Apollo spacecraft on top stands 363 feet tall. The five first stage engines of Saturn V develop a combined thrust of 7,720,174 pounds at first motion. Thrust increases with altitude until the total is 9,169,560 pounds an instant before center engine cutoff, scheduled for 2 minutes 14 seconds after liftoff. At that point, the vehicle is expected to be at an altitude of about 26 nm (30 sm, 45 km) and have a velocity of about 5,414 f/sec (1,650 m/sec, 3,205 knots, 3,691 mph). At first stage ignition, the

space vehicle will weigh 6,486,915 pounds.

Apollo/Saturn V vehicles were launched Nov. 9, 1967, April 4, 1968, and Dec. 21, 1968, on Apollo missions. The last vehicle carried the Apollo 8 crew, the first two were unmanned.

During the Apollo 9 mission, communications between the spacecraft and the Mission Control Center, the spacecraft will be referred to as "Apollo 9" and the Mission Control Center as "Houston". This is the procedure followed in past manned Apollo missions. However, during the periods when the lunar module is manned, either docked or

undocked, a modified call system will be used.

Command Module Pilot David Scott In the command module will be identified as "Gumdrop" and Spacecraft Commander James McDivitt and Lunar Module Pilot Russell Schweickart will use the call sign "Spider."

Spider, of course is derived from the bug-like configuration of the lunar module. Gumdrop 1s derived from the appearance of the command and service modules when they are transported on Earth. During shipment they were wrapped in blue wrappings giving the appearance of a wrapped gumdrop.

Reminiscences

NASA Johnson Space Center

Oral History Project

Oral History Transcript

Edward I. Fendell

Interviewed By Kevin M. Rusnak

Houston, Texas - 19 October 2000

FENDELL: Well, Carnarvon was a tracking station in Australia. During Mercury, there was a tracking station at a place called Muchea, which was just north of Perth. When Gemini came along, they changed trajectory, the longitude and latitude, so they needed a station further north. So they closed Muchea and moved to a place called Carnarvon. Carnarvon was—is; I shouldn't say was—is 600 miles due north of Perth. I don't know exactly what's there now, but between Carnarvon and Perth was one town, which was 300 miles away, halfway, called Geraldton. So you usually flew up there, flew back. Hardly anybody ever drove because the road was dirt. And you flew up in a DC-3, a C-47,

which was an airline called MMA, Mickey Mouse Airline, we used to call it.

When you got to Carnarvon, Carnarvon was kind of like if you watch the "Late, Late Show" on TV in the old days, the "Late, Late Show," and Hopalong Cassidy would right into town. Well, when Hoppy rode into town, if you threw four or five cars on the street, you had Carnarvon. And the main thing to do in Carnarvon was drink beer. And there was a lot of guys who were running ranches out in the middle of nowhere, huge sheep stations that hadn't much grass, and they'd be out there for like three or four months at a time, they'd be out there along with the dogs, they'd been hired to run these places. They'd come in and they'd drink beer. And people from the tracking station.

A hotel was not like anything that you could imagine in your mind. It was completely different. When it was time to eat, you ate

(Continued on page 5)

The Book of CRO

A social and technological history of the Carnarvon Tracking Station (CRO) and its role in the exploration of space from the context of the town of Carnarvon as told by the participants: the Trackers and their wives/partners and families; the people of the town; and the visitors to the town and the station.

This is a task that has not yet, as far as I know, been attempted. Before many more of the participants are no longer able to contribute I have decided to 'write the book' though I expect my role to be as much editor as writer.

This will not be a 'history of space tracking': Hamish Lindsay has already done a large part of this in his *'Tracking Apollo to the Moon'*. Instead it will focus on the lives and work of the participants and the impact that being part of this great adventure had on their lives and on the town.

This will not be an insignificant project. It can only be successful if I have the willing help and support of the thousands of participants for whom this is will be 'their story'.

I anticipate producing a book similar to *'The Vital Link: a history of Main Roads in Western Australia 1926-1996'* by Leigh Edmonds; copiously illustrated and explained by photographs and by panels which contain 'Oral Segments', 'Technical Inserts' and, in our case, 'Mission Inserts'.

At this stage it seems that the story cannot be told in a strictly chronological order.

Some chapters at least will have to be organised by topics and it may be that manned space flights, scientific missions, SPAN activities, power, administration and logistics etc. may best be covered by appendices as would detailed descriptions of the various subsystems.

The topics to be covered include stories: of location and construction; of arrivals from all over the world; of the kindness of strangers; of adapting to different customs and ways of life; of participation in community; of installation and training; of participation in tracking; of achievement in both community and tracking; of humour and sadness; of splashdown parties, Trackers Balls, and festival floats; of game-fishing competitions; of inducements and industrial awards; of departure or staying (a 'sand-change'); of closure.

I hope that all that read this draft of my intentions feel obliged to contribute.

Please contact me by sending an email to CRO@dench.net or by writing to the address below.

Paul Dench: 14 Feb 2004

Carnarvon Tracking Station, 1963-1975
Various engineering roles, 1963-1971
AWA Company Senior Representative,
1971-1975

7 The Bulwark
WILLETTON WA 6155
Australia

Reminiscences ctd.

(Continued from page 4)

where you lived, and you ate during that period of time or you didn't eat at all, because there was nowhere else to eat. There was no Wendy's or McDonald's or anything; you ate there.

The big thing there was drinking Swan Lager beer. That was the big thing. There were

a few women worked there, lived there. You could go out at night and shoot kangaroos, which I don't do. And that was it. You worked and drank beer.

RUSNAK: Certainly sounds like a colorful place to spend a tour,

FENDELL: Yep. That was Carnarvon.

35th Anniversary Reunion Dinner

We have been able to take advantage of a great offer from the management of the Bridgeleigh Reception Centre in Wanneroo to provide you with a buffet dinner.

HOT DISHES

Veal tortellini with a pesto cream sauce & Parmesan
*Seafood platter of deep fried crumbed calamari,
fish goujons, prawns, with tartare sauce & lemon*
Satay chicken kebabs with peanut sauce & rice

BAKERY

Hot garlic bread
Fresh loaves & bread rolls

COLD COLLATION

Platter of marinated Spring chicken
Mirror platter of sugar baked ham with mustards
Chef's selection of three freshly made Salads

DESSERTS

Warm chocolate pudding with chocolate sauce
Fruit salad of seasonal fruits
Profiteroles with chocolate sauce

TO END . . .

Freshly Brewed Coffee & Tea

Apollo Launch Tower

“Preservationists will try to save historic pad

By Todd Halvorson

CAPE CANAVERAL — NASA delayed plans to dispose of the hazardous remnants of a historic Apollo launch tower this week to see whether a preservation group can come up with enough money to turn the gantry into a national monument.

Since 1983, the old Apollo launch umbilical tower has sat in a secure area at Kennedy Space Center. In the near future, the structures will be decontaminated and then cut up for scrap, if it can't be saved.

Known as Launch Umbilical Tower 1, the gantry was the starting point for eight Apollo and Skylab flights, including the flight that took astronauts Neil Armstrong and Buzz Aldrin to the moon in July 1969.

The 380-foot tower was dismantled in 1983, and segments of it since have been rusting in a five-acre “bone yard” behind the NASA headquarters building at Kennedy Space Center, creating an environmental hazard.

Several previous “Save The Tower” campaigns have failed, and now heavy metals and toxic substances within orange gantry paint are leeching into the soil at the open-air storage site as well as the water table beneath it.

To comply with federal and state regulations, NASA this week launched a \$2 million effort to decontaminate and dispose of the pieces.

“A lot of people have tried over the years to save the tower, but unfortunately no one has come up with the financial wherewithal to do it,” said Burton Summerfield, chief of the safety, health and environmental division at KSC. ”

The Recognition Saga

I was astounded to read, in the latest issue of the *Carnarvon Visitor Guide*, that "...The Station was closed down in 1986 after the tracking of Halley's Comet...". Strangely enough, in reference to the OTC dish on another page, it states that "...it also played a role in tracking Halley's Comet prior to ceasing operation in March 1987...".

On a much brighter note, communications from Mick Coffey and Sue van Dongen lead me to believe that at long last the confusion will be dispelled and a suitable sign will be erected at the entrance to the site of the NASA Tracking Station.

Mick writes:

"I've been pondering on the case of Joan Terraci's letter in your last newsletter, she is correct. The folks around Carnarvon couldn't give a rats where the tracking station used to be. The latest Carnarvon visitors' guide has the tracking station as having closed in 1986. Obviously confused with OTC.

I had a look at the old tracking station entrance last week. There is a pretty good galvanized sign frame between the highway and the front gate. It's got a completely bleached and faded sign riveted to it, and another faded sign riveted to that sign.

That 2nd one has a warning about the radiation from the broadcast antennas. It's only a duplicate of the similar warning sign that's on the gate itself, so nobody would care if we put a sign over it.

So, if we got permission from the M.R.D. ...to put up a sign there, I will put it up myself for no charge. I will also supply the sheet of colorbond sign—white cut to size at no charge. ...

The frame will suit a sign of 2135 wide and 915 high; the old 7ft x 3ft if I'm not mistaken, and it's sticking outta the ground at a good height to be read by passers by."

This was followed up a few days later by a letter from Sue van Dongen. From the content she has been very active in Carnarvon on this issue. Here are a few extracts:

"I have discussed the need for accurate recognition of the Tracking Station with our Tourist Bureau manager and also Dudley Maslen both of whom were enthusiastic and both said they would write to you! Dudley is excellent at getting stuck into it if something takes his interest...

I suggested that this year is the time for a plaque at the gateway—& also at the Span building—seeing as it is the only building left, & a bit of general appreciation seeing as it is the 40th anniv. of the opening

& the 35th of the moon landing. Dudley is really keen to try to get the original plaque back from Tidbinbilla...

The shire has recently been granted \$270,000 which has been earmarked for renovations of the OTC building... with plans to set aside an area for memorabilia of the Tracking Station. Dudley agreed that some of this could be used for a plaque on the true site.

The Tourist Bureau also agree to include an article of factual information on the Tracking Station...

They also agree to alter the info on their Tourist map, which at present shows the T. Station & OTC being one & the same place..."

I have suggested to Sue that she and Mick get together on this.

I am also making plans to visit Carnarvon in early April to discuss things with the "new" Tourist Bureau manager and Dudley Maslen. For those of you who may not know, Dudley is the Carnarvon Shire President. He also receives a complimentary copy of the Trackers CRONicle.

So, at long last, it appears that there will be official recognition in Carnarvon of the Tracking Station and its contribution to world history.

...and in my lifetime too!

The Editor

Carnarvon, in Western Australia, was opened as a part of the Manned Space Flight Network on June 25th 1964.

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Vol 1 June 2004

The Trackers

C R O N I C L E



Keeping the memory alive

June marks the anniversary of four manned space flight missions:

Vostok 5	June 14 –19	1963
Vostok 6	June 16 –19	1963
Gemini IV	June 3 – 7	1965
Gemini IX	June 3 – 6	1966

In addition, this month marks the 40th anniversary of the opening of Carnarvon Tracking Station.

The Tracking Station is the subject of our main article in a bumper issue.

Vostok 5 was a joint flight with Vostok 6. The Soviet Union first launched Vostok 5, piloted by Lt. Col. Valery F. Bykovsky. Two days later Lt. Valentina V. Tereshkova followed in Vostok 6.

On its first orbit, Vostok 6 came within about five km of Vostok 5, the closest distance achieved during the flight, and established radio contact. Both cosmonauts landed safely on June 19.

The flight of Vostok 6 marked the first journey into space by a woman, Valentina Tereshkova. She was considered by her countrymen to be “Gagarin in a skirt”.

Terence (Terry) Kierans
Editor

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Gemini IV

On June 3, 1965, astronaut Edward H. White II became the first American to perform an Extra Vehicular Activity (EVA) or "spacewalk". During his 20 minutes outside Gemini IV, White remained connected to the spacecraft's life-support and communications systems by the golden "umbilical cord," and he used a hand-held jet thruster to maneuver in space. His crewmate, James A. McDivitt, remained inside



the spacecraft. The first EVA had been performed three months earlier by Soviet cosmonaut Aleksei A. Leonov, who remained outside his spacecraft for about 10 minutes.

Gemini IV was the second of 10 manned Gemini missions, which perfected the techniques of spacecraft rendezvous and docking and demonstrated that astronauts could withstand prolonged weightlessness for the planned Apollo missions to the Moon.

Gemini IX

The primary objective was to perform rendezvous and docking and conduct EVA.

Secondary objectives included:

- Rendezvous with ATDA (launched 1 June 1966 from Complex 14) in 3rd revolution.
- Conduct systems evaluation and equiperiod rendezvous.
- Execute seven experiments.
- Practice Docking.
- Rendezvous from above and,
- To demonstrate controlled reentry.

The original crew of Gemini-IX, Elliott M. See and Charles Bassett, were killed in an airplane crash on February



28, 1966. The backup crew was named to the prime crew positions.

GT-9 was postponed when TLV 5303 with Gemini Agena target vehicle GATV-5004 malfunctioned on May 17. In its place, a substitute target was used for GT-9A; the Augmented Target Docking Adapter (ATDA) was launched by an Atlas on June 1, 1966 (TLV-5304) from Launch Complex 14; However

GT-9A was not launched the same day as planned due to a guidance system computer problem. After a brief hold, the spacecraft was launched on the 3rd day.

The primary objective of rendezvous and docking was only partially achieved because the shroud on the ATDA failed to jettison. Instead GT-9A performed a number of rendezvous manoeuvres, including a simulation of lunar module rendezvous. EVA time 2 hours 7 min.

During EVA manoeuvres, Cernan's visor became fogged, and he was unable to test the Air Force manoeuvring unit.

What Are They Doing Now?

Lesley Boulton

(formerly Morling)

Now living and working in Adelaide.

Les Figg

Living in California with his wife of 36 years, Lynne.

Moved around a bit since leaving Carnarvon — Alice Springs, Adelaide, Tehran, Melbourne,

Boston, Melbourne, Boston, Santa Clara, CA.

After working for E-Systems in Pine Gap for almost three years, he joined Digital Equipment Corporation where he remained for 13 years.

After the 2nd move to Boston with Digital Equipment he left them in 1986 and joined Sun Microsystems for three years,

followed by Auspex Systems, and now Alacritech where he is responsible for IT and Customer support in a 40 person company.

John Lambie

(ex PMG)

Now retired for 11 years. Spends his time between running a 50-acre hobby farm and restoring MG sports cars.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch — and coming to the reunion dinner. The more we find, the more names crop up.

If you have any knowledge of the whereabouts of any of the following would you please let me know their details.

I will also facilitate renewing contact, with due regard to privacy.

Thank you.

Ed.

Gay Ablon
Keith Barnard
Mike Bartlett
Michael Billings
Hans Britz
Jim Cleary
Vince Constable
John Cummings
Bert Day
Roy Dice
Neville Dippell
John Draper

Alan Dulwich
Fred Dykstra
John Easterbrook
Kerrie Eyre
M Fort
Jamie Gardiner
Kim Gates
Roger Glocke
Ann Green
Ron Harnes
Anne Harvey
Deidre Howard

Jim Keenan
Peter Kent
Peter Kloppenberg
Ian McLaren
Don McLelland
Richard Milner
Ian Mitchell
John Monteith
Dennis Naylor
Terry Newman
John Noble
Frank Parkinson

John Parkinson
Mike Pender
Frank Pettit
Don Plumb
Stewart Sands
Ron Sargeant
Russell Schwarzer
Jean Spokes
David Stansbury
Alec Stevenson
Jack Stewart
Bob Swaby

CLARIFICATION

I have been asked to make it clear that the quotation, “Carnarvon, in Western Australia, was opened as a part of the Manned Space Flight Network on June 25th 1964.”, used on page 7 of the March 2004 Trackers CRONicle, refers to the Tracking Station, not the town

35th Anniversary Reunion Dinner

Guess Who's Coming To Dinner?

So far we have 55 confirmed attendees for the reunion dinner on the 24th July:

Name/s	Last Name	Number Attending	Location
Viv	Batty	1	GERALDTON, WA
Bill & Ailsa	Brooke	2	PORT MACQUARIE, NSW
Paul & Joan	Dench	2	WILLETTON, WA
Susanne & Alan	Dennings	2	ONGERUP, WA
Mike	Ferguson	1	OSBORNE PARK, WA
John	Findlay	1	CANBERRA, ACT
John & Eloise	Ford	2	GLEN FORREST, WA
Colin & Carol	Foster	2	GIRRAWHEEN, WA
Geoff & Rhoda	Goddard	2	KINGSLEY, WA
Mike & Margaret	Hendersen	2	GUILDFORD, WA
Bob & Betty	Hocking	2	KALAMUNDA, WA
Trevor & Jocelyn	Housley	2	ST IVES, NSW
Alan & Anne	Irvine	2	UKI, NSW
Terry & Valerie	Kierans	2	QUINNS ROCKS, WA
Barbara	King	1	KEWDALE, WA
Shirley	Lester	1	CARNARVON, WA
Neil & Lyn	McBain	2	WHITTLESEA, VIC
Roger & Jeannie	McMurtrie	2	HOLT, ACT
Brian & Judy	Milne	2	EMBLETON, WA
Geoff & Colleen	Oldman	2	DENMAN, NSW
Norm	Pitt	1	ALICE SPRINGS, NT
Jannette	Radford	1	RENOWN PARK, SA
Bev	Robertson	1	CARINE, WA
Dave	Rodda	1	BASSENDEN, WA
Lorraine	Sartori	1	GERALDTON, WA
Tito & Joan & daughter	Teraci	3	MIDDLE SWAN, WA
Barbara	Thompson	1	MERRIWA, WA
Jenny & Wilson	Tuckey	2	REDCLIFFE, WA
Sue	van Dongen	1	CARNARVON, WA
Pauline	Vinton	1	ELLENBROOK, WA
Stuart & Terry	Wattison	2	ATHELSTONE, SA
Geoff & Rosemary & family	Williams	4	ALICE SPRINGS, NT
Wendy	Wise	1	MT HELENA, WA

There are another **36**
who said they will be coming.

Please be sure to pay for your tickets by
June 30;
I need to confirm numbers for the caterer.

The Book of CRO

Collection of information is going famously — so good that I've spent nearly all my time in responding to it, collating and indexing it and changing my ideas of what 'our' book will include. Keep those recollections coming in.

The job of writing the book is under way. The second chapter 'From Muchea to Carnarvon' is almost finished so if you have any MUC (Muchea) recollections to share please forward them soon. Some of you worked there and even more were staged through there in the early days of CRO on their way north.

The good news is that the task is so vast that I now have a co-author who herself was about to undertake the task and has been very helpful with advice in these early stages. Many of you will know her as the wife of a former Tracker senior

technician, Jim Gregg (SPAN and Assistant M&O). My co-author Alison Gregg, Ph.D., was a professional librarian and wrote her thesis on the development of children's libraries in WA. She is a consultant on Local History and does a lot of work in that area.

While in Carnarvon she held a part-time job as correspondent for The West Australian reporting news events (including CRO missions) for the Perth daily. She was also responsible for collecting and reporting Carnarvon and regional news to News of the North, the paper's weekly regional supplement.

Alison will bring a valuable perspective from a Trackers' family viewpoint and her knowledge of the local community. I hope you're all as delighted as I am.

Paul Dench

In March 1995, Paul & Joan Dench both recorded an interview with a visiting 'guru' from the East about their recollections of the CRO era, as did a number of other Trackers.

Can anyone tell us who it was as Paul would like to consider the material on the tapes for use in the book he is researching?

Please contact Paul, or me if you can help. Thank you.

SUBSCRIPTION RENEWALS

It only seems the other day that the Trackers CRONicle was launched, and already it is time to solicit subscription renewals with five issues under our belts.

There is no increase in cost, it is still only \$AU11.00 for four issues if you live in Australia, and \$AU10.00 if you live outside

these fair shores.

A renewal form has been posted on page 12 of this newsletter. Renewal will cover you until the June 2005 issue.

This notice doesn't apply to those who have taken advantage of an earlier offer and already paid through to June 2005.

Putting history back on Track

(Continued from page 11)

The Tracking Station closed down in 1974 after playing a role in three Skylab missions.

Cyclone Tracy in 1974 wiped out Radio Australia's base in Darwin and the Tracking Station facility in Carnarvon was chosen to house their operation for the next 11 years*. When Radio Australia pulled out they buried the equipment and bulldozed the buildings.

Mr Kierans was an operations supervisor at the Tracking Station and left Carnarvon in 1970 to continue his specialised career.

But he has never forgotten his time here or when events at the Tracking Station were part of world history. From his Quinns Rocks home, Mr Kierans publishes a quarterly newsletter for ex-employees and interested readers, The Trackers CRONicle.

*My profuse apologies for not seeing this error when I proofread the article before publication.

CARNARVON TRACKING STATION

Carnarvon Tracking Station was sited on Brown Range, about six air kilometres from
and its operating cost was about \$5 million

It was established by the then Department of Supply on behalf of N.A.S.A., with maint

June 25th marks the 40th anniversary of the official opening of the Tracking

The first tracking was in January 1964, when Ranger 6 was plotted

The Station closed its doors at

After Cyclone Tracy caused the closure of Radio Australia's relay base near Darwin a temporary fill-in station was immediately necessary. NASA made the abandoned Tracking Station available for the project. The former T&C building, selected to house the transmitters, was reinforced for added protection against cyclones.

On December 20 1975, the scheduled target date, regular broadcasting began.

Radio Australia closed its Carnarvon shortwave relay station, sited at the old Tracking Station, effective June 30, 1996.

Following Radio Australia's removal of its equipment the whole site was stripped and razed to the ground.

Then and Now



FPQ-6 Radar Installation —Then



Now

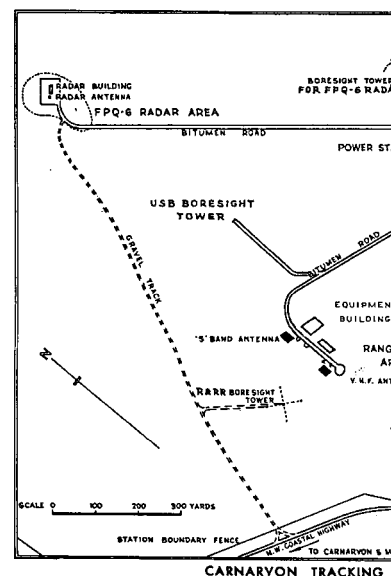


Removing Range and Range Rate Antenna

FPQ-6 Radar stood alone on a hill to the north of the Station. It had a 9m diameter antenna mounted next to the two-storey building that housed its electronic equipment. It was one of the most accurate tracking radars in the world.

The equipment included a computer used to predict satellite orbits and for processing measurements made by the radar.

Now it is used as a camp site.



TRACKING STATION

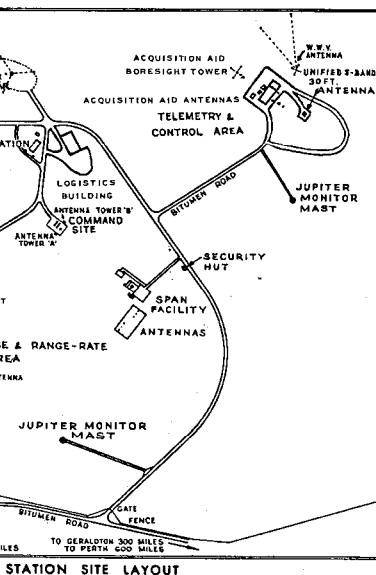
the town of Carnarvon, and occupies 259 hectares. It cost \$4.5 million dollars to build in a year (in the dollar value of the sixties).

enance and operational services provided by Amalgamated Wireless (Australasia) Ltd.

ing Station by Alan Fairhall MHR, the then Minister of State for Supply.

during its first few hours of flight to the moon, by the FPQ-6 radar.

5pm WAST on April 18 1975.



Then and Now



*Range and Range Rate Installation —
Then*



*Range and Range Rate Installation —
Now*

The Range and Range Rate system was a facility designed for the tracking of scientific satellites up to moon distances, or about 400,000 kms from earth.

Because it was required to track satellites mostly at greater distances, the R&RR system was designed to make accurate measurements of distance and speed rather than angular position.

SPAN, the Solar Particle Alert Network, was one of three stations around the world. It consisted of an optical and radio telescope used to monitor solar disturbances.

Large flares on the surface of the sun can affect the earth by disturbing communications. They also emit high-energy particles which arrive in the earth-moon vicinity from one to two hours after onset of the flare. This is a potential hazard to astronauts.



SPAN —Then



SPAN —Now

(Continued on page 9)

Apollo 35th Anniversary Lunch—Canberra

Ideal for those of you in the Eastern States and unable to get to Perth.

Replaces the yearly Honeysuckle picnics in 2004. They are also trying to contact ex-Tidbinbilla people and anyone out of the several thousand around Australia who were involved with Apollo.

21 July 2004

11am for Lunch at 12 noon and first step anniversary 1256 (21/0256Z)

At the Canberra Club

45 West Row, Canberra City

\$35 each, including 3 Course Meal

Events will include

Book Launch by Bryan Sullivan and Jackie French

Honeysuckle Web Site and dvd Launch by Col Mackellar (Sydney space enthusiast)

Messages from Apollo people

Synchronous Display of Apollo 11 TV

Memorabilia Display

And much more!

But the main aim will be the reunion of those involved in this most momentous event of the 20th Century

Please RSVP with numbers likely to attend.

If large numbers we may need to change venue

John Saxon (jsaxon@pcug.org.au) 2 Mauldon St, Chifley, 2606. Ph 61611524

Mike Dinn (mike@dinn.com) 12 Risdon Place, Lyons, 2606. Ph 62814877

First steps in Moon walk taken in WA

(Continued from page 10)

when Carnarvon was a centre of scientific advances in space travel.

From the complex, spacecraft were tracked from horizon to horizon as they emerged from a communications black spot over the Indian Ocean.

Medical and equipment checks were made from the ground and relayed back to NASA headquarters in Houston.

The shire president at the time was Wilson Tuckey, now a minister in the Howard Government. He recalls how the arrival of NASA transformed the town.

His pub, The Port, was a meeting place for locals, astronauts and scientists.

“I was on first-name basis with more astronauts than the mayor of Sydney” he said.

“I don’t think too many people realise Carnarvon sent the signal that sent those first blokes to the Moon. It was a very significant part of history, not only for WA but for the world.”

It was in Carnarvon that technical aspects of the Moon shot were planned, including the difficult task of docking

and undocking craft in space.

The facilities were put in place as a link chain of stations across Australia, but its strategic location on the western edge of the continent made it the most important.

Pictures of the Moon landing watched in Perth were transmitted back to the US via Carnarvon, even though at the time television had not reached the tiny town.

The dish’s importance faded with a slowing down of the space race and the tracking centre was closed in 1975.

Then and Now

(Continued from page 7)

The Unified S-Band System was installed primarily for manned lunar missions, but it was also used to track some scientific spacecraft and the ALSEP packages. It had a 9m diameter antenna located in front of the T&C building.

The system provided a link between earth and the spacecraft which was able to be used for a number of purposes including:

- Voice transmission to and from the astronauts;
- Reception of telemetry and television from the spacecraft, and
- Transmission of commands to control spacecraft systems.



USB Antenna —Then



USB Antenna — Now

Sensitive receiving equipment and a 20kW transmitter were built into equipment compartments in the antenna structure. The remainder of the system occupied a large control room in the T&C building and was

interconnected with most other equipment in the T&C area.

Computers were included in much of the equipment at the Tracking Station. A number of computers, associated mainly with the Apollo tracking system and the Apollo flight control room, was housed in a room in the T&C building.

Radio commands enable unmanned spacecraft to be controlled in such things as direction of motion and also provide a means of relieving the astronauts of unnecessary duties and of controlling their spacecraft in an emergency. The Apollo tracking system included facilities for transmitting commands to the spacecraft.

Another independent command transmitting system was located near the power station. It was installed in 1964 for the Gemini Project and for use with some scientific spacecraft.



*UHF Command —Then
Sid Hill in foreground, Dave Sims in background.*

Accurate time keeping was of vital importance to the Tracking Station, and the timing equipment included several atomic clocks. The Station's caesium beam primary standard was so accurate that if it continued to operate for ten thousand years it would not have gained or lost more than one

(Continued on page 10)

Then and Now

(Continued from page 9)

second.

An appreciation of the need for precise timing may be gained for consideration of spacecraft speeds often exceeding 9,000 metres per second.



USB Timing Equipment — Then

All tracking equipment at the Station depended on the uninterrupted supply of electrical power. Power was generated by eight diesel generators supplying two distribution systems. One provided power for electronic equipment, the other for utilities such as air-conditioning, lighting and domestic needs.

Both systems were equally vital because in many cases the electronic equipment could not have operated satisfactorily without cooling.

Acknowledgements

The source for “Removing Range and Range Rate Antenna” and “UHF Command —Then” is not known. The map is reprinted from a Commonwealth of Australia publication, undated. The rest of the photographs were taken by the Editor.

First steps in Moon walk taken in WA

Courtesy “Sunday Times” — Jim Kelly. Date unknown.

AUSTRALIA’s role in early NASA space missions was glorified in the quirky hit movie *The Dish* but WA’s extra-terrestrial past is even more out of this world.

In Carnarvon, 900km from Perth, another dish played a greater role in the early Gemini and Apollo space missions in preparation for the historic 1969 Moon landing.

In the time of flower power, the tiny frontier town became a bustling outpost for mankind’s leap into the final frontier.

The signal for the Apollo astronauts to leave Earth’s orbit and head for the Moon

was sent from Carnarvon.

While NSW’s dish at Parkes got the kudos in the movie, it was in WA that much of that mission was done. “I was horrified by that film,” former Carnarvon digital command engineer Monte Sala said, expressing the view of many who contributed to the space program in Australia. “As usual, WA does all the pioneering work and then at the end some other bugger steals all their thunder.”

Mr Sala, who worked at the Carnarvon tracking centre for six years before the 1969 Moon landing, said WA’s role in the early space mission had been largely forgotten.

Astronauts left their boot prints in the red dirt of the Gascoyne long before mankind made its giant leap onto the lunar surface.

In a small compound just out of Carnarvon, NASA and the Australian Government established a satellite tracking station which later worked in tandem with the Overseas Telecommunications Commission dish, which is still standing today.

At the time, it was the second largest tracking station outside the US.

A handprint of Apollo 7 astronaut Wally Schirra¹ remains at the base as a reminder of a time

(Continued on page 8)

¹ Just what did become of items like these?

The Recognition Saga — The Latest

As foreshadowed in the last issue of the CRONicle I re-visited Carnarvon at the beginning of April.

There were three principle objectives for the trip:

1. Discuss with the Shire President, recognition for the Tracking Station and what it had achieved;
2. Endeavour to remove the confusion which, for too long, have surrounded the relative functions of the Tracking Station and OTC, and
3. Evaluate at first hand, what historical material was available.

The Shire President, Dudley Maslen, assured me that, when the grant funds were received, he would ensure that a suitable plaque would be placed at the entrance to the Tracking Station site and that the museum site would clearly separate the OTC and Tracking Station functions.

I also drafted a letter for him to sign relating to the return of the official opening plaque now residing at Tidbinbilla, with a guarantee that it would be kept in a secure location.

While the Tourist Bureau Manager said that she understood the problem of confusion, she

emphasised that her job was to publicise what was there, not what had been there. The new edition of the Official Carnarvon Planner does not include any reference to the Tracking Station, but more importantly it no longer perpetuates the myths appearing in previous issues.

The Manager of the Carnarvon Heritage Precinct at the Jetty kindly allowed me to copy what material she had relating to the Tracking Station, including a 1970 issue of "The Social Club News".

The Editor

Thank You

My trip was made possible by the generous hospitality afforded me by Sue van Dongen. She not only provided me with pleasant accommodation but allowed me the use of her vehicle to enable me to travel around.

The visit was enhanced by the actions of Joe McGrade who, in conjunction with Sue, arranged a mini-reunion at the Carnarvon Club.

He also organised an interview with the reporter from the "Northern Guardian" to facilitate correction of entrenched misconceptions regarding relative roles of OTC and the Tracking Station.

My sincerest thanks to you both.

The article, "*Putting history back on Track*" is reproduced in this issue, with permission.

Putting history back on Track

TERENCE KIERANS, among others, is passionate about the place in history of the Carnarvon Tracking Station. In a recent visit to Carnarvon he spoke with the Northern Guardian to try to right some of the wrong ideas that may have settled into the minds of people and into the literature surrounding the Tracking Station.

"PEOPLE have been led to believe that the OTC site tracked the Apollo spacecraft," Mr Kierans said. He said the Tracking Station tracked manned space craft, from the 10 Gemini missions through Apollo to Skylab, while the OTC facility was used to monitor and control communications satellites. But he said the OTC dish was used to provide a leased communications service for the National Aeronautics and Space Administration between Australia and the U.S.A in support of the Apollo project.

The Tracking Station, owned by the Commonwealth Government and run by a commercial business, Amalgamated Wireless Australia, was operational between 1964—1974. During that time it employed up to 200 people and gave Carnarvon an international profile.

When man first walked on the moon, AEST July 21 1969, the Tracking Station was part of the process.

During the Apollo 11 mission, a key command to exit Earth's orbit sending the spacecraft on its way to the moon, was given from the Tracking Station.

Mr Kierans agreed that part of the problem was that there were no physical remains of the station and people associated all the communications and space achievements with the OTC facility that still stands.

(Continued on page 5)

Subscription Renewal Form 2004-2005

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Vol 2 September 2004

THE TRACKERS

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Keeping the memory alive

In the previous issues (Vol 1) we have provided information on anniversaries of manned missions for the month of issue. In Vol 2, anniversaries of missions due the coming month will be covered.

October marks the anniversary of three manned space flight missions:

Mercury-Atlas 8	October 3	1962
Voskhod 1	October 12	1964
Apollo 7	October 11 — 22	1968

Mercury-Atlas 8, Sigma 7, was manned by Walter Schirra Jr. It was a successful six-orbit engineering test flight lasting 09 hours, 13 minutes, 11 seconds.

The Voskhod 1 mission was flown by three cosmonauts. They were Vladimir Komarov, Boris Yegorov and Konstantin Feoktsov. It was the first three-crew manned spacecraft in space. The mission lasted only one day, the crew returning safely on October 13th.

For those of you with internet access there is a diary of the Voskhod 1 mission at <http://www.zarya.info/Diaries/Voskhod1/Index.htm>.

Apollo 7, the first manned Apollo space flight, is the subject of our page 2 article.

Terence (Terry) Kierans
Editor

CROtrak
PO Box 93
QUINNS ROCKS WA 6030
email: crotrak@virtualservices.com.au

Apollo 7

Apollo 7 was the first manned flight of the Apollo spacecraft with astronauts Walter Schirra, Jr, Donn Eisele, and Walter Cunningham on board. It performed 163 earth orbits.

During the mission, the crew made the first live television transmission from space.

Apollo 7 was launched on a Saturn IB booster.



The Command Module is on display at the National

Museum of Science and Technology, Ottawa, Canada.

The primary objectives for the Apollo 7 engineering test flight, were simple:

“Demonstrate CSM/crew performance; demonstrate crew/space vehicle/mission support facilities performance during a manned CSM mission; demonstrate CSM rendezvous capability.”



Crew:

Walter M. Schirra, Jr., Commander

Donn F. Eisele, CSM Pilot

R. Walter Cunningham, Lunar Module Pilot

October 11 at Cape Kennedy was hot but the heat was tempered by a pleasant breeze when Apollo 7 lifted off in a two-tongued blaze of orange-coloured flame.

The Saturn IB, in its first trial with men aboard,

provided a perfect launch and its first stage dropped off 2 minutes 25 seconds later.

The S-IVB second stage took over, giving astronauts their first ride atop a load of liquid hydrogen, and at 5

minutes 54 seconds into the mission, Walter Schirra, the commander, reported, “She is riding like a dream.”

About five minutes later an elliptical orbit had been achieved, 140 by 183 miles above the Earth.

Information courtesy N.A.S.A.

What Are They Doing Now?

Fred Dykstra I'm now 64 and although I've still got most of the hair on my head, the grey matter just under the surface is starting to get a little bit fuzzy I think, because I have difficulty remembering many of the names of people from our Trackers days.

We moved from Carnarvon just before the moon landing and I worked for Control Data in Melbourne for a couple of years. But the culture shock was too much for us. We couldn't settle down to city life after Carnarvon.

We came to north Queensland and made Innisfail, in the sugar cane belt, our home for the next ten years. We started up a TV repair business and moved into electrical retailing a few years later. We

were doing pretty well, until we moved into larger premises, over-extended ourselves and went belly-up.

For the next fourteen years or so, Heather and I became involved working with disadvantaged kids, street kids, kids who couldn't live at home, kids with behaviour problems and the like. Most of that time Heather and I were 'house parents' with up to twelve kids in our care. It was challenging work, but very rewarding.

About 18 years ago my eldest son, Shane, and I started up an electronics repair business in Cairns, specializing in professional sound equipment. The business went very well and Shane still operates it today.

Seven years ago Heather retired from the work force and decided to

start a small business making health bars, just for the local weekend markets and a few health food stores. Soon it grew and she asked if I would help her. So I started to take time off from our electronics repair business and before I knew it, I was sucked in.

Anyway, here we are today with this neat little business, making health bars and selling them all over Australia. We're a long way off getting rich, but what the heck, we're enjoying ourselves.

We have four children, all grown up. We had the two boys, Shane and Brett, when we came to Carnarvon. Tammy was born there and Christine was born in Innisfail. She gave birth to a boy only eight weeks ago, our eighth grandchild.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. The more we find, the more names crop up.

If you have any knowledge of the whereabouts of any of the following would you please let me know their details.

I will also facilitate renewing contact, with due regard to privacy.

Thank you.

Ed.

Gay Ablon
Keith Barnard
Mike Bartlett
Michael Billings
Hans Britz
Jim Cleary
Vince Constable
John Cummings
Bert Day
Roy Dice
Phil Dickinson
Neville Dippell
John Draper
John Easterbrook
Kerrie Eyre
M Fort
Jamie Gardiner

Kim Gates
Roger Glocke
Ron Harmes
Anne Harvey
Deidre Howard
Jim Keenan
Peter Kent
Joy King
Peter Kloppenberg
Gloria Lyon-Roberts
Ian McLaren
Ivan McLean
Don McLelland
Peter Meagher
Peter Maine
Ruby Maxwell

Richard Milner
Fred Mitchell
Ian Mitchell
John Monteith
Dennis Naylor
Terry Newman
John Noble
Frank Parkinson
John Parkinson
Mike Pender
Frank Pettit
Don Plumb
Stewart Sands
Ron Sargeant
Russell Schwarzer
Jean Spokes

David Stansbury
Alec Stevenson
Jack Stewart
Bob Swaby
John Swanney
Nim Thomas
Jack Thompson
Alf Tovey
Mike Travell
Dave Troup
Reg Truelove
Bernie Wilbourne
Roger Williams
Glen Williamson
Barbara Vernon
Lyn Willis

Apollo 11 — 35th Anniversary

Astronaut Visit to the White House

President George W. Bush welcomed Apollo 11 Astronauts Michael Collins, Neil Armstrong, and Buzz Aldrin to the Oval Office on July 21, 2004. The astronauts visited the White House to mark the 35th anniversary of the successful Apollo 11 mission of landing on the moon, walking along its surface and safely returning home.

White House Rendezvous With Apollo 11 Crew

Apollo 11 Astronauts Q & A
An “Ask the White House” session was carried out, but due to scheduling issues Armstrong and Collins were able to take only a few questions in a very rushed format. They had flights to catch and had a very limited amount of time.

The astronauts met in the Garden Room, outside of the Rose Garden. Armstrong wrote out a few answers while Collins recorded his responses to a few questions. Barney, the President’s dog, joined the crew members for the brief online discussion.

The questions and answers from that discussion follow:

Mendel, from the Netherlands writes: *At first my congratulations for what you did 35 years ago. I'm a university student, interested in space travelling a long time. How do you feel about the American initiative to go back to the moon? Did you ever want to go back to the moon in those*

35 years, and would you now with the new space initiative, volunteer to go if it was possible?

Neil Armstrong: *I am encouraged with the new initiative. I have wanted to return (I left a few things behind). If they offer me a Mars Command, I'll jump at it.*

Dave, from Maine writes: *Good morning gentlemen—congratulations on the 35th anniversary of your historic mission. Could you please tell us your thoughts when you first learned that you had been chosen to be the crew for Apollo 11—knowing it would be the first manned mission to the moon? Thanks for taking my question.*

Neil Armstrong: *At the time we were assigned to Apollo 11 the lunar module had not yet flown. So there was no way to know that it would be the first lunar landing attempt. We were delighted to be assigned to the flight, whatever the objective would be.*

Daniel, from Great Barrington, MA writes: *I am 14 years old and fascinated by space travel. Is it really possible send a human to Mars? In your mind could it work out practically?*

Neil Armstrong: *We technically have the ability to send humans to Mars. We still have a number of difficulties to surmount, but I believe we will overcome those barriers in the years ahead.*

Melissa, from Alexandria, Virginia writes: *Thirty-five years later, what remains the most memorable moment of your moon landing?*

Also, what do you believe we can learn from additional research on the moon that will help us most in the future? You're spirit of adventure continue to inspire me. Thank you for all you do.

Michael Collins: *Seeing Neil and Buzz come back up from the surface of the moon to rejoin me in the command module Columbia.*

Mark, from Pittsburgh PA writes: *When Mr. Collins was orbiting during the Moon walk, how many times actually did he orbit and how long did each orbit take? And actually how many times did he circle around the Dark side and are there any photographs available that he might have taken? I think the Moon landings are the most awesome events I have ever witnessed in my life, thank you so much to all who made it possible.*

Michael Collins: *I think each orbit took two hours and I think there were a total of 20, 22 of them.*

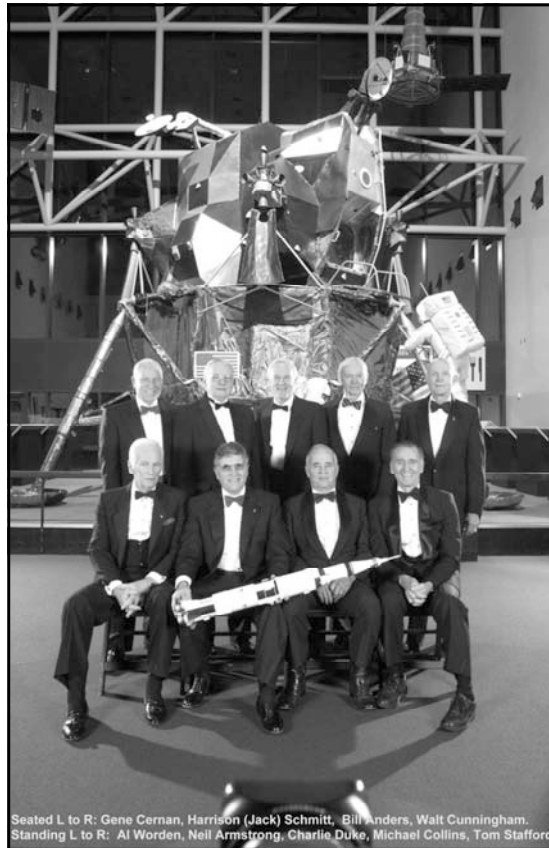
Dean, from Moose Jaw, Saskatchewan writes: *Good Morning Gentlemen. This is an extreme honor to speak with 3 men who have made a huge impact on history. I still remember that day when you walked on the moon. My question is what was it like when those engines started and you knew that your historic journey was about to begin?*

Michael Collins: *I was nervous that it was going to blow up.*

(Continued on page 5)

Apollo 11 — 35th Anniversary

Washington DC — Astronaut's Reunion



Seated L to R: Gene Cernan, Harrison (Jack) Schmitt, Bill Anders, Walt Cunningham.
Standing L to R: Al Worden, Neil Armstrong, Charlie Duke, Michael Collins, Tom Stafford.

Astronaut Visit to the White House

(Continued from page 4)

Laura, from Iowa writes: *Dear Apollo 11 Crew. What an honor to have you on the White House web site. My question today is very obvious: "What was it like stepping onto the surface of the moon?" I cannot even begin to imagine what it would be like. Thank you for your time.*

Michael Collins: *I was very happy when Neil and Buzz were walking on the moon and I was even happier when we were walking on the deck of the aircraft carrier.*

Wesley, from Connecticut writes: *I was disappointed*

to hear that on the 35th anniversary of your landing, a Congressional subcommittee took a blow against the new space vision and decided to cut funding to NASA. What are your thoughts on this? What can a 19-year-old do to save the vision? Thank you all for your service to our country.

Michael Collins: *I think it is going to Mars.*

Dave, from Maine writes: *Good morning gentlemen... congratulations on the 35th anniversary of your historic mission. Could you please tell us your thoughts when you first learned that you had been*

chosen to be the crew for Apollo 11—knowing it would be the first manned mission to the moon? Thanks for taking my question.

Michael Collins: *I was very happy to be on the crew of the first landing and furthermore I was very happy to be flying with Neil and Buzz.*

Kenny, from Montgomery, AL writes: *Did you ever want to go back to the moon?*

Michael Collins: *No, I haven't wanted to go back to the moon, but I want to go to Mars and I would go instantly if I had the opportunity.*

Apollo 11 – 35

Guess Who Came To Dinner?

Here are the names of those who enjoyed our reunion dinner on the 24th July:

Colleen Allen
Ron Ashford
Jackie Ashford
Kaye Barr
Viv Batty
Lesley Boulton
Bill Brooke
Ailsa Brooke
Geoff Broom
Lynette Broom
Malcolm Cameron
Maureen Cameron
Neil Castlehow
Tania Castlehow
Bill (Jeff) Chandler
Amy Chandler
Col Death
Paul Dench
Joan Dench
Susanne Dennings
Alan Dennings
Fred Dykstra
Heather Dykstra
Archer Eckersley
Beryl Eckersley
Lloyd Eckersley
James Egan
Mike Ferguson
John Findlay
John Ford
Eloise Ford
Colin Foster
Carol Foster
Kathy Franin
Max Garth
Eileen Garth
Geoff Goddard

Rhoda Goddard
Tony Green
Maureen Green
Jim Gregg
Alison Gregg
Michael Gregg
Catriona Gregg
John Harmsen
Lynne Harmsen
Barrie Heald
Mike Henderson
Margaret Henderson
Bob Hocking
Betty Hocking
Trevor Housley
Jocelyn Housley
David Johns
Geoff Kerr
Valma Kerr
Terry Kierans
Valerie Kierans
Barbara King
Maggie Lambert
John Lambie
Karim Lambie
Frank Legge
Hans Lemmens
Heather Lemmens
Shirley Lester
Chris Limb
Megan Limb
Paul Linnane Jr
Neil McBain
Lyn McBain
Roger McMurtrie
Jeannie McMurtrie

Trevor Mosel
Val Mosel
Brian Murty
Geoff Oldman
Colleen Oldman
Stan Parkes
Lorraine Patrick
Jannette Radford
Bev Robertson
Lorraine Sartori
Ian Shardlow
Kerry Shardlow
Eric Sirel
Nora Sirel
Ian Squire
Marieka Squire
Mitchell Squire
Tito Teraci
Joan Teraci
Fiona Teraci
Barbara Thompson
Dot Tonkin
Wilson Tuckey M.P.
Jenny Tuckey
Sue van Dongen
Pauline Vinton
Ken Watters
Judy Watters
Stuart Wattison
Terry Wattison
Geoff Williams
Rosemary Williams
Ben Williams
Josephene Williams
Wendy Wise



Thank You

My grateful thanks to my good friend Trevor Mosel who performed admirably as the MC, thus giving me a much needed rest.

Thank you too, Trevor Housley, for undertaking the role of official photographer for the whole evening and for his auctioneering prowess.

To the two Barbs, King and Thompson, for carrying out their onerous ticket collecting duties so

efficiently, and with a smile for everyone.

To Paul Dench for an entertaining and informative talk, and keeping it brief.

Last, and by no means least—to my wife Valerie who, as always, was willing to give her wholesale and unselfish support during the lengthy organisation process, and was the perfect hostess.

5th Anniversary

Publicity

All in all, the anniversary did not collect as much coverage here in WA as it did over east; despite a professional news release having been sent in good time to all radio and television stations.

However, I did receive two belated telephone calls on the evening of the 20th. From the Sunday Times, followed immediately by the West Australian. A few hurried 'phone calls and we were able to meet up for a photo shoot for the Sunday Times. Couldn't quite get my head around why we had to go to an observatory but.

While the Honeysuckle Creek celebration bathed in television coverage, the actual mission anniversary received scant coverage on our local TV.

I did manage a spot on the ABC Breakfast Show—courtesy Lorraine Sartori, and a neighbour 'phoned me regarding a commercial talk-back radio show. At least I was able, hopefully, to debunk the "Dish" myth.

Carnarvon—what did that place have to do with it?

Keeping the flag flying



L-R: Mike Henderson, Geoff Broom, Lyn Broome, John Harmsen, Roger McMurtrie, Terry Kierans

Photograph Tony McDonough, The Sunday Times

CROtrak—The Next Generation

It was very heartening to see some of the sons and daughters of Carnarvon CROtrackers and associates in attendance at the reunion dinner. Another generation to keep the memory alive.

I understand that one man in particular has retained vivid and accurate memories of his childhood days in Carnarvon.

It was also a pleasure to meet up with Arch Eckersley, Carnarvon ANZ bank manager from

1961-1964, his wife and son.

So, here's a toast to the next generation:

Neil and Tania Castlehow;
Lloyd Eckersley;
Catriona, Michael and Robin Gregg;
Paul Linnane Jr;
Mitchell Squire;
Fiona Teraci, and
Ben and Josephene Williams.

It is very heart-warming to know that you have pride in a parent(s)' historical achievements.

Jack Stewart's Dreadnaught

Contributed by Jim Wilcox

In 1908 the British Navy launched the biggest, baddest battleship in the then history of naval warfare. They called her the 'Dreadnaught'. She was so awesome, and the relationship between members of the Royal Family in England and Germany was so touchy, that the leaders in both countries decided to mass produce these heavy-weight fighters of the sea. They became known as 'Dreadnaughts'.

They were so valuable that while the poms and the krauts had their stoush on their favourite battlefield (France)

the respective lords of the admiralty couldn't risk exposing their Dreadnaughts to battle. They only met once...and that was a farce. Well, as they say, 'the rest is history', but not quite!!

It was not until the 1960s when Jack Stewart and John Easterbrook (I think) looked at the Indian Ocean and decided to build a boat. Jack had navy experience and consequently knew something about naval history. Before the keel was laid, he decided to call her the 'Dreadnaught'.

She was a sturdy little vessel. Designed to withstand a torpedo hit amidships and

fitted with an engine which would propel her at destroyer speed along Teggs Channel, she was (on paper) a worthwhile descendant of her illustrious alter egos.

The report has it that when the Dreadnaught was launched, and the designers set out on sea trials, the weight of the motor and the thrust of the propeller set the ship at an angle of about 45degrees, bow up.

Oh well, history has a way of repeating itself. Jack Stewart's 'Dreadnaught', like her predecessors, spent the rest of her life at the safety of her mooring.

The 'Eagle' Has Landed, And Boy Can It Cry!

From the Komo News 20 July 2004

Thirty-five years ago today, a voice from space said, "The Eagle has landed".

Astronaut Neil Armstrong landed the first manned spacecraft on the moon.

At that very moment, a Seattle connection was born.

"I was actually born the minute the Eagle landed, so what he said at the moment I was born is that 'The Eagle has landed,' " says Neil Armstrong Dial.

July 20, 1969 at 1:17 pm was when the Eagle touched down. And at the very same minute, Seattle's littlest astronaut was born. His parents named him

Neil Armstrong Dial. He made worldwide headlines.

But on his 35th birthday and the Eagle's 35th anniversary, Neil Armstrong reveals a shocker about his name.

"From what I understand the nurses actually picked the name, my parents had a different name picked out and the nurses were like, 'Oh no, you can't go with that, it's gotta be Neil Armstrong.' They essentially talked my parents into it," he said.

His father didn't even have a say in it.

"The story he tells, he showed up to the hospital and a reporter asked him how he felt about his son being named

Neil Armstrong, and he was shocked that decision had already been made," Dial said.

Truth is, his dad has always been fascinated with the space program and thought Neil might grow up to be an astronaut.

"The story I'm told is my dad and the doctors were more interested in the landing than they were in her birth. There was a TV in another room, and the nurses were going in and saying 'Doc, she can't wait any longer.' "

Later that day, Neil Armstrong made history and walked the dusty surface of the moon. But, Neil Armstrong Dial never followed in his namesake's footsteps.

Carnarvon, OTC, and All That

In view of the myth that had been perpetuated regarding the OTC dish tracked Apollo 11, it was a welcome relief to come across this definitive description of the communications configuration in Australia for the Apollo 11 mission.

All we need now is something similar explaining to the public why the Carnarvon Tracking Station was so essential to the Apollo missions, and that it carried out essential tracking activities and command uplinks that, physically, an 85ft dish in Australia could not.

Apollo 11 Communications in Australia

There was a vast communications link up for the Apollo 11 mission just in Australia alone, involving the **Post Office (now Telstra), Overseas Telecommunications Commission**, (now part of **Telstra**) The **Australian Broadcasting Commission**, and the **Australian Federation of Commercial Television Stations**.

The **NASA Switching Centre** in the Canberra suburb of Deakin provided a central communications point for the ACT tracking stations, using computers to assemble the signals destined for the USA, and unscrambling the signals from the USA to the stations.

The Post Master General's (PMG's) Department

The **PMG**, now called **Telstra**, provided circuits to carry television, voice, telemetry, and command data between Honeysuckle Creek and the overseas terminals where the **Overseas Telecommunications Commission (OTC)** took over. It also provided lines from Carnarvon, and Bassendean in Perth, from the Indian Ocean Ship, right across Australia for transmission to Houston via OTC connections. The whole range of facilities of the Post Office were used—coaxial cable, microwave radio, and open wires. Alternative circuits as back-ups, sometimes even triplicated, were used in case of a failure.

The open wire system across the Nullarbor Plain was backed up by a radio link from Perth to Melbourne. Western Australia was unable to see Apollo 11 live because at that time there was no broadband link across the nation. Experts had checked and double checked all the security aspects of the relays.

16,000 kilometres of trunk circuits were used for over a week. Just the television relay network over the eastern states covered over 8,000 kilometres, all looked after by more than 100 engineers and technicians working around the clock. These links were being carried free of charge by the PMG as the Apollo 11 relays were regarded as programs of national importance.

LIVE TELEVISION COVERAGE OF THE AUSTRALIAN EAST COAST FOR THE APOLLO 11 MOON LANDING.

The Overseas Telecommunications Commission (OTC)

The television signals from Honeysuckle Creek and Parkes were fed down PMG bearers to the OTC terminal at Paddington in Sydney, where it was selected for the best quality signal by NASA personnel and split, one for the local networks was sent to the ABC at Gore Hill, where it was converted from the American standard of 525 lines

to the Australian standard of 625 for distribution to the local networks for an estimated 10 million viewers. The second split was sent to the OTC satellite communications station at Moree, New South Wales, for transmission to Houston via the Intelsat III Pacific Communications satellite.

At various times during the mission OTC received telecasts from the United States for

distribution to the local television networks. The “Voice of Apollo” sound programs were sent from the United States using the Compac cable system, the Moree satellite earth station, or the Seacom cable which terminated at Cairns.

The NASA ships and aircraft stationed around Australia used the OTC facilities to relay their signals back to Houston, particularly during the earth orbit and landing phases.

Information courtesy John Saxon <http://www.pcug.org.au/~jsaxon/space/book/technical.htm>

Some Faces from the Reunion Dinner



Alan & Susanne Dennings



Lynn & Neil McBain



Barb King, Tito Teraci & Lorraine Sartori



Barb Thompson, Jocelyn Housley & Betty Hocking



John Ford & Bill (Jeff) Chandler



Jeannie & Roger McMurtrie



Bob Hocking



Megan Limb



Bev Robertson



Fred Dykstra



Geoff Goddard



Carol Foster & Marg Henderson



Max Garth & Paul Dench



Heather Dykstra & Ian Squire



Col Death & Dot Tonkin



Geoff Broom & Jim Gregg



Geoff & Colleen Oldman

Photographs by Trevor Housley.

These photographs, in colour, and other photographs and material from the Reunion Dinner, will be posted at
www.virtualservices.com.au/CROtrak

Some Messages for the Reunion Dinner

From Ed Goldsmith

Like all of you, we look back on our time at Carnarvon as a great adventure. For us it was an adventure with many different dimensions. We were New Australians; we and almost all of us at Carnarvon were new to the bush and living in remote areas. (You think Carnarvon was remote you should have seen Gove - that was so remote you couldn't even get radio there).

Quite a number of us were new to having and raising families (well there was no TV for starters). We were involved with very advance technology which was exciting and challenging. For quite a number of us we were involved in live operations for the first time and unlike the military we had little or no training for this aspect of the job. Most of all, we were a significant part of man's greatest endeavour.

Its no wonder that under these circumstances we made many lasting friendships and that for many of us the time at Carnarvon shaped the rest of our lives. It is not surprising that CRO attracted some extremely talented individuals and I'm proud to have had the opportunity to have been part of the team.

Best regards

From David Wigley

Hi All You CRO Trackers.

I'm sure you'll all have a great evening at the reunion dinner.

Sorry I can't be with you. It'll be a great night.

I was only at CRO telemetry for around 12 months but, the memories!

It was the best job I ever had.

Remember—"Any day above ground is a good day"

From Ernie Cooke

I know you will celebrate in style and I would love to be with you, take some photos please. We are having a Lunch here on the day (mostly HSK bods naturally). May final LOS be a long time coming.

From Norma & Alan Hickmott

Hi there to all our old (?) friends from that happy time and place called Carnarvon.

I am very sorry that we cannot be with you on this occasion, but we will be thinking of you and will drinking a toast to you, not with 'Mucky Duck' but the local brew. We will try not to cry in our beer but treat it as the happy time we expect it to be.

So ENJOY YOURSELVES and maybe spare a thought for us sometime.

From Fred Vey

To fellow Apollo Trackers; greetings from the far side of the earth, Lusby, Maryland, USA and Evonne Martell Vey and Fred Vey. We regret not being able to attend the 35th anniversary of Apollo 11 with so many of our friends in Australia. We made it in 1989 and 1994 and hope to make it again; maybe the 40th or 50th (space program participants were always optimists.)

As most of you know Evonne worked at Carnarvon during Apollo 11 and I was on the re-entry tracking ship USNS Huntsville and we later met and married during Apollo 13 mission at Honeysuckle Creek.

The Apollo space program will always have a special place in our memories, especially the many friends from that era. Enjoy the reunion and keep in touch at evonnesart@comcast.net and check out Evonne's (nearly finished) web page:

www.evonnesartcreations.com.

From Mick Coffey

Hi fellow Trackers. Greetings from Carnarvon. Hope you all have an exceedingly wonderful time on this occasion.

Best wishes to Terry and Paul for "keeping the memory alive".

Will be thinking of you while kayaking down the fascine. Cheers, Mick & Sue Coffey.

From Ian & Tanya Murphy

Tanya and I look back on our Carnarvon days as some of the most exciting times in our lives. The exciting changes at that time prepared us well for the rapidly changing technology we see today.

The many friendships we made in Carnarvon have endured throughout the intervening period. I cannot think of any other large group of individuals who were so competent and also so easy to get along with, particularly Bill Brennan and the magnificent "B Shift Team".

How could we ever forget those feasts that Shirley offered in the Tracking Station canteen. Where else could you have obtained such great meals for 35 cents at that time? Certainly not the Port Hotel!

Many thanks to you Terry and all the others who have kept the dream alive.

Have a "blast" at reunion dinner! Tanya and I will have a (few) quiet drinks on the day and will celebrate with you.

Kind regards—Ian-Telemetry/COMMS (B Shift)
Tanya- SPAN/Computers

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Vol 2 December 2004

The Trackers

C R O N I C L E



Keeping the memory alive

In keeping with the series of anniversaries of missions that took place in the coming month.

January marks the anniversary of three missions:

Apollo 1	January 27	1967
Apollo 5	January 22	1968
Apollo 14	January 31 — February 9	1971

Apollo 1 was the launch pad test of the Apollo/Saturn vehicle being prepared for the first piloted flight.

Three astronauts, Lt. Col. Virgil I. Grissom, a veteran of Mercury and Gemini missions; Lt. Col. Edward H. White, the astronaut who had performed the first United States extravehicular activity during the Gemini program; and Roger B. Chaffee, an astronaut preparing for his first space flight, died in this tragic accident.

The unmanned Saturn/Apollo 5 marked the first test of the Lunar Module in space.

Apollo 14, Kitty Hawk and Antares, delayed by about four months as a result of the Apollo 13 accident, is the subject of our page 2 article.

Photographs from the reunion dinner can still be viewed at:

<http://www.virtualservices.com.au/CROtrak>

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Apollo 14

Apollo 14 was the third mission during which humans walked on the lunar surface and returned to Earth.

Crewed by Alan Shepard Jr, Stuart Roosa and Edgar Mitchell, Apollo 14 was launched on January 31st 1971. Four days later, Alan Shepard and Edgar Mitchell landed at Fra Mauro.

During the final approach, they recognised Cone Crater right at pitchover and, soon thereafter, picked up the familiar pattern of smaller craters near their aim-point another mile or so to the west. There wasn't, Shepard said later, any really flat ground close at hand; there were either craters or sloping



ground wherever he looked; but he had no trouble finding a crater-free, LM-sized patch that was only 30 metres from his target.

The only problem with the landing spot was that it was on an eight degree slope; and, for 24 of the next 33 hours the astronauts

had to contend with a tilting floor that threatened to dump Shepard over onto Mitchell's side of the spacecraft. In addition, the tilt contributed to a sleepless night between the two EVAs; but otherwise, the LM attitude had no effect on the mission.

(Continued on page 5)



Crew:

(L — R)

Stuart A. Roosa, CSM Pilot

Alan B. Shepard, Jr., Commander

Edgar D. Mitchell, Lunar Module Pilot

Alan Shepard was born November 18, 1923. He was chosen with the first group of astronauts in 1959, and was pilot of Mercury-Redstone 3 (Freedom 7) and the first American in space. He retired from NASA and the Navy on August 1 1974, with the rank of Rear Admiral. He died on July 21, 1998 after a long battle with leukaemia.

Stuart Roosa was born August 15, 1933. Chosen with the fifth group of astronauts in 1966 he was the backup command module pilot for Apollo 16 and

Apollo 17. He retired from the Air Force with the rank of Colonel, and resigned from NASA on February 1, 1976. He died on December 12, 1994 of complications from pancreatitis.

Edgar Mitchell was born September 17, 1930. He was chosen with the fifth group of astronauts in 1966. He was backup lunar module pilot for Apollo 10, and backup lunar module pilot for Apollo 16. He retired from the Navy, with the rank of Captain, and from NASA in October 1972.

"If we die, we want people to accept it. We're in a risky business, and we hope if anything happens to us, it will not delay the program. The conquest of space is worth the risk of life."

Virgil I. Grissom, Commander, Apollo 1, speaking a few weeks before his death in the Apollo 1 fire

What Are They Doing Now?

13 August 2004

Greg and Pam (Tacey)

Sorry to disappoint, but Pam and I have been slumming in Eastern European countries since the 18th June and we just got back to read the emails today.

We visited Germany, Poland, Slovak Rep., Hungary, Austria, Czech Rep., Finland, Russia, Belarus, Lithuania, Latvia, Estonia, and then spent the last two weeks

in England.

So you see, not only did we not attend the reunion, but also could not answer your email until now when it is too late.

Nevertheless we had a bloody good time even though we are now suffering from jet lag.

I trust all is forgiven, and our apologies to all those who missed us.

Regards.

Roy Dice has been working at Pine Gap for the last 26 plus years.

Harry Malbon

Has been retired for many years after returning to the UK and working with AVRO (now British Aerospace).

Now living on the borders of the Peak National Park and still indulging his love of photography.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. The more we find, the more names crop up.

If you have any knowledge of the whereabouts of any of the following would you please let me know their details.

I will also facilitate renewing contact, with due regard to privacy.

Thank you.

Ed.

Gay Ablon
Keith Barnard
Mike Bartlett
Michael Billings
Hans Britz
Jim Cleary
Vince Constable
John Cummings
Bert Day
Phil Dickinson
Neville Dippell
John Draper
John Easterbrook
Kerrie Eyre
M Fort
Jamie Gardiner
Kim Gates

Roger Glocke
Ron Harmes
Anne Harvey
Deidre Howard
Jim Keenan
Peter Kent
Joy King
Peter Kloppenberg
Gloria Lyon-Roberts
Ian McLaren
Ivan McLean
Don McLelland
Peter Meagher
Peter Maine
Ruby Maxwell
Richard Milner

Fred Mitchell
Ian Mitchell
John Monteith
Dennis Naylor
Terry Newman
John Noble
Frank Parkinson
John Parkinson
Mike Pender
Frank Pettit
Don Plumb
Stewart Sands
Ron Sargeant
Russell Schwarzer
Jean Spokes
David Stansbury

Alec Stevenson
Jack Stewart
John Swanney
Nim Thomas
Jack Thompson
Alf Tovey
Mike Travell
Dave Troup
Reg Truelove
Roger Williams
Glen Williamson
Barbara Vernon
Lyn Willis

SNIPPETS

A New South Wales subscriber to the ProjectApollo@yahoogroups.com newsletters posted a message regarding Australian Apollo place names.

He noted that Charlestown NSW has streets named:

- Apollo Drive
- Armstrong Road
- Aldrin Avenue and
- Conrad Avenue.

Also Grafton has a small park named “Apollo 11 Park”.

Another subscriber noted that there is an Apollo Avenue in Baulkham Hills NSW (c. 1970).

Apart from Collins St in Melbourne , which has been around for ever and bears no relation, does anyone know of any other places or streets which recognize Project Apollo?

The Omega Speedmaster Professional

In 1962, NASA began the search for a wristwatch that could be worn by the Gemini and Apollo astronauts. NASA purchased watches from several companies and devised a series of stringent tests and procedures that were to be followed to the letter, to test them. The only watch that survived this testing to a satisfactory level was the Omega Speedmaster Professional.

It is significant to note that this was a standard, production line model which was

purchased over-the-counter, incognito at a Houston jewelry store.

“GT-3” (Gemini Titan III) was a reference to the first Gemini flight, which took off at 04:52 on March 23, 1965, with astronauts Virgil Grissom and John Young on board. Both men wore Omega Speedmaster wristwatches and the Speedmaster became part of the standard equipment issued to all astronauts. The watch was worn on the outside of the pressure suit with the use of a large black velcro band. It was worn during the first walk in space by an American, Edward White, in 1965 and the following year Omega added the word ‘Professional’ to the dial. Thus, the Omega Speedmaster Professional was born.

From the Omega Speedmaster Website

Computer Screen Wallpaper

There is a series of Apollo Desktop Wallpapers, one or more from each landing mission — and they are all free.

<http://moonpans.co.uk/wallpaper/>

Apollo 13 DVD Set

A three DVD set, with complete TV and onboard film is now available from “Spacecraft Films” with over 12 hours of material.

<http://www.spacecraftfilms.com/>



The Speedmaster, model c.1321, worn on the moon by Alan Shepard. Manufactured in 1966-1967 it was supplied from the initial purchase of watches and was official NASA equipment.

Apollo 14

(Continued from page 2)

Mission Objectives

The objectives of the mission were to investigate the lunar surface near a preselected point in the Fra Mauro formation, deploy and activate an Apollo lunar surface experiments package; further develop the ability to work in the lunar environment, and obtain photographs of candidate exploration sites.

The lunar surface experiments planned for the Apollo 14 mission differed somewhat from those of the Apollo 13 mission. The crew's traverse capability was improved by

the addition of the modularized equipment transporter (MET), which is a light, hand-drawn cart that enabled the crew to transport tools and samples with greater ease.

Two extravehicular activity (EVA) periods were planned, each of which was to last four hours, 15 minutes. The principal objectives of the first EVA were to collect geological samples (including a contingency sample in case an early abort became necessary) and to deploy the Apollo lunar surface experiments package (ALSEP).

The second EVA was largely devoted to a geological

sampling traverse toward Cone Crater, with several other experiments being conducted along the traverse.

Mission Highlights

- ALSEP and other instruments deployed.
- Lunar surface stay time: 33.5 hours.
- 67 hours in lunar orbit, with 34 orbits. Two EVAs of 09 hours, 25 minutes.
- 42 kg (94 lbs) of materials gathered.
- Alan Shepard hit a golf ball with a six iron making golf the first sport played on another celestial body.

Moon Trees

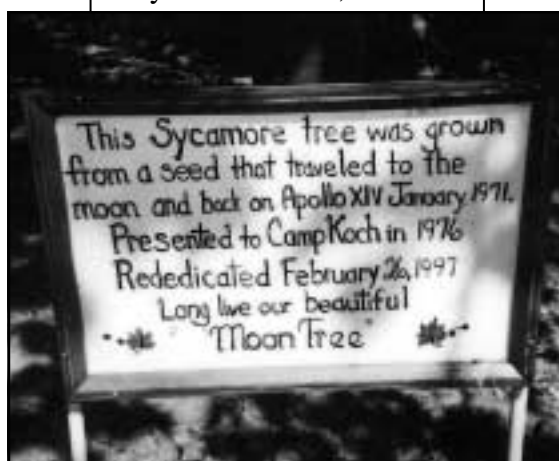
Tucked away on the Apollo 14 spacecraft, as it lifted off for the Moon on 31st January 1971, were small containers carried within the personal flight kit of astronaut Stuart Roosa; part of a joint NASA/USFS project.

Upon return to Earth, the seeds were germinated by the Forest Service.

Known as the "Moon Trees", the resulting seedlings were planted throughout the United States and the world. They stand as a tribute to astronaut Roosa

and the Apollo program.

Sadly, Stuart Roosa passed away in December, 1994.



The Moon Trees continue to flourish, a living monument to our first visits to the Moon and a fitting memorial to

Stuart Roosa.

No list was ever kept, nor any systematic tracking made, of the disposition of all the trees.

However NASA scientist Dave Williams is hunting for them. So far he has located 44 of the 450 or so that were planted in 1976. He's hoping his website at [http://nssdc.gsfc.nasa.gov/](http://nssdc.gsfc.nasa.gov/planetary/lunar/moon_tree.html)

[planetary/lunar/moon_tree.html](http://nssdc.gsfc.nasa.gov/planetary/lunar/moon_tree.html) will eventually list the whereabouts of all the missing trees.

Spacecraft Designer Dr. Maxime A. Faget

The man who designed the original spacecraft for Project Mercury and is credited with contributing to the designs of every U.S. human spacecraft from Mercury to the Space Shuttle has died.

Dr. Maxime A. Faget, in 1958, became part of the Space Task Group that would later evolve into the NASA Johnson Space Center.

“Without Max Faget’s innovative designs and thoughtful approach to problem solving, America’s space program would have had trouble getting off the ground,” said NASA Administrator Sean O’Keefe. “He also was an aeronautics



pioneer. In fact, it was his work on supersonic flight research that eventually led to his interest in space flight.”

Faget was selected as one of the original 35 engineers as a nucleus of the Space Task Group to carry out the Mercury project. The group also devoted a lot of time to follow-on programs and Faget led the initial design and analysis teams that studied the feasibility of a flight to

the Moon. As a result of his work and other NASA research, President John F. Kennedy was able to commit the U.S. to a lunar landing by the end of the 1960s.

NASA News 10 October 2004

Houston Today



From Alan Gilham

At a recent visit to the old Houston control centre, where as usual no mention was made of tracking stations, I cornered the NASA spokesman and pointed out that the information about orbits had to come from tracking stations and I pointed out their locations on the screened map. He was very pleased to meet someone from that era and warmly shook my hand and would mention tracking stations in the future.

NASA Sets Aside Day to Remember Fallen Astronauts

NASA Administrator Sean O'Keefe declared on January 29 2004 that the last Thursday in every January be set aside as a Day of Remembrance within the space agency to honour the memory of the crews of Apollo 1, Challenger and Columbia.

The Day of Remembrance falls three days before the anniversary of the Columbia disaster, coming as close as it does to all three of the nation's space program catastrophes.

- Gus Grissom, Edward White and Roger Chaffee, killed Jan. 27, 1967, in a fire in their Apollo capsule during a countdown test on the launch pad.
- Dick Scobee, Michael Smith, Ronald McNair, Judith Resnik, Christa McAuliffe, Gregory Jarvis and Ellison S. Onizuka, killed Jan. 28, 1986, when the space shuttle Challenger exploded shortly after liftoff.
- Rick Husband, William McCool, Kalpana Chawla, Michael Anderson, David Brown, Laurel Clark and Ilan Ramon, killed Feb. 1, 2003, when shuttle Columbia broke up during re-entry.

O'Keefe noted that three peaks on Mars seen from the first of the two newly arrived rovers would be named Grissom Hill, White Hill and Chaffee Hill after the Apollo 1 astronauts.

The space agency named the rover landing sites after the Challenger and Columbia crews.

Administrator Sean O'Keefe said in a televised address that space exploration is

risky but never should result in fatalities because of "complacency, indifference, failure to attend to detail." That should be a solemn pledge for anyone who works in the space program, he said.

O'Keefe choked up as he read the roll of 17 who "lost their lives because we failed."

"They are not with us today because when it mattered most, we failed. And so it is incumbent upon us to remember not just today, not once a year, not on the anniversaries, but every day, every single day that the consequences of us not getting it right are catastrophic, and each of those families will live with this consequence for the rest of their lives."

There have been four other recorded space exploration setbacks:

- Soyuz 1, April 1967 — Vladimir Komarov was killed when the parachute on his Soyuz 1 spacecraft failed to deploy on re-entry.
- Apollo 13, April 1970 — An oxygen tank in the service module exploded leaving the command and service modules without propulsion or electrical power.
- Salyut 1, June 1971 — Georgi Dobrovolski, Vladislav Volkov and Viktor Patsayev died when their Soyuz ferry craft developed a leak before re-entry, allowing the oxygen in the cabin to escape.
- Mir, February to June 1997 — An onboard fire in February, repeated computer glitches and a collision with an uncrewed Progress spacecraft in June. No lives lost.



*A very merry Christmas
and
a healthy and prosperous New Year
to you and your families
from the editor*

If undelivered, return to:

CRO Trackers

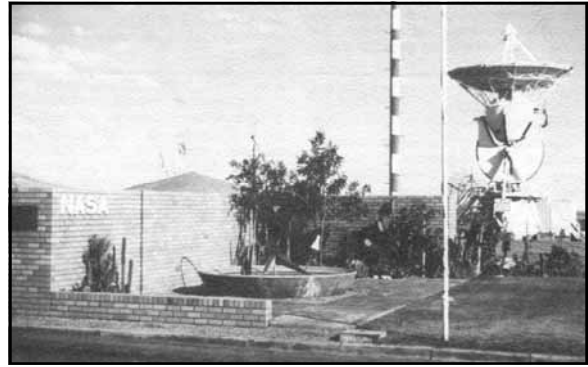
PO Box 93, Quinns Rocks, WA 6030



Vol 2 March 2005

The Trackers

C R O N I C L E



Keeping the memory alive

In keeping with the series of anniversaries of missions that took place in the coming month.

April marks the anniversary of five missions:

Vostok 1	April 12	1961
Soyuz 1	April 23	1967
Apollo 6	April 4	1968
Apollo 13	April 11—17	1970
Apollo 16	April 16 –27	1972

Vostok 1, named Swallow, was piloted by the late Yuri Gagarin. The mission lasted 1hr and 14 minutes.

Soyuz 1, piloted by the late Vladimir Komarov, crash landed 1 day 2 hrs 53 mins after lift-off, killing the pilot and putting back the Soviet lunar program by 18 months.

Apollo 6 was the Apollo program's last unmanned test flight of the Saturn V launch vehicle. Flight duration of 9hrs 57 minutes. This day also marks the anniversary of the assassination of Martin Luther King.

Apollo 13, Odyssey/Aquarius, was crewed by James Lovell, Jack Swigert and Fred Haise. Enough has been written and enacted to make any related material in this newsletter superfluous.

Apollo 16 is the subject of our page 2 article.

Terence (Terry) Kierans

Editor

CROtrak

PO Box 93

QUINNS ROCKS WA 6030

email: crotrak@virtualservices.com.au

Apollo 16

The Apollo 16 spacecraft was configured essentially the same as Apollo 15, to carry out a greater range of lunar orbital science activities and to increase the lunar surface stay and return a larger scientific payload.

Crewed by John Young, Thomas Mattingly II and Charles Duke, Apollo 16 was launched on April 16 1972. On April 21 John Young and Charles Duke became the ninth and 10th men respectively to walk on the moon.

Many minor changes were made because of problems that occurred during the previous mission. The mass spectrometer and gamma ray spectrometer booms in the Scientific Instruments Module (SIM) on the service

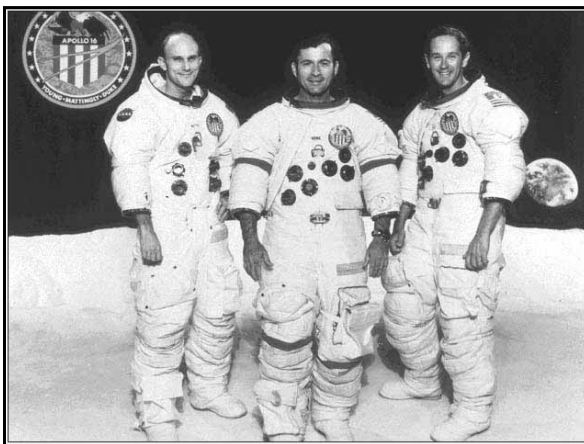


module were modified to improve extension and retraction. Some minor changes were also made to the lunar roving vehicle (LRV) for this mission.

The exploration of the Descartes region by the crew provided the best look at lunar highlands. As a result, many theories concerning

lunar geologic structure and processes were improved greatly.

Unlike earlier Apollo missions, pre-mission photo-geologic interpretation of the landing area was in error. Far from diminishing the mission, however, discovery of the unexpected enhanced the scientific impact. The surprise at Descartes was the state of the rocks, not their composition.



Crew:

(L — R)

Thomas K Mattingly II, CSM Pilot

John W Young, Commander

Charles M Duke Jr, Lunar Module Pilot

John W. Young was born on September 24, 1930, in San Francisco, California. He was chosen with the second group of astronauts in 1962. He was pilot of Gemini 3, backup pilot for Gemini 6, command pilot on Gemini 10, backup command module pilot for Apollo 7, command module pilot for Apollo 10, and backup commander for Apollo 13. Following this mission, he was backup commander for Apollo 17 and flew on STS-1 and STS-9.

Thomas K. Mattingly II was born on March 17, 1936, in Chicago, Illinois. He was chosen in the fifth group of astronauts in 1966. Scheduled to be command module pilot on

Apollo 13, he was replaced by his backup because he had been exposed to measles. After flying on Apollo 16, he headed the astronaut office ascent/entry group from December 1979 to April of 1981, after which he served as backup commander for space shuttle flights 2 and 3 and was the commander for STS-4 and STS 51-C.

Charles M. Duke Jr. was born on October 3, 1935, in Charlotte, North Carolina. He was chosen with the fifth group of astronauts in 1966. He was backup lunar module pilot on Apollo 13 and Apollo 17. He resigned from NASA and the Air Force on January 1, 1976.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. Paul Dench has now provided some more names too. If you have any knowledge of the whereabouts of any of the following would you please let me know their details.

I will also facilitate renewing contact, with due regard to privacy. Thank you.
Ed.

Eric	Ainsworth	Geoff	Hammond	John	Parkinson
Gay	Albon	Ron	Harmes	Mike	Pender
Geoff	Ball	Anne	Harvey	Don	Plumb
Matt	Barber	Bill	Herrington	Gerry	Plummer
J	Barber	Daphne	Hillier (Carlton)	D	Powell
Keith	Barnard	Stan	Hills	M.J.K	Power
Deidre	Beaumont	Don	Holder	A	Rees
Elizabeth	Beckett	Bill	Hore	Frank	Rice
Bill	Bell	Bob	Houghton	Jack	Roney
Michael	Billings	Deidre	Howard	Ted	Rosser
A	Biscaya	Jim	Keenan	Lynne	Rosser
Don	Blackman	D	Kettley	Stewart	Sands
Bill	Boyle	Joy	King	Ron	Sargeant
Hans	Britz	M	King	Russell	Schwarzer
Charlie	Brown	Joe	Kinsella	John	Sharples
Martin	Burgess	Gloria	Klarie	P	Sims
Basil	Byrne	Peter	Kloppenburg	Frank	Sloane
G	Carrick	Roy	Lester	Roger	Smith
Tom	Cates	Don	Lindsay	P	Smith
Ruth	Cates	Geoff	Linthorne	Helen	Smith
Keith	Chant	S.C	Lund	J	Smith
Brian	Clifford	Gloria	Lyon-Roberts	Bill	Smythe
Barbara	Cobcroft	John	Mahaffey	Jean	Spokes
Vince	Constable	Peter	Maine	Dave	Standbury
Ron	Cuthbert	Ruby	Maxwell	John	Stanton
F	Dawes	Shirley	McClaughlin	Wally	Steckis
Marjorie	Dench	Ian	McDonald	Alex	Stevenson
Marilyn	Dick	S	McDonald	Bob	Swaby
Phil	Dickinson	Frank	McGregor	John	Swanney
Neville	Dippell	Ian	McLaren	Ian	Symes
John	Draper	Ivan	McLean	Leila	Symes
Andy	Drummond	Don	McLellan	Barbara	Teahan
Kim	Dupre	Peter	Meagher	Des	Terrill
John	Easterbrook	Verica	Milanovich	Jack	Thompson
Dave	Elliot	Ray	Mills	Don	Thompson
J	Erickson	Bill	Mills	Alf	Tovey
Lorraine	Erlandshaw	Peter	Milne	Mike	Travell
Kerrie	Eyre	Richard	Milner	Dave	Troup
Les	Figg	Ian	Mitchell	Milton	Turner
M	Fort	John	Monteith	Jean	Walker
Vic	Gadelvicius	Dennis	Naylor	A	Watermeyer
Jamie	Gardiner	Terry	Newman	Jack	Watson
L	Gardner	Kel	Nickerson	Barbara	Wigley (Vernon)
Kim	Gates	John	Noble	Marilyn	Wilbourne
J	Gerschwitz	Patsy	Nolan (Thompson)	Roger	Williams
Dave	Gibson	Peter	O'Meagher	Glen	Williamson
Olly	Gravdel	Frank	Parkinson	Ray	Zatorski

Muchea

Our pre-occupation with the Carnarvon Tracking Station should not preclude some coverage of its predecessor in W.A.

Established in 1960, Muchea (pronounced "Mewshay"), in the Shire of Chittering was the only Command station outside the United States. (All the other stations outside the US were receive-only.)

Muchea used VERLORT (Very Long Range Tracking) radar equipment to track the Mercury spacecraft.

Muchea Communications Technician Gerry O'Connor became the first Australian to speak with a space traveller on 20th February 1962, when he called John Glenn in Freedom 7 on his pass over the West Australian coast.

Muchea closed in 1963. The development of the Carnarvon Tracking Station for Gemini and Apollo meant that Muchea, after its pioneering work, was no longer needed.



Some of the commemorative plaques erected by the Shire of Chittering



"Human beings are great explorers...and it's about time that we started looking around for better ways and making the progress we need to explore the solar system with human beings. That's our next goal...not because we want to really, but because we have to."

- John Young

What Are They Doing Now?

Larraine Glocke - née Fitzgerald, but maybe also better known as “Teeny Bopper”

Now residing in a Perth suburb with husband Roger and still in the workforce. We understand that there is a Teeny Bopper Mk II and also a Mk III.

Colleen Allen - née Bennett. Another Range and Range Rate denizen with Trevor Mosel, and subsequently a TTY Op under the aegis of Greg Tacey. Now a resident of Alice Springs, but soon to take off for the U.K. where she will be chasing up family history

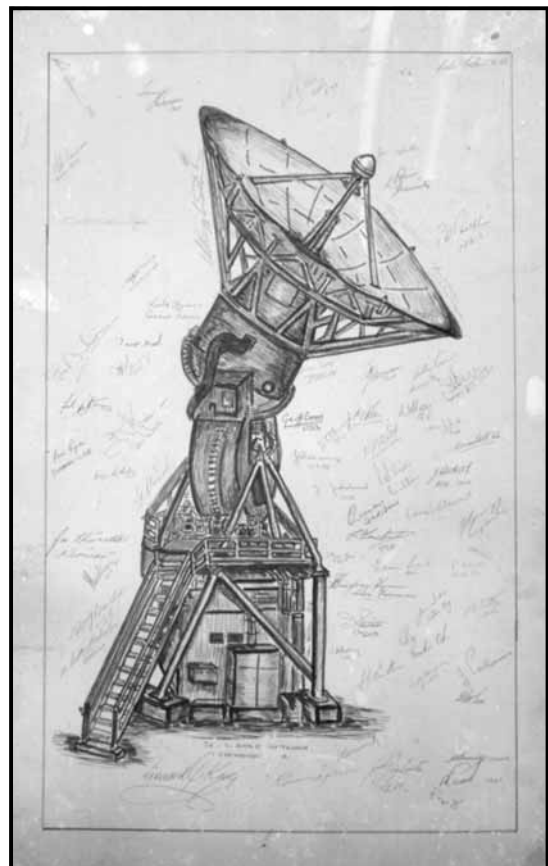
The original of this piece of memorabilia is in the hands of Viv Batty.

It is believed to have been drawn by Tom Lysaght and includes the signatures of a large proportion of those at the Tracking Station at that time.

It has faded with age and the signatures are somewhat difficult to decipher. However, some image enhancement may produce better results, but with loss of the antenna drawing quality.

Will anyone knowing any details relating to the origin of this artefact please contact the editor.

Thank you.



LOS



It is with much regret that I have to advise of the passing of Bill Graham in January of this year.

He was farewelled by family, friends, ex-trackers and his comrades from the T.S.Gascoyne.

TS GASCOYNE



PARADE NIGHT - TUE 1830 - 2130
UNIT CONTACT -

Northern Guardian

September 22nd 2004

From the Shire of Carnarvon 2004/2005 Budget

“This year will see the commencement of Stage 1 of the OTC Tourism Concept. To be delivered over two years, Stage 1 has a budget of approximately \$767,000 which includes financial contributions from both the Federal and State Governments.

Works in Stage 1 include—repair and renovation of main dish and sugar scoop secure site and establish caretakers residence establish car parking, bus turn around and seal access roads interpretive displays and signage lighting and entry statement.

Current signage



- Will the “interpretive displays” include any reference to the Tracking Station?
- Will the signage continue to reflect the centre as being “O.T.C.”?
- Will the promise made in April 2004 be kept, to extend the signage to include those barren gates and bare brick walls depicted above?



In connection with “Keeping the Memory Alive” we have been fortunate enough to have a copy of “The Space Connection” donated by the author, Robert Douglas, together with his permission to republish if so desired.

It was produced for the 25th Anniversary of the Lunar Landing.

It is the opinion of a number of ex-trackers that this is the closest to the truth that has ever been published in W.A.

Carnarvon Watering Holes (as they are today)



Bring back any memories?



Picnic Day

It has been suggested that five years is a long time between drinks. So...

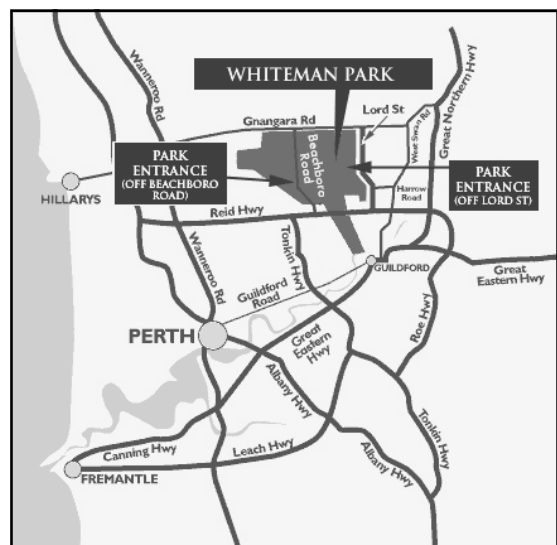
The Perth Chapter of the CRO Trackers will be holding their, to be annual, picnic/barbeque at Whitemans Park, Mussel Pool, some 20 kms and 25 minutes from the Perth CBD.

Date: Sunday April 10 2005

Time: Kick off 11 am

BYO: Everything

Look out for the banner



Keeping the Memory Alive



Photo: Tom Sheehan, courtesy Colin Mackellar

If undelivered, return to:

CRO Trackers

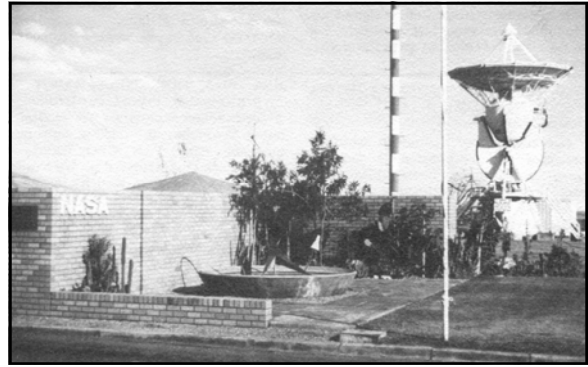
PO Box 93, Quinns Rocks, WA 6030



Vol 2 June 2005

THE TRACKERS

C R O N I C L E



Keeping the memory alive

In keeping with the series of anniversaries of missions that took place in the coming month.

July marks the anniversary of four manned missions:

Mercury-Redstone 4	July 21	1961
Gemini X	July 18-21	1966
Apollo 11	July 16-24	1969
Apollo 15	July 26-August 7	1971

Liberty Bell 7. The late Virgil “Gus” Grissom became the second American to go into space, on a 15 minute trip, as part of Project Mercury.

John Young and Michael Collins crewed Gemini X on its 70 orbit trip, rendezvousing and docking with a Gemini-Agena en route.

What more could be said concerning this historical mission culminating in man’s first steps on the moon?

Galileo’s conclusion was vindicated during the last lunar walk of the Apollo 15 mission. David Scott dropped a feather and a hammer simultaneously—within the limits of the accuracy of the simultaneous release they were observed to reach the surface at the same time.

Terence (Terry) Kierans
Editor

CRO Trackers
PO Box 93

QUINNS ROCKS WA 6030

email:crotrak@virtualservices.com.au

Gemini X

The primary objective was to rendezvous and dock with Gemini Agena target vehicle (GATV-5005) launched as TLV-5305 from Complex 14 on 18 July 1966.

Secondary objectives included:

- Rendezvous and dock in 4th revolution. Rendezvous with the Gemini Agena target vehicle using Agena propulsion systems,
- Conduct EVA,
- Practice docking,
- Perform 14 experiments,
- Perform system evaluation on bending-



mode tests; docked manoeuvres; static discharge; monitoring; post-docked Agena manoeuvres; reentry guidance, and

- Park Gemini Agena target vehicle (GATV) in 352km (190.3 nm) orbit. The Agena re-entered on 29 December 1966.

Launched July 18 1966, Gemini X achieved 43 orbits and landed on 21 July 1966.

All primary objectives and most secondary objectives were met.

The practice docking secondary objective and some experiments were cancelled due to insufficient fuel reserves.



John Young (Commander) and Michael Collins (Pilot)

Upon graduation from Georgia Tech, John Young entered the United States Navy. After serving on the west coast destroyer USS LAWS (DD-558) in the Korean War, he was sent to flight training. He was then assigned to Fighter Squadron 103 for four years, flying Cougars and Crusaders.

In September 1962, Young was selected as an astronaut. He is the first person to fly in space

six times from earth, and seven times counting his lunar lift off.

In January 1973, Young was made Chief of the Space Shuttle Branch of the Astronaut Office, providing operational and engineering astronaut support for the design and development of the Space Shuttle.

(Continued on page 4)

"The attention span of the American mind proved to be the biggest disappointment of the century. We had the solar system, maybe even the stars, in our hands. And the American people told us to forget it."

— Christopher Kraft

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. Paul Dench has now provided some more names too. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you Colleen Allen, Viv Batty, Paul Dench, Lesley Gilbert, Laraine Glocke, Tony Green, Barb King , Paul Linnane Jnr, Ena McAtee, Mike Marsh, Trevor Mosel, Ian Shardlow, Barbara Thompson, Pauline Vinton and Stu Wattison for your inputs. Ed.

Eric	Ainsworth	Ron	Harmes	John	Parkinson
Gay	Albon	Anne	Harvey	Mike	Pender
Geoff	Ball	Bill	Herrington	Don	Plumb
Matt	Barber	Daphne	Hillier (Carlton)	Gerry	Plummer
J	Barber	Stan	Hills	D	Powell
Keith	Barnard	Don	Holder	M.J.K	Power
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Bill	Bell	Deidre	Howard	Ted	Rosser
Michael	Billings	Jim	Keenan	Lynne	Rosser
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Neville	Dippell	Ian	McLaren	Leila	Symes
John	Draper	Ivan	McLean	Barbara	Teahan
John	Easterbrook	Don	McLellan	Des	Terrill
Dave	Elliot	Verica	Milanovich	Jack	Thompson
J	Erickson	Ray	Mills	Don	Thompson
Lorraine	Erlandshaw	Bill	Mills	Alf	Tovey
Kerrie	Eyre	Peter	Milne	Mike	Travell
Ross	Eyre	Richard	Milner	Dave	Troup
Les	Figg	Ian	Mitchell	Milton	Turner
M	Fort	John	Monteith	Jean	Walker
Vic	Gadelvicius	Dennis	Naylor	A	Watermeyer
Jamie	Gardiner	Terry	Newman	Jack	Watson
L	Gardner	Kel	Nickerson	Barbara	Wigley (Vernon)
Kim	Gates	John	Noble	Marilyn (Nora)	Wilbourne
J	Gerschwitz	Patsy	Nolan (Thompson)	Roger	Williams
Olly	Gravdel	Frank	Parkinson	Glen	Williamson
Geoff	Hammond			Ray	Zatorski

The Roles of the Carnarvon Space Tracking Station (CRO) and the Carnarvon Earth Station (OTC)

CRO – establishment: conceived by NASA in 1961 as a replacement for the Muchea (Perth) station, surveyed '62, constructed in '63 at the *southern end* of Browns Range, and opened '64.

CRO – role: to provide critical support for the **Manned Spaceflight Network** (MSFN) missions of **Gemini** and **Apollo** which led to men walking on the moon from July '69 to December '72; followed by the **Skylab** missions.

CRO - other facilities: (1) The **Satellite and Tracking Data Acquisition Network** (STADAN) R&RR supported almost a hundred different satellites in a scientific analysis of the near space environment and the Earth's weather patterns and its land and marine resources; (2) The **FPQ-6** radar, the most accurate radar of its time, tracked everything that the US ever launched and included deep space missions, defence satellites, sounding rockets, water vapour clouds in space, balloons and wedge-tailed eagles for CSIRO research – and, it is rumoured, horses at the Carnarvon Races; and (3) The **Solar Particle Alert Network** (SPAN) observatory monitored solar flares, recorded 'signals' from the planet Jupiter, and reflected laser beams from the moon.

CRO – ground communications: At first only marginally reliable, **CRO** nearly missed its first mission (April '64) due to a lightning strike near Gascoyne Junction. PMG technicians worked frantically to improvise an alternative route along an obsolete section of a PMG pole-top phone line from Mullewa to Northampton, and then patched it through to the postmistress at Hamelin Pool. She gallantly read the data figures – for over two hours – down the line to the Carnarvon Telephone exchange. A troposcatter link to Geraldton was installed to increase ground communication reliability

(Continued on page 5)

Potted Biographies ctd.

(Continued from page 2)

In January 1974, he was selected to be Chief of the Astronaut Office, with responsibility for the coordination, scheduling, and control of activities of the astronauts. Young served as Chief of the Astronaut Office until May 1987.

From May 1987 to February 1996, Young served as Special Assistant to the Director of JSC for Engineering, Operations, and Safety. In that position, he had direct access to the Centre Director and other senior managers in defining and resolving issues affecting the continued safe operation of the Space Shuttle.

In February 1996 Young was assigned as Associate Director (Technical), responsible for technical, operational and safety oversight of all Agency Programs and activities assigned to the Johnson Space Center.

On December 31, 2004 Young retired from NASA. He will continue to advocate the development of the technologies that will allow us to live and work on the Moon and Mars. Those technologies over the long (or short) haul will save civilization on Earth.

Michael Collins graduated from West Point in 1952, flew fighters on peacetime assignment in Europe, and in 1961 became an Air Force test pilot. In 1963 he joined the National Aeronautics and Space Administration (NASA) and began training as an astronaut.

Collins orbited the Earth as pilot for the Gemini X mission (July 18-21, 1966), during which he completed two space walks.

In 1969 he joined Neil Armstrong and Buzz Aldrin as a member of the three-man crew of Apollo 11, the first manned mission to land on the moon. Collins circled the moon in the command module, Columbia, while Armstrong and Aldrin descended to the surface in the lunar module Eagle and then walked on the moon.

Collins completed two space flights, logging 266 hours in space—of which 1 hour and 27 minutes was spent in EVA.

Collins retired from NASA in 1970 and later became the first head of the Smithsonian Institution's National Air and Space Museum in Washington, D.C.

Biography content courtesy of N.A.S.A.

The Roles of the Carnarvon Space Tracking Station (CRO) and the Carnarvon Earth Station (OTC) — ctd.

(Continued from page 4)

but this only functioned well in cloudy weather – rare in the region.

NASA – communications upgrade: Requiring a much more reliable communications network for the critical support from **CRO**, **NASA** contracted **Intelsat** to launch three communications satellites. To link with these, **NASA** also contracted **OTC** to build an ‘earth station’ at Carnarvon at the ***northern end*** of Browns Range. This was opened in October ’66; a 12.6m Cassegrain horn antenna affectionately known as the ‘sugar scoop’.

Communications upgrade implemented: The communications satellites were launched by **Intelsat**. The first went adrift; the other two went into successful synchronous orbits, one over the Atlantic, the other over the Pacific. **OTC**’s role was solely the two-way relay of data and voice between **CRO** and the **US** via the Pacific satellite, apart from a starring part in the first Australian overseas live television broadcast – *Down Under Comes Up Live* - from Carnarvon to Goonhilly (England) on 24/25 November ’66, which took advantage of the failed satellite as it drifted over the Indian Ocean.

Increased demand: A need for improved communications for **Apollo** and a developing demand for commercial satellite communication from Perth led to the construction of **OTC 2** at Carnarvon in mid-1969, a 32m parabolic dish connected by coaxial cable to Perth. **OTC 1** was now released for maintenance and operations on the **Intelsat** network for tracking, telemetry, and command - monitoring the various communication satellites near Australia.

CRO closure: April 1975. Until that date, the **OTC** earth stations did not track **NASA** spacecraft nor did they receive signals directly from the moon. They merely acted as a relay station for **CRO**.

OTC continuation: Intelsat still needed **OTC** for commercial satellite communication. In addition, **OTC** was contracted to support the European Space Agency (**ESA**). It now had an additional role as a ‘space tracking station’ in the full sense, notably supporting:

The Galaxy communications satellite rescue shortly after launch – Sep ’84

A **NASA** shuttle recovery of the Palapa & Westar communications satellites – Nov ’84

The **ESA** Giotto rendezvous with Haley’s Comet when it was the prime deep space control centre – Mar ’86

OTC closure: In 1987 the Gnangarra Earth Station opened near Perth and the Carnarvon **OTC** stations were closed.

All Carnarvon stations, both **CRO** and **OTC**, were the victims of a communications revolution.

Paul Dench

To be released at a public dinner in Carnarvon June 20th — attended by Alison Gregg and Paul Dench .



LOS

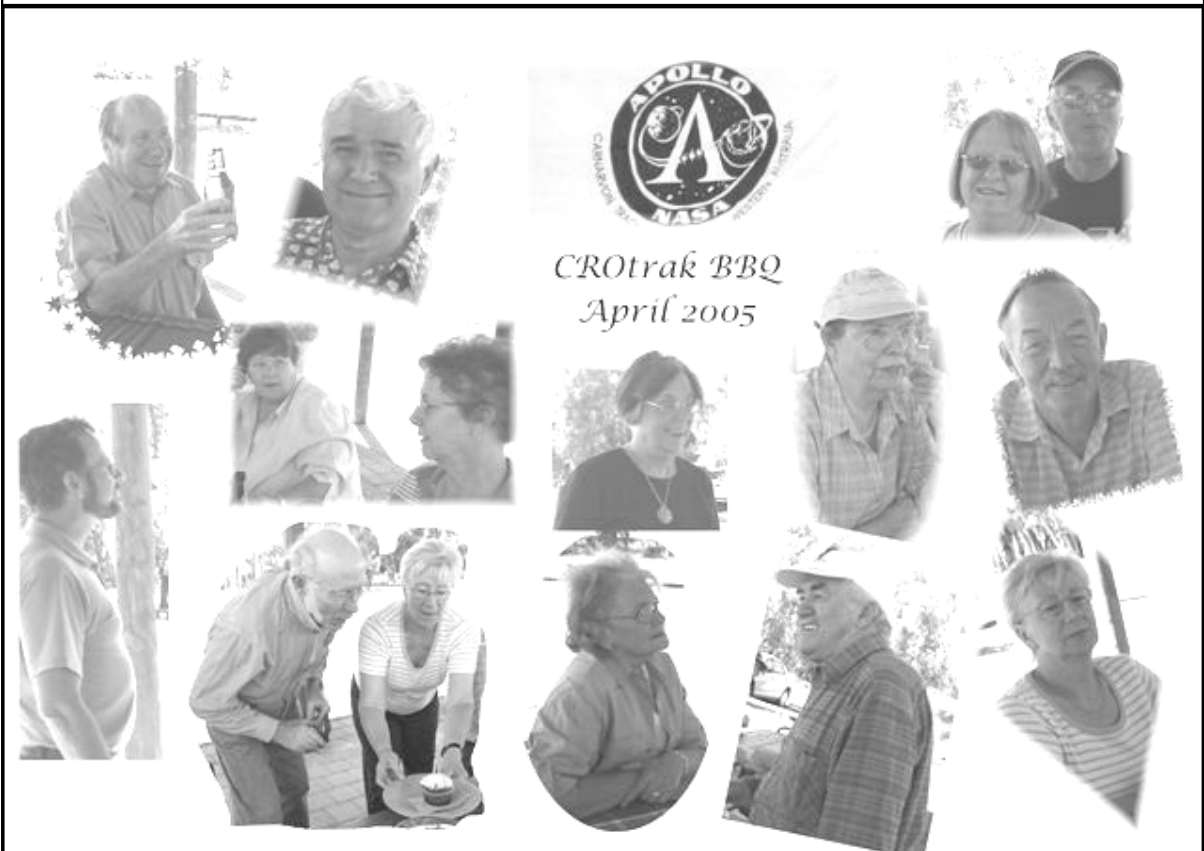
It is with much regret that I advise the passing, in March of this year, of Gyth Cross, our beloved courier and mother of Barbara Thompson, .

She was farewelled by family, friends, and ex-trackers at Karrakatta cemetery.

Inaugural Picnic

Reminiscing appeared to be the order of the day, restoring our flagging memories and

We look forward to even more participants next year.



Photographs and collage by Larraine Glocke (aka Teeny Bopper)

Request from Mick Coffey.

Hi all,
Shortly after June 3, 1965, my mother, then Isobelle Coffey, (now Isobelle Cochrane), had an article published in the Australian Women's Weekly entitled "I walked with Gemini IV"; with mum's name under the heading. We never saved a copy,

Cheers to all from sunny downtown
Carnarvon!

The End of an Era — Closure of the Carnarvon Club

The evening of the 15th March, 2005 was a very sad evening indeed for it saw the closing down of the Carnarvon Club, an establishment that has been going since 1912 and one that has withstood all the trials and tribulations of the township and its surrounds, two World Wars, floods, fires and social change.

In 1987, the Club celebrated its seventy fifth year by publishing a small booklet entitled “The Carnarvon Club Story 1912-1987” written by Jack Valli and printed by Gascoyne Printers. In the foreword to the book, Valli says “a glance through the Club register reveals that the majority of present members have joined within the last ten years (that would be 1977-1987), in fact only a handful of stalwarts were members on the occasion of its fiftieth birthday twenty-five years ago.

It is therefore difficult for many present members to visualise the concept of the Club in its earlier years. Not only were ladies “taboo”, except for the annual cocktail parties, membership was the zealously guarded preserve of a selected few. Entry was restricted to district pastoralist, bank managers, stock agents and professional men. Not until the sixties when members became weary of regular levies to main the liquidity of the Club did the prospect of opening up membership become a reality.

The arrival of personnel of the NASA tracking station was the catalyst for the move, and membership eventually climbed from less than one hundred to a record of over 800 a few years ago”

In 1987 membership was still 700 and the then Club committee believed it was set to rise even further. But that was not to be.

Over the years, the Carnarvon Club played host to numerous famous dignitaries including governors

and Prime Ministers. Charles Kingsford-Smith was a former member and according to Valli, several moon astronauts used the Club facilities during their briefing visits to the town. It became a focal point in the social life of the townspeople for many years.

After relaxing the entrance rules, membership almost doubled in 1964-5 with many of the Tracking Station staff joining. Bar takings leapt and the Club registered a net profit at last. The profits enabled the building to be extended and renovated. In 1970 the Club's membership had reached 321 members and the annual turnover was \$80,000.

The current membership is 51 members and sadly the finances are depleted which brought about the decision by the Committee and members on Sunday the 13th March 2005 to close the doors of the famous old establishment.

Changing social behaviour, the drink driving laws and the decreasing Carnarvon township population all combined to the falling away of the Club's membership, patronage and resultant financial decline.

The committee will care take and remain in the building until it is sold and will store the memorabilia until a suitable location can be found to house it.

The closure of the Club marks the end of an era.

An edited, and condensed, version of the story published in the *Carnarvon Community News*, March 18 2005.

As we go to print I understand that the Club land and building have been sold for around \$250,000.

Newsletter Subscriptions

**Please note that subscriptions for 2005-2006 are now due.
A renewal form is available on the back page of this newsletter.
Your prompt attention will ensure continuity and prevent
an increase in price.**

Thank you.

Keeping the Memory Alive

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Vol 3 September 2005

The Trackers

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we will cover anniversaries of missions that took place in the preceding months.

Vostok 2	August 6-7	1961
Vostok 3	August 11-	1962
Gemini V	August 21-29	1965

August marks the anniversary of three manned missions:

Vostok 2, call sign “*Eagle*” and crewed by Gherman Titov, achieved 17.5 orbits, despite Titov suffering from space-sickness in the first few orbits.

Vostok 3, call sign “*Falcon*” and crewed by Adrian Nikolayev, shared with Vostok 4 the first launch of what was to be the first double spaceflight.

Gordon Cooper and Charles “Pete” Conrad crewed Gemini V, the third manned Gemini flight, on a mission lasting eight days, the likely duration for a complete lunar mission. The mission, a space endurance record, was also a trial run for the fuel cell.

Terence (Terry) Kierans
Editor
CRO Trackers
PO Box 93
QUINNS ROCKS WA 6030

Gemini V

The primary objectives were to:

- Evaluate rendezvous Guidance and Navigation system with a Radar Evaluation Pod (REP).
- Demonstrate eight day capability of spacecraft and crew.
- Evaluate effects on weightlessness for eight day flight.

There was a number of secondary objectives, including:

- Demonstrate controlled reentry guidance.
- Evaluate fuel cell.
- Demonstrate all phases of guidance and control system operation needed for rendezvous.

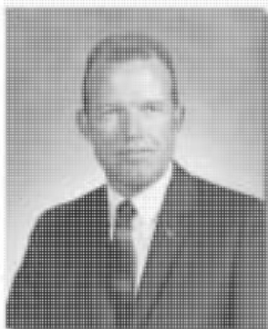


- Evaluate capability of both crewmen to manoeuvre spacecraft to rendezvous.
- Checkout rendezvous radar.
- Execute 17 experiments.

During the mission, problems developed with the fuel cell, leading to a decision to power down the fuel cells. This

precluded rendezvous with the REP.

One of the secondary objectives, to demonstrate controlled reentry guidance, was not achieved due to incorrect navigation coordinates having been transmitted to the spacecraft computer from the ground. This caused an 89-mile overshoot of the landing zone.



*Commander
Gordon Cooper*



*Pilot
Charles Conrad*

Colonel Cooper was selected as a Mercury astronaut in April 1959.

On May 15-16, 1963, he piloted the "Faith 7" spacecraft on a 22-orbit mission which concluded the operational phase of Project Mercury.

Cooper served as command pilot of the 8-day 120-revolution Gemini 5 mission which began on August 21, 1965. It was on this flight that he and pilot Charles Conrad established a new space endurance record by travelling a distance of 3,312,993 miles in an elapsed time of 190 hours and 56 minutes. Cooper also became the first man to make a second orbital flight and thus won for the United States the lead in man-hours in space by accumulating a total of 225 hours and 15 minutes.

He served as backup command pilot for Gemini

12 and as backup commander for Apollo X.

Colonel Cooper logged 222 hours in space.

He retired from the Air Force and NASA in 1970.

Gordon Cooper passed away on October 4, 2004, at his home in Ventura, California, at the age of 77.

Following graduation from Princeton University in 1953, Mr. Conrad entered the Navy and became a naval aviator. He then attended the Navy Test Pilot School at Patuxent River, Maryland, where he was assigned as a Project Test Pilot. Mr. Conrad also served as a flight instructor and performance engineer at the Test Pilot School. After completing his tour of duty at

(Continued on page 7)

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you Colleen Allen, Viv Batty, Paul Dench, Lesley Gilbert, Laraine Glocke, Tony Green, Barb King , Paul Linnane Jnr, Ena McAtee, Mike Marsh, Val and Trevor Mosel, Ian Shardlow, Joan Teraci, Barbara Thompson, Pauline Vinton and Stu Wattison for your inputs.

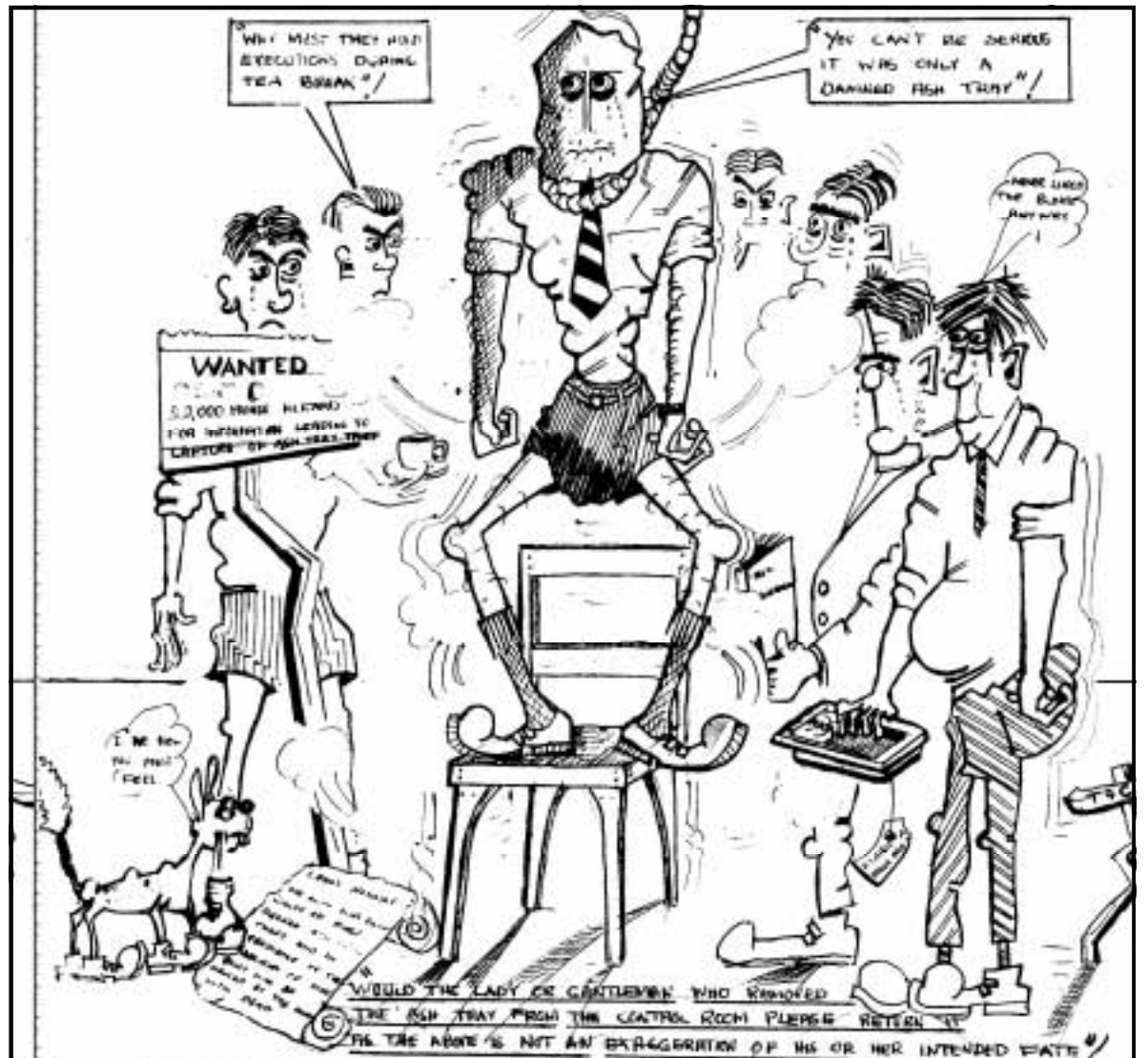
Ed.

Eric	Ainsworth	Ron	Harmes	Gerry	Plummer
Gay	Albon	Anne	Harvey	D	Powell
Geoff	Ball	Daphne	Hillier (Carlton)	M.J.K	Power
Matt	Barber	Stan	Hills	A	Rees
John (Allan)	Barber	Don	Holder	Frank	Rice
Keith	Barnard	Bill	Hore	Ted	Rosser
Deidre	Beaumont	Deidre	Howard	Lynne	Rosser
Elizabeth	Beckett	Jim	Keenan	Stewart	Sands
Michael	Billings	D	Kettlety	Ron	Sargeant
A	Biscaya	Joy	King	Russell	Schwarzer
Don	Blackman	M	King	Lorraine	Scott-Malcolm (Erlandshaw)
Bill	Boyle	Gloria	Klarie	Michael	Scott-Malcolm
Hans	Britz	Peter	Kloppenburg	John	Sharples
Charlie	Brown	Roy	Lester	P	Sims
Martin	Burgess	Don	Lindsay	Frank	Sloane
Basil	Byrne	Geoff	Linthorne	Roger	Smith
G	Carrick			P	Smith
Tom	Cates	Gloria	Lyon-Roberts	J	Smith
Ruth	Cates	John	Mahaffey	Bill	Smythe
Keith	Chant	Peter	Maine	Dave	Standbury
Brian	Clifford	Ian	McDonald	John	Stanton
Barbara	Cobcroft	S	McDonald	Alex	Stevenson
Vince	Constable	Frank	McGregor	John	Swanney
F	Dawes	Don	McLellan	Barbara	Teahan
Marilyn	Dick	Verica	Milanovich	Des	Terrill
Phil	Dickinson	Ray	Mills	Jack	Thompson
Neville	Dippell	Bill	Mills	Don	Thompson
John	Draper	Peter	Milne	Helen	Tondut (Smith)
John	Easterbrook	Marilyn	Milner (Gobby)	Mike	Travell
Dave	Elliot	Ian	Mitchell	Dave	Troup
J	Erickson	John	Monteith	Milton	Turner
Kerrie	Eyre	Dennis	Naylor	Jean	Walker
Ross	Eyre	Terry	Newman	A	Watermeyer
Les	Figg	Kel	Nickerson	Jack	Watson
M	Fort	John	Noble	Barbara	Wigley (Vernon)
Vic	Gadelvicius	Patsy	Nolan (Thompson)	Nora	Wilbourne
Jamie	Gardiner	Frank	Parkinson	Bernie	Wilbourne
L	Gardner	John	Parkinson	Roger	Williams
Kim	Gates	Mike	Pender	Ray	Zatorski
J	Gerschwitz	Don	Plumb		
Geoff	Hammond				

I have been given a fair bit of information concerning the possible whereabouts of a few of these, but as yet have not been able to follow up.

TK

The Missing Ashtray



This item was passed on to me from Barbara Thompson, who had acquired the cartoon original from her mother, Gyth Cross.

Unfortunately she does not have any detailed recollection of the circumstances surrounding the event which gave rise to the cartoon depicted here.

Unfortunately she does not have any detailed recollection of the circumstances surrounding the event which gave rise to the cartoon depicted here.

Needless to say, neither do I; I believe it must have happened before I arrived in the Spring of '65.

As we understand it, there was a set of engraved ashtrays in the Gemini control room. Some dastardly person removed one, thus causing the ire of one Lewis Wainwright.

What Are They Doing Now? ctd.

(Continued from page 5)

are in Maddington and I believe Lloyd is something to do with the security system at Burswood Casino. Miriam and I are in Rockingham.

We are sorry we missed the dinner; I see now after looking at the web site that it was here in Perth. Lost track of the Fosters and the Hendersons.

Star Trek and NASA

A space burial is planned for character actor James Doohan, best known as the peripatetic chief engineer Scotty in the original Star Trek series.

Doonan died July 20. His ashes will be among the remains of more than 150 people that Houston's Space Services plans to send into orbit this fall, the Houston Chronicle said.

Neil Armstrong attended his farewell party last August.

Courtesy www.startrek.com

...aside from Jimmy himself, no one stirred up as much excitement that night as Neil Armstrong, the first human to step onto the Moon, who made a rare public appearance to serve as keynote speaker. "This evening is really an honour for me," Armstrong began. "It reminds me that I am indeed remarkably fortunate. I have ridden on 13 different rocket engines, and had the privilege of commanding three different types of spacecraft, travelling as fast as 25,000 miles an hour. Candidly, and unfortunately, all of those were primitive — none of them had warp drive. The

Enterprise was about 100,000 times as fast as anything I ever flew. Our crafts did not even have the ability to leave our solar system. Lucky for those Klingons!

Not having a transporter was a significant disadvantage. The method we used to descend from orbit to the surface of an alien world, uhh, worked," the astronaut continued to the crowd's laughter, "but it would've been far more efficient and far less traumatic if we could just be beamed down. I'm hoping for my next command, to be given a Federation starship. When I get that command, I would like to have a crew like Captain James T. Kirk had: Spock, Chekov and Uhura, Dr. McCoy, Sulu, and the others we all remember.

Now, I have a confession to make. I am an engineer. And if I get that command, I want a Chief Engineering officer like—" he took on a Scottish lilt— "Montgomery Scott. Because I know Scotty will get the job done, and do it right. Even if I often hear him say, 'But Caepain, I dunna have enough time!' So from one old engineer to another, thanks Scotty."

What Are They Doing Now?

Harry and Miriam Dowson

I was initially employed as a storeman at the Tracking Station in about 1972 and ended up doing a bit of everything, including Security Guard, before leaving for Perth in 1975.

Like Ed Goldsmith, we were New Australians migrating from England in 1971 straight to Carnarvon. I worked for Terry Cahill for a while in the Mitre 10 store before getting a job with Peter Davison (Our friend from U.K. who sponsored us) in the stores. It was a wonderful adventure.

The people who were recruited for the Tracking

Station came from many and varied backgrounds and life was never dull. Most took an active part in the local community activities and I think left as lasting an impression on Carnarvon as Carnarvon did on them!

We lived on the Carnarvon Caravan Park and it's here that we made good friends with Colin and Carol Foster and Mike and Margie Henderson. There was Alf and Helen Tovey, Lloyd and Helen Reynolds, John and Hilary Coulson.

The Coulsons are still in Alice Springs, Peter Davison and Hazel are in Brisbane. The Toveys

(Continued on page 4)

Some Spaceflight Trivia Questions

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. What are the names of the original seven astronauts? 2. Which one of these seven, is the only one to have flown on all three spacecraft, Mercury, Gemini and Apollo? 3. Which one of these seven never went back into space after his Mercury flight until 1998? 4. Which one of these seven is the only one to have walked on the moon? 5. Which one of these seven never flew for 16 years? 6. Which of these seven was never offered a second flight? 7. Name the second group of nine astronauts chosen in 1962. 8. Which team of astronauts never flew again after their first Apollo mission? 9. From which Apollo spacecraft was the first television broadcast made. 10. Which astronaut asked, via television, "Are you a turtle?"? | <ol style="list-style-type: none"> 11. Describe the only photograph of Neil Armstrong on the moon. 12. Who controlled the Lunar Rover to view the lift-off from the lunar surface of the Lunar Module <i>Challenger</i>? 13. Where is <i>Columbia</i> housed? 14. Who was the oldest astronaut to walk on the moon? 15. ...and who was the youngest? 16. Which astronaut spent the most time in space during the Apollo missions? 17. Which astronaut was CapCom at Carnarvon Tracking Station for Gemini III? 18. Who was Carnarvon CapCom for Gemini IV? 19. Who was the CapCom at Houston when the <i>Eagle</i> landed"? 20. What was the essential difference between EASEP and ALSEP? |
|--|--|

Answers in the next issue, DV.

Stateline; and the Saga Continues

Once again we have been treated to a display of ignorance, this time by the ABC.

Many of us watched the broadcast in late June, and were horrified to say the least.

Here's an extract of a message I sent to the producer of the program:

"I never thought the day would come when an ABC program would succumb to the press journalist's mantra 'Never let facts get in the way of a good story'.

I and very many others, are disgusted and extremely disturbed at the extensive misreporting in your Stateline segment on Carnarvon last week.

Apart from Mr Wilson Tuckey's comments and the item on Australia's first live television broadcast from Carnarvon to Goonhilly, England on 24/25 November '66 which took advantage of a drifting satellite, the program was replete with misinformation.

You have unfortunately helped to perpetuate the erroneous belief that the OTC Carnarvon Earth Station was responsible for tracking NASA manned spaceflights. (After all, if it was on television it must be true.)

It is disgraceful that you used an OTC engineer as your source rather than a knowledgeable previous employee of the NASA Carnarvon Tracking Station. Without denigrating Mr Bateman's expertise in his professional field I find it difficult to understand how he could be a spokesman for the operation of the NASA Carnarvon Tracking Station...

...CRO closed in April 1975. At no time did the OTC 'earth stations' track a NASA spacecraft nor did they receive signals directly from the moon. They merely acted as relay stations for CRO.

(Continued on page 7)

Newsletter Subscriptions

**Please note that subscriptions for 2005-2006 are now overdue. I have received only 32, 60% down on last year. and regret that if more are not forthcoming then the newsletter will have to be put to rest. Those who have paid in advance will have their money refunded
Thank you.**

"Stateline" ctd.

(Continued from page 6)

Whilst consumers have redress through Consumer Affairs, it appears that their reach does not extend to misleading television viewers. Your reporter has done a grave disservice to the history of Carnarvon and Western Australia."

From Les Bateman:

"...sadly, despite my best efforts to explain the respective roles of NASA's CRO and OTC, the misconception has only been perpetuated, not dispelled."

And from the ABCproducer:

"Thank you for your valuable feedback.

We have checked the facts with sources used in the story and have found that you are correct.

I can assure you the journalist did her utmost to tell the story truthfully and it was NOT a case of "never let the facts get in the way of a good story" as you put it. The ABC is an organisation

of integrity and remains so. The journalist was however, relying on information from various talent in the story as well as the council's own "Conservation Plan Overview" which Stateline now understands contains errors.

Les Bateman is well known in Carnarvon as "the man to talk to" about the satellite dishes. Our journalist endeavoured (sic) to seek out a second person who had worked at the station but was unable to get any leads. It was the council that originally suggested we speak to Mr Bateman.

We have sought to amend the transcript on the web."

So despite efforts, particularly those of Paul Dench and Alison Gregg during their recent trip to Carnarvon to promote "The Book", we have been put behind the eight-ball in our attempts to gain the Carnarvon Tracking Station its rightful place in history.

Potted Biographies ctd.

(Continued from page 2)

Patuxent River, he served as instructor pilot in F4H Phantoms on VF-121 and was then assigned duty in VF-96 on board USS Ranger.

In September of 1962, Mr. Conrad was selected as an astronaut by NASA. His first flight was Gemini V, which established the space endurance record and placed the United States in the lead for man-hours in space.

As commander of Gemini XI, Mr. Conrad helped to set a world's altitude record. He then served as commander of Apollo XII, the second lunar landing. On Mr. Conrad's final mission,

he served as commander of Skylab II, the first United States Space Station.

In December 1973, after serving 20 years (11 of which were as an astronaut in the space program), Mr. Conrad retired from the U.S. Navy to accept a position as Vice President - Operations and Chief Operating Office of American Television and Communications Corporation (ATC).

Mr. Conrad died July 8, 1999 from injuries sustained in a motorcycle accident in Ojai, California.

Biography content courtesy of N.A.S.A.

Keeping the Memory Alive

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Vol 3 December 2005

THE TRACKERS

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we will cover anniversaries of missions that took place in the preceding months.

Mercury-Atlas 5	November 29	1961
Gemini XII	November 11– 15	1966
Apollo 4	November 9	1967
Apollo 12	November 14—24	1969

November marks the anniversary of one unmanned and three manned missions:

The Mercury-Atlas 5, had chimp Enos on board. He completed his first orbit in 1 hour and 28.5 minutes. Enos' flight was a full dress rehearsal for the next Mercury launch on February 20, 1962, which would make Lt. Colonel John Glenn the first American to orbit the Earth.

James Lovell and Buzz Aldrin crewed Gemini XII.

Apollo 4 was unmanned, During third orbit and after SPS engine burn, the spacecraft coasted to a simulated translunar trajectory, reaching an altitude of 18,079 kilometers.

Charles (Pete) Conrad, Richard Gordon and Alan Bean crewed Apollo 12 on its lunar landing mission

Terence (Terry) Kierans

Editor

CRO Trackers

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email:crotrak@virtualseervices.com.au

Gemini XII

Launched on November 11 1966, Gemini XII achieved 59 orbits at an altitude of 301.3kms. Splashdown was four days later, only 4.6km from target.

This flight operationally completed the Gemini program.

Mission Objective

Primary object was rendezvous and docking and to evaluate EVA. Secondary objective included: Tethered vehicle operation, perform 14 experiments, rendezvous and dock in 3rd revolution, demonstrate automatic re-entry, perform docked manoeuvres, practice docking, conduct system tests and to park the Gemini Agena target vehicle GATV-12 in a 555.6 km (300nm) orbit.



Mission Highlights

EVA time 5 hours, 30 min. All primary objectives and most secondary objectives were met. Docked manoeuvres were cancelled due to a propulsion anomaly during GATV insertion. The GATV was not placed in a 555.6km orbit because its attitude control gas was depleted by earlier

manoeuvres.

It has since been announced (November 4), "Thirty-nine years after its only trip to space, the Gemini XII will be restored over the next three months at the Kansas Cosmosphere and Space Center... Restoration officials said that despite some deterioration and corrosion, the Gemini was in good shape."



*Commander
James Lovell*



*Pilot
Buzz Aldrin*

Captain Lovell was selected as an Astronaut by NASA in September 1962. He served as backup pilot for the Gemini IV flight and backup Commander for the Gemini IX flight, as well as backup Commander to Neil Armstrong for the Apollo 11 lunar landing mission.

Lovell served as Command Module Pilot and Navigator on the epic six-day journey of Apollo 8 — man's maiden voyage to the moon — December 21-27, 1968.

He completed his fourth mission as Spacecraft Commander of the Apollo 13 flight, April 11-17, 1970, and became the first man to journey twice to the moon. Apollo 13 was programmed for ten days. However, the original flight plan was modified en route to the moon due to a failure of the Service Module cryogenic oxygen system.

Captain Lovell held the record for time in space with a total of 715 hours and 5 minutes until surpassed by the Skylab flights.

On March 1, 1973, Captain Lovell retired from the Navy and from the Space Program to join Bay-Houston Towing Company in Houston, Texas.

Colonel Edwin "Buzz" Aldrin was one of the third group of astronauts named by NASA in October 1963. Born Edwin Eugene Aldrin he later legally changed his name to "Buzz Aldrin".

On November 11, 1966, he and command pilot James Lovell were launched into space in the Gemini 12 spacecraft on a 4-day flight, which

(Continued on page 7)

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you Alison Gregg, Geoff Oldman and Bob Tompkins for your inputs.

Ed.

Eric	Ainsworth	Stan	Hills	M.J.K	Power
Gay	Albon	Don	Holder	A	Rees
Matt	Barber	Deidre	Howard	Frank	Rice
John (Allan)	Barber	Jim	Keenan	Ted	Rosser
Keith	Barnard	D	Kettlety	Lynne	Rosser
Deidre	Beaumont	Joy	King	Stewart	Sands
Elizabeth	Beckett	M	King	Ron	Sargeant
Michael	Billings	Gloria	Klarie	Russell	Schwarzer
A	Biscaya	Peter	Kloppenburger	Lorraine	Scott-Malcolm (Erlandshaw)
Don	Blackman	Roy	Lester	Michael	Scott-Malcolm
Bill	Boyle	Don	Lindsay	John	Sharples
Hans	Britz	Geoff	Linthorne	P	Sims
Charlie	Brown	Gloria	Lyon-Roberts	Frank	Sloane
Martin	Burgess	John	Mahaffey	Roger	Smith
Basil	Byrne	Peter	Maine	P	Smith
G	Carrick	Ian	McDonald	J	Smith
Brian	Clifford	S	McDonald	Bill	Smythe
Barbara	Cobcroft	Frank	McGregor	Dave	Standbury
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Phil	Dickinson	Ray	Mills	John	Swanney
Neville	Dippell	Bill	Mills	Barbara	Teahan
John	Draper	Peter	Milne	Des	Terrill
John	Easterbrook	Marilyn	Milner (Gobby)	Jack	Thompson
Dave	Elliot	Ian	Mitchell	Don	Thompson
J	Erickson	John	Monteith	Helen	Tondut (Smith)
Kerrie	Eyre	Dennis	Naylor	Mike	Travell
Ross	Eyre	Terry	Newman	Dave	Troup
Les	Figg	Kel	Nickerson	Milton	Turner
Vic	Gadelvicius	John	Noble	A	Watermeyer
Jamie	Gardiner	Patsy	Nolan (Thompson)	Jack	Watson
L	Gardner	Frank	Parkinson	Barbara	Wigley (Vernon)
Kim	Gates	John	Parkinson	Nora	Wilbourne
J	Gerschwitz	Mike	Pender	Bernie	Wilbourne
Geoff	Hammond	Don	Plumb	Roger	Williams
Ron	Harmes	Gerry	Plummer	Ray	Zatorski
Anne	Harvey	D	Powell		

I have been given some more information concerning the possible whereabouts of a few of these, but as yet have not been able to follow up.

TK

Vale — The Carnarvon Club



Photographs from the Northern Guardian courtesy Ray White™

Gone, but not forgotten.
I understand that the block will be re-developed to build a set of units.

Newsletter Subscriptions

I am more than pleased to report that subscriptions are only 10 short of the break-even point. Also, thanks to some generous donations, I can confirm that the newsletter will continue.

Thank you.

Answers to "Some Spaceflight Trivia Questions"

- | | |
|--|--|
| 1. Malcolm Scott Carpenter; Leroy Gordon Cooper; John Herschel Glenn; Virgil L Grissom; Walter M Schirra; Alan B Shepard and Donald K Slayton. | 9. Apollo 7. |
| 2. Walter "Wally" Schirra — Sigma 7 Mercury; Gemini VI and Apollo 7. | 10. Wally Schirra |
| 3. John Glenn — Mercury Atlas 6, 1962 and STS-95, 1998 | 11. His reflection in Buzz Aldrin's visor. |
| 4. Alan Shepard — Apollo 14. | 12. Ed Fendell. |
| 5. Donald "Deke" Slayton — Apollo-Soyuz Test Project, 1975. | 13. National Air and Space Museum, Washington DC, USA. |
| 6. Scott Carpenter. | 14. Alan Shepard — 47yrs 3 mths. |
| 7. Armstrong, Borman, Conrad, Lovell, McDivitt, See, Stafford, White, Young. | 15. Charlie Duke 36yrs 6 mths. |
| 8. The crew of Apollo 7, the first manned Apollo flight—Walter Schirra, Donn Eisele, and Walter Cunningham. | 16. Eugene Cernan — 20 days, 13 hrs, 54 mins. |
| | 17. Pete Conrad. |
| | 18. Ed Fendell. |
| | 19. Charlie Duke. |
| | 20. EASEP (Apollo 11) was solar powered, ALSEP used a Radioisotope Thermoelectric Generator (RTG). |

From the Yeti

I read with a huge amount of interest the article in the Dec 2003 issue, by Alan Gilham, titled Carnarvon Revisited.

Alan, Leo Overington and I (and wives and small children) all arrived in Perth on the same flight, and all drove up the long road to Carnarvon at about the same time. Alan did not appear to like Carnarvon and could not wait to get away, so after the required two years he was off. So it surprised me to read his article, but the part I am most intrigued about is the Carnarvon Tracking Station plaque.

I will put in a bit of background info here. In New Zealand I have a friend I met about 12 years ago who owns a factory which manufactures vanity tops and the cabinets to put them on, and over the years I have designed and built the electrical side of vacuum formers — machines that use heat to soften the acrylic sheet then form it into the vanity top under vacuum. We made two machines between us which we sold to Australian companies, one in Sydney and one in Queanbeyan. The owner of the Queanbeyan machine was so wrapt in it that after a couple of years he wanted us to put a second operating station on it, so in January 2002 we went to Queanbeyan for two weeks to do the work.

While I was there my old brain eventually remembered that there was a tracking station at Tidbinbilla and that people had lived in Queanbeyan

and worked at the station, so I asked the factory owner there if he would take us out to look at the station one time. So with grumbles from both Trevor (my Kiwi friend) and Joe (the owner of the factory in Queanbeyan) — what on earth do you want to go and look at that for? — off we went after work one Saturday morning. It is quite a drive to get to the station from Queanbeyan so I was quite glad after doing it just once that I had finished going to Carnarvon!!!

When we got there the other two were very surprised at what they saw, totally impressed with the huge 210ft (I think) dish just outside the Moon Rock Café, and very interested in everything else. On the way to the café from the car park I was some way ahead of them and I suddenly let out a great whoop, and yelled out, "Come and look at this", so they rushed up to see what was up. It was the Carnarvon Tracking Station plaque I had come to, and it made me quite emotional.

So-o-o-o, I would very much like to know how it got there from Alan finding it at Carnarvon. It was interesting at Tidbinbilla but I was a bit disappointed that we could not wander about — visitors are confined to the car park and café only, unless by special arrangement. When we got back to work I rang the station up to find out if anyone who had worked at Carnarvon worked there, but the people in the office knew of no-one.

LOS ~ Richard "Dick" Simons — 1924-2005

Dick was one of the first CRO Trackers, arriving in October 1963 fresh from the UK with his wife Janet and two children, David and Anne. He was appointed as the second PCM engineer but soon took over the Operations Supervisor (M&O) role from Wes Oke, CSR, who found the dual role of station management and operations too much to handle.

A stickler for promptness and protocol, Dick was a very exacting Ops Sup; just what the irreverent Aussies and new Poms needed, though he suffered many jibes and pranks as a consequence. Who can forget the

'Phantom Phuffer' teasing and Dick's impatient, "Chop, chop"?

Eventually he felt the need to refresh his engineering skills at R&RR from mid-1967 but then transferred to Orroral Valley in May 1968 as its Operations Supervisor, a role with which he was evidently more comfortable.

Dick was also a stalwart in the renaissance of the Carnarvon Repertory Club where he played several memorable roles and directed several plays.

Paul Dench

Something to Ponder

Dear Terry,

Thanks for your efforts at keeping the CROnicle going. I'm just digesting the on-going efforts at getting the correct site recognized as the original tracking station.

As far as having the Tracking Station remembered for future generations, I wonder what you think of this crazy idea... *A model of the entire NASA station and OTC to scale; built by interested Trackers and OTC exes Australia-wide.*

A big ask? But not insurmountable. Let me elaborate.

After canvassing interest thru The CROnicle, we could proceed thus:

By means of suitable scaling down, the land area of both stations is divided into parts that fit comfortably in the corner of a room of a person's home. Each interested party receives a contoured map of his area of interest. He and his group purchases a piece of say 8ft x 4ft x 18mm form-ply; builds up his land surface, builds his buildings (minus all the asbestos {sick joke}) and the roads etc. to the scale previously agreed upon.

O.T.C. exes could invite their own people to do likewise; they must have some sort of association of exes going... and then we combine the two units further down the track. In the event that there is deemed to be too much bush between the two stations, thus taking up too much room, then we could close up the gap using a conspicuous separator.

At the end of the construction period (say 12 months?) each enthused modeller sends his portion to the chosen place. There the various pieces are butted together, individual buildings are labelled, and Carnarvon Tracking Station and OTC are fine-tuned to perfection. The local shire has been granted megabucks recently to re-furbish the OTC to a tourist facility so there may be a bit of room for the model there,

By the use of email, digital photography and computer imaging I reckon a central co-ordinator would see that the project comes together smoothly at minimal cost.

A scale is something I haven't thought about much, but if there are a number of Ford Transit vans around of the matchbox or dinky variety, then that may be a good starting point.

Anyhow that's the vision. Having been aged but 18 in 1969 when I joined the ranks on Brown Range, I've got some "youthful" energy to do my fair share. If money's an issue I reckon that the Carnarvon Shire and/or Gascoyne Development Commission will be inclined to chip in with some of the readies on call.

Well, having just re-read this tome, I can see that this looks a fair bit daunting. What do u think Terry? If it looks like a load of old cobblers, then just bin it.

CHEERS MATE.

Regards,

Mick Coffey

A great concept. Let me have your comments folks — email message or snail mail.
Editor

The Saga—Daylight at the End of the Tunnel?

With the advent of a new manager at the Carnarvon Tourist Bureau, Mrs Gael Palmer, I sent her the following email message:

"On viewing the website at <http://www.west-oz.com/Regions/gascoyne/carnarvon/carnarvon.asp> I note that there are two glaring errors relating to the NASA Tracking Station.

Promoting the old OTC dish as being used by NASA as a tracking station is totally and demonstrably untrue and is providing false information to visitors.

I request that the two relevant paragraphs are corrected."

On this occasion I received a response:

*"Hello Terry,
Thank you for going to the trouble to contact us. If NASA did not build the dish who did?"*

Paul Dench followed up by sending her further information and suggested corrections.

Her reply:

"Hi, sorry, I didn't quite understand. I have contacted the author of the web site and will get the changes made.

Thank you again for contacting us."

I also sent her, with Paul's permission, his definitive document on the differences, which was published in a previous issue of the CROnicle.

This elicited the response:

*"Thank you Terence,
I have tried to make contact with the author of the*

site, no reply as yet. When I receive an email from them, I will certainly get your attachment to them and ask them to make the corrections.

Thank you very much for providing the correct information. Would you mind if we use the document as a hand out to those visitors who show interest? Is there anything else we can obtain for distribution? There are many people interested as you can imagine."

I replied in the affirmative, and have since compiled a brochure for her to print and publish.

At the time I also corresponded with the General Manager of West-Oz Web Services, who responded:

"Hi Terence,

I very much appreciate updates from the public especially when they are from the relevant fields, as such a trusted information source it would be unwise of me to not correct any wrong information, so I thank you for your time.

The new information is now displayed on the page."

Another piece of good news. The new Carnarvon Shire Council CEO, who will be taking office in the New Year, is a cousin of an ex-tracker! I understand he is keenly interested in history — so the odds are now good that the museum area, when completed, will represent fact, not fiction, as we had feared.

For those with internet access:

<http://www.west-oz.com/Regions/gascoyne/carnarvon/carnarvon.asp>

Potted Biographies ctd.

(Continued from page 2)

brought the Gemini program to a successful close. Aldrin established a new record for extravehicular activity (EVA), spending 5-1/2 hours outside the spacecraft.

He served as lunar module pilot for Apollo 11, July 16-24, 1969, the first manned lunar landing mission. Aldrin followed Neil Armstrong onto the lunar surface on July 20, 1969, completing a 2-hour and 15 minute lunar EVA.

In July 1971, Aldrin resigned from NASA. Aldrin had logged 289 hours and 53 minutes in space, of which, 7 hours and 52 minutes were

spent in EVA.

Bart Sibrel, a conspiracy theorist who believes that NASA faked the moon landing, confronted retired astronaut Buzz Aldrin on September 9, 2002. "You're a coward", he exclaimed, "and a liar..."

At that point, Aldrin (age 72) landed a spirited punch to Sibrel's jaw.

The Los Angeles County District Attorney's office declined to file charges.

Biography content courtesy of N.A.S.A.

Keeping the Memory Alive



FPQ-6 RADAR
CARNARVON TRACKING
STATION, W.A.

*A very merry Christmas
and
a healthy and prosperous New Year
to you and your families
from the editor*

If undelivered, return to:

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PO Box 93, Quinns Rocks, WA 6030



Vol 3 March 2006

The Trackers

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we cover anniversaries of missions that took place in the preceding months.

Mercury-Atlas 6 February 20 1962

February marks the anniversary of one manned mission, the very first American manned orbital flight — Friendship 7.

John Glenn's mission lasted 4hrs 55 mins 23 secs.

Fellow astronaut Gordon Cooper was the CapCom at Mucnea for this historical event.

Paul Dench was interviewed recently by local radio station 6PR. The producer and the interviewer had obviously done their homework for a change.

Paul gave a very clear explanation of the difference between the Carnarvon OTC Earth Station and the Space Tracking Station

For those of you with internet access you can listen, or download, at a temporary website:

<http://tinyurl.com/j2zn2>

Reunion days are here again — a picnic in Perth and a function in Canberra. See page 7 for details.

Terence (Terry) Kierans
Editor

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email:crotrak@virtualservices.com.au

Mercury-Atlas 6 aka Friendship 7

February 20, 1962, saw the launch of the first American astronaut to orbit the earth.

After several holds, including one of two minutes at T-6m 30s to make a check of the network computer at Bermuda, the capsule was launched to complete three orbits.



Mission objective

Place a man into earth orbit; observe his reactions to the space environment; and safely return him to earth to a point where he could be readily found. The Mercury flight plan during the first orbit was to maintain optimum spacecraft attitude for radar tracking and communication checks.

Mission Highlights:

First American in orbit.

Total time weightless 4 hours 48min 27sec.

During the flight only two major problems were

encountered:

(1) A yaw attitude control jet apparently clogged at the end of the first orbit, forcing the astronaut to abandon the automatic control system for the manual-electrical fly-by-wire system; and

(2) A faulty switch in the heat shield circuit indicated that the clamp holding the shield had been prematurely released — a signal later found to be false. During re-entry, however, the retropack was not jettisoned but retained as a safety measure to hold the heat shield in place in the event it had loosened.

(Reference NASA SP-4001 - Project Mercury: A Chronology)

(Reference NASA - Results of the First US Manned Orbital Space Flight)

(Reference NASA SP-4201 - This New Ocean)



Glenn was assigned to the NASA Space Task Group at Langley Research Center, Hampton, Virginia, in April 1959 after his selection as a Project Mercury Astronaut.

The Space Task Group was moved to Houston and became part of the NASA Manned Spacecraft Center in 1962.

Glenn flew on Mercury-6 (February 20, 1962) and STS-95 (October 29 to November 7, 1998), and has logged over 218 hours in space.

Prior to his first flight, Glenn had served as backup pilot for Astronauts Shepard and Grissom.

When astronauts were given special assignments to ensure pilot input into the design and development of spacecraft, Glenn specialized in cockpit layout and control functioning, including some of the early designs for the Apollo Project.

Glenn resigned from the Manned Spacecraft Center on January 16, 1964. He was promoted to the rank of Colonel in October 1964 and retired from the Marine Corps on January 1, 1965.

He was a business executive from 1965 until his election to the United States Senate in November 1974.

Glenn retired from the U.S. Senate in January 1999.

Biography content courtesy of N.A.S.A.

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you Paul Dench, Barb King, Alison Gregg and Lorraine Sartori for your inputs.

Ed.

Eric	Ainsworth	Daphne	Hillier (Carlton)	D	Powell
Gay	Albon	Stan	Hills	M.J.K	Power
Bill	Arbery	Don	Holder	A	Rees
Matt	Barber	Deidre	Howard	Frank	Rice
John (Allan)	Barber	B	Hughes	Ted	Rosser
Keith	Barnard	B	Hunter	Lynne	Rosser
Deidre	Beaumont	Jim	Keenan	Stewart	Sands
Elizabeth	Beckett	D	Kettlety	Ron	Sargeant
Michael	Billings	Joy	King	Russell	Schwarzer
A	Biscaya	M	King	Lorraine	Scott-Malcolm (Erlandshaw)
Don	Blackman	Gloria	Klarie	Michael	Scott-Malcolm
Bill	Boyle	Peter	Kloppenburg	John	Sharples
Hans	Britz	Roy	Lester	P	Sims
Charlie	Brown	Don	Lindsay	Frank	Sloane
J	Burdett	Gloria	Lyon-Roberts	J	Smith
Martin	Burgess	John	Mahaffey	Mike	Smith
Basil	Byrne	Peter	Maine	P	Smith
G	Carrick	Ian	McDonald	Roger	Smith
Brian	Clifford	S	McDonald	Bill	Smythe
Barbara	Cobcroft	Frank	McGregor	Dave	Standbury
F	Dawes	Don	McLellan	John	Stanton
Marilyn	Dick	Verica	Milanovich	Alex	Stevenson
Phil	Dickinson	Ray	Mills	John	Swanney
Neville	Dippell	Bill	Mills	Barbara	Teahan
John	Draper	Peter	Milne	Des	Terrill
John	Easterbrook	Marilyn	Milner (Gobby)	Alan	Thomas
Dave	Elliot	Ian	Mitchell	Jack	Thompson
J	Erickson	John	Monteith	Don	Thompson
Kerrie	Eyre	Dennis	Naylor	Mike	Travell
Ross	Eyre	Terry	Newman	Dave	Troup
Les	Figg	Kel	Nickerson	Milton	Turner
W	Frost	John	Noble	A	Watermeyer
Vic	Gadelvicius	Patsy	Nolan (Thompson)	Jack	Watson
Jamie	Gardiner	Frank	Parkinson	Barbara	Wigley (Vernon)
L	Gardner	John	Parkinson	Nora	Wilbourne
Kim	Gates	Mike	Pender	Bernie	Wilbourne
J	Gerschwitz	Wendy	Petersen	Roger	Williams
Geoff	Hammond	Don	Plumb	Ray	Zatorski
Ron	Harmes	Gerry	Plummer		
Anne	Harvey				

I have been given some more information concerning the possible whereabouts of a few of these, but as yet have not been successful in following up.

TK

A Blast from the Past

Courtesy Trevor Mosel

Page 1.

AMALGAMATED WIRELESS (AUSTRA LASIA LIMITED)

CARNARVON GUIDE

This guide has been prepared from information collected locally in Carnarvon and Perth for the specific purpose of providing important details of living conditions affecting company employees and their families planning to take up residence in Carnarvon.

For ease of reference the items considered have been covered and listed under the following headings:-

1. General - Location - Population - Industries
2. Climate - Winds - Flood - Temperature - Rainfall - Humidity
3. Shopping - Postal - Banking facilities
4. Cost of living
5. Hospital - Medical - Dental Facilities
6. Fire Fighting
7. Education
8. Religion
9. Transport
10. Amenities
11. Income Tax Concessions
12. Accommodation
13. Removal and Transfer Expenses
14. Details of Tracking Station

GENERAL

Carnarvon (114 E, 24 S. approx) is located at the mouth of the river Gascoyne in the Shire of Gascoyne and Minilya. This is about 610 miles North by road (sic) from Perth, the capital city of Western Australia (Population 3905000). Carnarvon itself has a population of about 3,500 with its own Mayor and Town Council.

Due to its isolated position, (the nearest large town is Geraldton 295 miles by road due South) Carnarvon has created a full self contained character and is unusually well endowed with recreational and sporting facilities relative to the size of its population.

It is particularly favoured by its climate, which Carnarvonites claim, shares with Southern California the reputation of "the Best in the World". It is therefore not surprising to find it a popular holiday resort for Perth residents during the winter months.

The main industries are agriculture, whaling and fishing, it is also the supply depot for the inland homesteads along the Gascoyne river. The Gascoyne river area is particularly fertile and is the centre of banana and vegetable plantations.

To be continued

Lunar Communication TV System

Lunar Communication/TV System



Photograph courtesy NASA

The photograph shows the RCA communications systems that rode the lunar rover as it travelled across the moon's surface during the Apollo 17 mission.

The colour TV camera worked in conjunction with the television control unit to enable NASA controllers in Houston to operate the camera remotely.

The Lunar Communications Relay Unit (LCRU) was a portable mini-broadcast station that allowed the Astronauts to maintain voice contact with earth and to transmit telemetry and TV signals from the moon.

The high gain antenna was 96.5cms in diameter, used a mesh design, and could be opened and folded a number of times.

The camera, LCRU and antenna were designed by RCA divisions in Princeton, Camden and Moorestown, N.J., respectively.

Editor's note: If I remember rightly, the remote operator was our old friend, turtle, and simulation terrorist, Ed Fendell. Apparently known in the Canaries as "Captain Video".



Book Review—of a sort

I have not long finished reading "Two Sides of the Moon", purportedly by Alexei Leonov and David Scott.

Pages 127 and 128 of the book contained the following interesting statements from David Scott (the emphasis is mine):

"...Being capcom on Gemini 4 would take me to Carnarvon, western Australia, where one of a series of worldwide remote tracking stations was located. **A team of two dozen or so permanent Australian staff ran the Carnarvon station;** we would be there to represent NASA..."

"...After Gemini 4's mission was over I spent a few days in Australia relaxing. Carnarvon was a great place, little more than a fishing village, really, **with just one hotel.** We spent most of our time out at the tracking station, which was at the end of a dirt road in poor, dry land, with the Australian 'trackies'. At the end of our trip we were invited to spend our last weekend at a sheep station - shearing sheep and eating kangaroo..."

Apart from that it was a good read, but in my opinion didn't match Andrew Chaikin's "A Man on the Moon" for depth of insight into personal characters.

NASA Aims for Moon by 2018

The centrepiece of NASA's return to the moon is a new spacecraft, dubbed the Crew Exploration Vehicle (CEV).

The CEV is designed to carry four astronauts to the moon for stays of up to seven days — until a moon base allows for longer.

The spacecraft can be piloted remotely. It can also be configured to ferry cargo loads and crews to the International Space Station and may eventually carry up to six astronauts to Mars.

NASA did not establish a timetable for missions to Mars in the announcement.

The CEV will be shaped like the capsules used during NASA's Apollo program but will be three times as large.

"Think of it as Apollo on steroids," NASA administrator Michael Griffin said at a press briefing as he unveiled plans for the CEV, according to the Associated Press.

On its return trip, the CEV will be able to parachute to dry land or water, though land



is preferable. With proper heat shield replacements, the craft will be able to be reused up to ten times.

The new lunar landing module will be delivered into Earth's orbit by a

separate rocket. The CEV, after separating from its own rocket, will attach itself to the lunar lander before heading to the moon.

If this rocket looks like a blast from the past, you're partly right. The new design borrows heavily from the Apollo program, which carried out lunar missions from 1968 to 1972.

In place of a reusable shuttle, rocket boosters will carry an Apollo-style crew capsule (the white cone at the top of the craft) into orbit. Once in space, the capsule will rendezvous with a lunar landing module launched by a separate cargo rocket.

NASA's new goal is to have astronauts back on the moon by 2020. The agency has scheduled unmanned missions between 2008 and 2011 to map out landing sites and to find a spot for a permanent moon base.

Courtesy National Geographic News

LOS

It is with sadness that we report the passing of Viv Batty's close friend and colleague Vic Mankelow on January 3rd.

In his time at R&RR Vic worked closely with Dick Simons on the Biosat Project.

Vic is survived by his wife Bridgida, their two children and seven grand children; all living in Adelaide.

Message of Sympathy

Our sincerest condolences to Wendy Wise (née Wilkinson) on the sad loss, due to accidental death, of her son Rowan, January 2006.

Picnic Day

The Perth Chapter of the CRO Trackers will be holding their second annual picnic/barbeque at Whitemans Park, Mussel Pool, some 20 kms and 25 minutes from the Perth CBD.

Date: Sunday April 9 2006

Time: Kick off 11 am

BYO: Everything

Look out for the banner



Honeysuckle Creek—2006 Reunion

Go to <http://www.pcug.org.au/~jsaxon/space/hsk/Reunions/2006/2006.htm>
For the full details and news of the special visitor

Date: Thursday 16th March

When: 11:30 am start

Till: 3 pm or so

Where: The Orion Room at the [Canberra Southern Cross Club](#) - Woden. Ample parking is available for members and Guests (you may have to drive down a level or two). Enter the car park off Corinna Street.

Food & Drink: Will be a Buffet lunch. We will have water and orange juice on the tables, but other drinks will be available at your cost.

If any attendee has particular **dietary needs**, please let me know with your RSVP. The club can provide Gluten Free, Diabetic, Nut & Nut oil free, and "religious and lifestyle choices" - presumably that includes vegetarian.

Cost and Payment methods:

Sadly these things seem to increase every year & this year is no exception. \$40 per person should cover everything. You can pay via one of the following methods.

1. Mail a cheque or cash to me at
John Saxon
2 Mauldon St,
Chifley, ACT 2606
Please make cheques out to me :-), or
2. Transfer funds from your bank to my
Credit Union account at:
Credit Union of Canberra,
A/C Name: Saxon
BSB: 801-009
Account Number: 1023979

If you use this method **you must** include your name in the **Comment field**, and it's probably worth dropping me an Email to confirm - I won't normally reply (unless you request one), or unless there is a problem.....

Once the account has reached a comfortable level I will book our tickets to Rio....

I would like to collect the money in advance if possible. But if all else fails I can collect cash on the day!

RSVP: Please remember to RSVP with names of attendees to me at jsaxon@pcug.org.au or via mail to the address above - it would be nice to get these as soon as possible.

Keeping the Memory Alive

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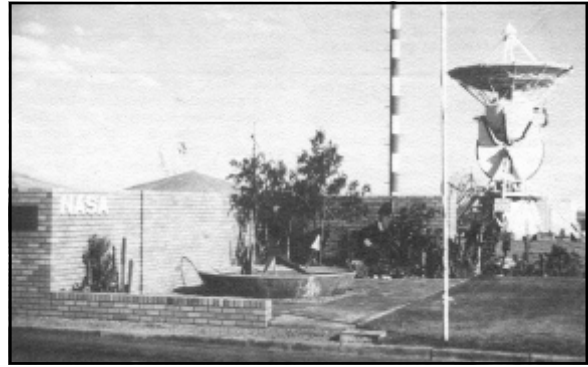
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Vol 3 June 2006

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we cover anniversaries of missions that took place in the preceding months.

Mercury-Redstone 3	May 5	1961
Mercury-Atlas 7	May 24	1962
Mercury-Atlas 9	May 15	1963
Apollo 10	May 18—26	1969
Skylab 1	May 14	1973

Mercury-Redstone 3. The Mercury capsule was named Freedom 7 and performed a suborbital flight, piloted by astronaut Alan Shepard, the first American person in space.

Mercury-Atlas 7. Piloted by Scott Carpenter this mission confirmed the success of Mercury-Atlas 6 by duplicating the flight.

Mercury-Atlas 9. Last and longest Mercury flight. Gordon Cooper was the last human to go into space alone.

Apollo 10, the fourth manned Apollo mission, is the key mission for this issue.

Skylab 1 was launched into orbit by a Saturn V booster. Almost immediately, technical problems developed due to vibrations during lift-off. A critical meteoroid shield ripped off taking one of the craft's two solar panels with it; a piece of the shield wrapped around the other panel keeping it from deploying.

NASA engineers, in an intensive 10-day period, developed procedures and trained the crew of Skylab 2 to make the workshop habitable.

Terence (Terry) Kierans
Editor

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QUINNS ROCKS WA 6030

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Apollo X

The Apollo X mission was the dress rehearsal for the lunar landings.

This mission was the tenth in a series of flights using Apollo-specification hardware; the first lunar flight of the complete spacecraft; the fourth manned flight of the command and service modules, and the second manned flight of the lunar module.

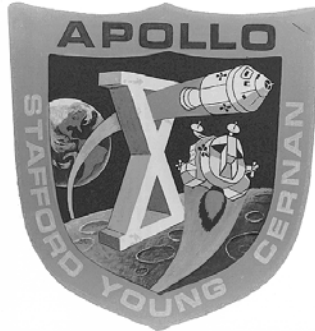
The major activity for this mission was the simulated lunar landing with the lunar module.

However, the lunar module was an early design that could not be used for a landing: it was too heavy to return to orbit from the lunar surface.

The mission took eight days. All systems in the command and service modules and the lunar module were managed very well. Some problems were encountered, most were minor and none constrained the completion of mission objectives.

Lunar Module Activation

The checkout proceeded smoothly and was completed in about two hours. The lunar module appeared to be in the same condition as observed during closeout activity before launch. Transfer of stowage items and the required housekeeping procedures were performed. The transfer from command module to lunar module power was completed without incident.



A landmark tracking training exercise was also performed during the checkout period.

Lunar Module Operations

The lunar module testing phase of the mission lasted over six hours and involved a number of operations:

- undocking and separation of the lunar module,
- communications and radar

checks,

- firing of the descent engine and moving to within eight miles of the lunar surface,
- checking the landing radar over one of the selected landings sites,
- modifying the orbit in preparation for the return to the command module,
- staging the lunar module to simulate an ascent from the lunar surface, and
- performing rendezvous with the command service module.

Landmark Tracking

Planned for the final day in lunar orbit, this activity required close coordination between the commander, command module pilot, and the network.

All detailed test objectives were satisfied with the exception of the lunar module steerable antenna and relay modes for voice and telemetry communications.



*Eugene Cernan
LM Pilot*



*Thomas Stafford
Commander*



*John Young
CM Pilot*

Potted biographies on page 5

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A thank you to Sue Gordon for her input.

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					(Erlandshaw)
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Martin	Burgess	Peter	Maine	Mike	Smith
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G	Carrick	S	McDonald	Roger	Smith
Brian	Clifford	Frank	McGregor	Bill	Smythe
Barbara	Cobcroft	Don	McLellan	Dave	Standbury
F	Dawes	Verica	Milanovich	John	Stanton
Marilyn	Dick	Ray	Mills	Alex	Stevenson
Phil	Dickinson	Bill	Mills	John	Swanney
Neville	Dippell	Peter	Milne	Barbara	Teahan
John	Draper	Marilyn	Milner (Gobby)	Des	Terrill
John	Easterbrook	Ian	Mitchell	Alan	Thomas
Dave	Elliot	John	Monteith	Jack	Thompson
J	Erickson	Dennis	Naylor	Don	Thompson
Kerrie	Eyre	Terry	Newman	Mike	Travell
Ross	Eyre	Kel	Nickerson	Dave	Troup
Les	Figg	John	Noble	Milton	Turner
W	Frost	Patsy	Nolan (Thompson)	A	Watermeyer
Vic	Gadelvicius	Frank	Parkinson	Jack	Watson
Jamie	Gardiner	John	Parkinson	Barbara	Wigley (Vernon)
L	Gardner	Mike	Pender	Nora	Wilbourne
Kim	Gates	Wendy	Petersen	Bernie	Wilbourne
J	Gerschwitz	Don	Plumb	Roger	Williams
Geoff	Hammond	Gerry	Plummer	Ray	Zatorski
Ron	Harmes				

I have been given some more information concerning the possible whereabouts of a few of these, but as yet have not been successful in following up.

TK

A Blast from the Past

Courtesy Trevor Mosel

Page 2.

A first class bitumen highway connects Carnarvon with Geraldton and Perth through an area which is well known for its richness in wild flowers. MacRobertson Miller Airlines operate six scheduled flights per week between Perth and Carnarvon.

2. CLIMATE

2.1. Winds and Floods

Although Carnarvon is situated on the southern extremity of the Timor Sea Cyclone area, it is normally free from cyclones- Cyclonic winds of 50 to 60 mph. (maximum of 110 mph. recorded in 1961), will strike the township causing damage to the plantations about once every seven years.

The Gascoyne river, which normally appears as sand flats of 200 to 300 yards wide flanked by trees on either bank, will flow about twice a year due to high rainfalls inland. Once every two years due to unusually high rainfalls further up, the river will break its banks, isolating the township for a few days from Geraldton. The floods however are restricted to the low lying land surrounding Carnarvon and do not effect the town itself.

2.2. Temperature

July is the coldest month with an average minimum temperature of 51°F and a lowest recorded temperature of 37°F.

February appears to be the hottest month with an average mean temperature of 88°F. The temperature will exceed 100°F for no more than about 14 days per annum, invariably cooling off during the night under the influence of a cool sea breeze.

2.3. Rainfall

The wet season is from January to August. The annual rainfall is about 9 inches per annum. The total number of wet days per year is about 35.

2.4 Humidity

In January the humidity is about 70 to 80% with a large day to night variation.

In July the humidity varies between 30 and 60%

3. SHOPPING POSTAL and BANKING FACILITIES

Carnarvon has an unusually extensive shopping centre for the size of the town.

There are three (3) well stocked department stores, a frock shop, chemist, Ladies Hairdresser, Barber, Betting Shop. All fresh foods are in plentiful supply.

The Post Office provides full postal services, including a telephone and telegram service.

The two (2) banks, A.N.Z. and the Commonwealth Bank, provide full Trading and Savings Bank facilities.

To be continued

Apollo X Crew

Thomas Stafford was born on September 17, 1930, in Weatherford, Oklahoma. He received a bachelor of science degree from the U.S. Naval Academy (1952) and was chosen with the second group of astronauts in 1962.

He was back-up pilot for *Gemini 3*; pilot for *Gemini 6*; command pilot for *Gemini 9* upon the death of a primary crew member; back-up commander for *Apollo 7*; commander of *Apollo 10*, and commander of the Apollo-Soyuz Test Project.

He resigned from NASA in November 1975.

John W. Young was born on September 24, 1930, in San Francisco, California. He received a bachelor of science degree in aeronautical engineering from the Georgia Institute of Technology in 1952. He was chosen with the second group of astronauts in 1962.

He was pilot of *Gemini 3*; back-up pilot for *Gemini 6*; command pilot on *Gemini 10*; back-up command module pilot for *Apollo 7*; command module pilot for *Apollo 10*, and back-up commander for *Apollo 13*. As

a member of the Apollo 16 crew, he became the ninth man to walk on the Moon.

Following this mission, he was back-up commander for Apollo 17, and flew on STS-1 and STS-9.

Eugene A. Cernan was born on March 14, 1934, in Chicago, Illinois. He received a bachelor of science degree in electrical engineering from Purdue University in 1956 and a master of science degree in aeronautical engineering from the U.S. Naval Postgraduate School in 1961. He was chosen in the third group of astronauts in 1963.

He was the pilot of *Gemini 9*; back-up pilot for *Gemini 12*; back-up lunar module pilot for *Apollo 7*; lunar module pilot on *Apollo 10*, and back-up commander for *Apollo 14*. He was the eleventh man to walk on the Moon. Later, he was the deputy director of the Apollo-Soyuz Test Project.

He resigned from NASA and the Navy in July 1976.

Biographies courtesy
Lunar and Planetary Institute



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For Your Diary

Max Garth will be giving a talk, accompanied by a graphics display, on the *Carnarvon Space Tracking Station* at the Yanchep Community Centre.

9am — 20th June 2006

How about providing a show of support for this venture—another step in educating the citizens of WA on an important stage in the history of their State.

“Gold” coin and other donations to help defray equipment expenses will be appreciated.

Subscription Renewal

I hate this bit!

Subscription renewals for this newsletter are at an all time low.

2005-2006 was 25% down on 2004-2005.

So far, 2006-2007 is 45% down on 2005-2006.

In simpler terms we have gone from 92 subscribers to, currently, 39.

Is there something wrong with the format of the CROnicle?

It is only due to the generosity of several ex-trackers (and one in particular) that funds have been available for me to continue publishing.

Plans included a website, but that will have to go on hold until more subscriptions are forthcoming.

My time is a donation— in gratitude for having been involved in world history, the history of my home State, and the history of my first home in WA—Carnarvon.

What Are They Doing Now?

John Preece

I arrived at CRO in June 1968 as a Wire Tech working with the late Paul Linnane, John Harmsen and Ian Squire in the Wire room, across the hall from Computers.

I lived in the single person's units at the rear of the Port Hotel while at CRO. Initially there was no unit available so I was assigned a room in the Hotel proper. One of the positives of at staying at the Port is that it is where I met Ann, who worked at the hotel, and later became my wife after we left Carnarvon.

After the Apollo 13 mission Ann and I left CRO in June 1970. While in Carnarvon I had become actively involved in the town's Volunteer Fire Brigade, creating an interest in fire-fighting which lead me to join the Dept of Civil Aviation at Perth Airport as an Airport Fire-fighter.

I remained with Airport Rescue & Fire Service until 1986 until the new International Terminal

was opened in October '86 when I transferred to the new International Terminal Control Centre as an Operator, remaining in that position until appointed a Terminal Duty Manager of the International Terminal now known as Terminal 1, a position currently hold.

Last September Ann and I travelled to CRO, the first time in over 20 years. Along with others, totally disappointed at the lack of recognition of CRO and it's part in Australian space history either at the site or in or around the town.

Taking the opportunity to have a look at the site I was accosted by a technician responsible for maintenance of the TV transmitter built on the SPAN site. He pointed out it was private property. When I explained that I had worked at CRO 68-70 he asked if I had time to shown him around the site and tell him what was where. It took a while to recognise the concrete slabs. We both enjoyed that short time, especially for me as the memories flooded back.

~ LOS ~

It is with sadness that we report the passing of Col McAtee and Bob Tompkins.

I didn't have the privilege of knowing Col all that well, but Bob was a very dear and loyal friend.

Bob was a man of strong convictions and beliefs: he remained independent up until he suffered a major stroke, from which he never recovered consciousness.

His lasting passion was maritime history. He will be sorely missed by his colleagues in that arena , and by his friends.

TK

Picnic Day

As usual, when our “extended family” gets together, a great time is had by all.

Numbers down a bit, and unfortunately our photographer of last year was unable to attend.

Of course there was much reminiscing, and Paul Dench, with notebook in hand, was full of questions — the answers to which will fill in gaps in **the** book
Hope to see more Perth trackers next year.

How We Nearly Missed Out

Courtesy Paul Dench

Minister for Industrial Development
PERTH

Western Australia

28th February, 1968

CONFIDENTIAL

HON. PREMIER:

I have received some confidential information I am trying to confirm that the Commonwealth Department of Supply is studying the N.A.S.A Installation at Carnarvon to see whether they will restrict, or in fact even withdraw, their operations from Carnarvon.

I gather they are disturbed at the lack of housing for any expansion and the difficulties that are being experienced by the local authority and others in getting them any firm housing promises.

If my information is correct, there is considerable pressure to have this type of installation developed mainly in the Eastern States where there are more associated support facilities.

I gather that some of the technical reasons why they sought isolation in the past are less important than they used to be. I suppose this is only natural with the technical developments that are taking place these days. Nevertheless, it is disturbing. I hope by Friday night to have further confidential information which could indicate how real this possible contraction or withdrawal is. In the meantime, I think that we have to accept that any expansion is most unlikely because of the fact that we cannot assist with their housing needs.

We have endeavoured to have these needs met by the Department of Supply and the N.A.S.A. But they are quite emphatic they cannot get funds themselves from their normal quarters and have to rely on assistance, either from the Carnarvon Shire Council along the lines of the former pro-posal whereby the Council is able to provide housing, or from the State Government.

I had to make it clear that we cannot; see any prospect of making houses available.

I think the Treasury are aware of the circumstances surrounding the refusal to authorise the Shire Council to raise any more money for housing. I gather they are quite at the limit so far as their permitted borrowing capacity is concerned.

In the meantime, I thought I should let you know because of the current uncertainty that has prompted the discussions that I hope to have late Friday with a view to obtaining additional information. A copy of this minute has gone to the Hon. Minister for housing for his information.

[Signed C. Court]

MINISTER FOR INDUSTRIAL DEVELOPMENT AND THE NORTH WEST.

Keeping the Memory Alive

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Vol 4 September 2006

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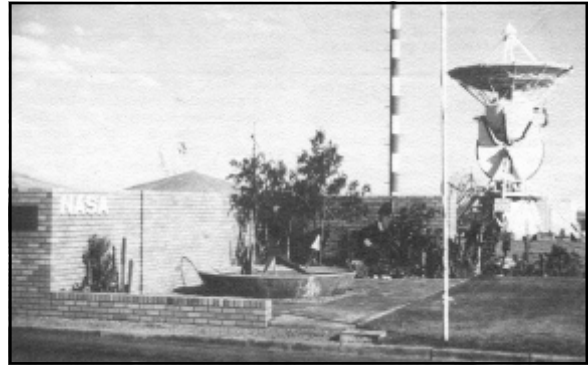
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Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. Now, in Volume 4, we start to catch up on those yet to be covered.

So our key mission this issue will be Apollo 12, launched in November 1969 and manned by the late Pete Conrad, Dick Gordon and Alan Bean.

I stated in the last issue that Gordon Cooper was the last human to go into space alone. I am pleased to accept Hamish Lindsay's correction. He was the last American to go into space alone.

Hamish said, "*Valentina Tereshkova was later, although I admit she was accompanied by a fellow space traveller in another spacecraft, but you can't argue with Vladimir Komarov, launched on 23 April 1967 to be the first to die in space, and Georgi Beregovoi launched on 26 October 1968.*"

Thank you Hamish—I should have double checked in your book.

To celebrate the generosity of some of our subscribers, and the extended life of the Trackers CRONicle, this month's newsletter will be a larger issue — 12 pages instead of eight. How's that for value for money?

Terence (Terry) Kierans
Editor

CRO Trackers
PO Box 93

QUINNS ROCKS WA 6030

email: crotrak@virtualservices.com.au

Apollo XII

The Apollo 12 mission was the first opportunity in the scientific exploration of the Moon to sample extensively the rocks within half a kilometer of the landing site.

Command Module Pilot Richard Gordon Jr. remained in lunar orbit as the Apollo 12 Lunar Module landed on the northwest rim of the Surveyor Crater in the Ocean of Storms.

The landing site was at 23 degrees 4 minutes west longitude and 3 degrees 2 minutes south latitude, approximately 120 kilometers (75 miles) southeast of Lansberg Crater and due north of the center of Mare Cognitum. The landing site is near a ray associated with the Copernicus Crater, which is approximately 370 kilometers (230 miles) to the north, and is characterized by a distinctive cluster of craters ranging from 50 to 400 meters in diameter.

During two moon walks totaling 7 hours and 45 minutes, the astronauts collected lunar soil and additional surface samples along a geologic traverse. Commander Charles Conrad Jr. and Lunar Module Pilot Alan Bean obtained material from the bottom of a shallow trench and brought back several items from the Surveyor 3 spacecraft. The astronauts caught some of the solar wind in an aluminum foil, and they took photographs of the lunar surface



and crew activities with 70-mm Hasselblad cameras and a close-up stereoscopic camera.

On landing day, November 19, 1969, Pete Conrad and Al Bean were in fine spirits. At launch from Earth, they'd had a scare when lightning struck the ascending Saturn V and tripped virtually all the circuit breakers in the Command Module. It was

a heart-stopping experience for people on the ground; but the crew stayed calm, the Saturn V kept them going toward orbit, and, in a matter of minutes, they had everything back on line. There was no permanent damage; and the flight to the Moon and the preparations for the descent were otherwise unremarkable. As pitchover approached, Conrad strained forward against his harness, trying to get a view of the horizon. He'd caught glimpses of the Moon's central highlands as he and Bean swooped down, feet first, toward the Ocean of Storms, and as they got closer, he couldn't wait to find his target.

"I'm trying to cheat and look out there," he said. "I think I see my crater."

He wasn't absolutely sure but, seconds later, at pitchover, there was no doubt. "Hey, there it is! There it is! Son-of-a-gun! Right down the middle of the road!"

Courtesy NASA



*Alan Bean
LM Pilot*



*Pete Conrad
Commander*



*Dick Gordon
CM Pilot*

Potted biographies on page 5

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you to those whose contributions have added just that bit more.

Ed.

Eric	Ainsworth	Ron	Harmes	D	Powell
Gay	Albon	Anne	Harvey	M.J.K	Power
Bill	Arbery	Deidre	Howard	A	Rees
Matt	Barber	B	Hughes	Frank	Rice
John (Allan)	Barber	B	Hunter	Ted	Rosser
Keith	Barnard	Jim	Keenan	Lynne	Rosser
Deidre	Beaumont	D	Kettlety	Stewart	Sands
Elizabeth	Beckett	Joy	King	Ron	Sargeant
Michael	Billings	M	King	Russell	Schwarzer
A	Biscaya	Gloria	Klarie	Lorraine	Scott-Malcolm (Erlandshaw)
Don	Blackman	Peter	Kloppenburg	Michael	Scott-Malcolm
Bill	Boyle	Gloria	Lyon-Roberts	John	Sharples
Hans	Britz	John	Mahaffey	P	Sims
Charlie	Brown	Peter	Maine	Frank	Sloane
J	Burdett	Ian	McDonald	J	Smith
Martin	Burgess	S	McDonald	Mike	Smith
Basil	Byrne	Frank	McGregor	P	Smith
G	Carrick	Don	McLellan	Roger	Smith
Brian	Clifford	Verica	Milanovich	Bill	Smythe
Barbara	Cobcroft	Ray	Mills	Dave	Standbury
F	Dawes	Bill	Mills	John	Stanton
Marilyn	Dick	Peter	Milne	Alex	Stevenson
Phil	Dickinson	Marilyn	Milner (Gobby)	John	Swanney
Neville	Dippell	Ian	Mitchell	Barbara	Teahan
John	Draper	John	Monteith	Des	Terrill
John	Easterbrook	Dennis	Naylor	Alan	Thomas
Dave	Elliot	Terry	Newman	Jack	Thompson
J	Erickson	Ellie	Nicholls?	Don	Thompson
Kerrie	Eyre	Kel	Nickerson	Mike	Travell
Ross	Eyre	John	Noble	Dave	Troup
Les	Figg	Patsy	Nolan (Thompson)	Milton	Turner
W	Frost	Frank	Parkinson	A	Watermeyer
Vic	Gadelvicius	John	Parkinson	Jack	Watson
Jamie	Gardiner	Alan	Paterson	Barbara	Wigley (Vernon)
L	Gardner	Mike	Pender	Roger	Williams
Kim	Gates	Wendy	Petersen	Ray	Zatorski
J	Gerschwitz	Don	Plumb		
Geoff	Hammond	Gerry	Plummer		

I have been given some more information concerning the possible whereabouts of a few of these, but as yet have not been successful in obtaining, or confirming, details.

TK

A Blast from the Past

Courtesy Trevor Mosel

Page 3.

4. COST OF LIVING

4.1 Eggs and vegetables are produced locally and are available at prices generally lower than in Sydney or Melbourne. Fruit also is in ample supply at prices favourable comparing with those in the city.

4.2. Groceries and milk are a little dearer than in Sydney or Melbourne

4.3. Meat is available either from local or imported sources at prices similar or slightly lower than in Sydney or Melbourne.

4.4. Soft drinks are made locally and are cheaper than in the city, with beer prices being slightly higher.

4.5. The domestic rate for electricity is 1/- per kWH, with special rates 6d.

4.6. Gas - only butane bottled gas is available.

4.7. Water - water rates amount to about £30 p.a. for a three bedroom house.

4.8. Sewer - Septic sewerage is universally used as the ground consists mainly of sandy soil.

5. MEDICAL AND DENTAL FACILITIES. The Carnarvon facilities include:

5.1. One modern hospital complete with Ambulance service.

5.2. Two Doctors

5.3. One Dentist

5.4. One Chemist

5.5. A baby health centre.

6. FIRE FIGHTING

The fire fighting service is organized on a volunteer basis and is equipped with one ex DCA fire engine.

Bush fire hazards are very low as most of the vegetation is scrub type.

7. EDUCATION

7.1. Kindergarten - Private

7.2, Primary School - State

- Catholic (Private)

7.3. Secondary School - State

- Catholic (Private)

Both teach up to full Junior Certificate (Equivalent to Intermediate in N.S.W. level) Subjects: Maths I and II, Science I and II, English, French, Geography, History and Typing.

To be continued

Apollo XII Crew

Charles (Pete) Conrad was born June 2, 1930, in Philadelphia, Pennsylvania. He died July 8, 1999, from injuries sustained in a motorcycle accident in Ojai, California. According to some reports his death was due to medical negligence.

Following graduation from Princeton University in 1953, Pete Conrad entered the Navy and became a naval aviator. In September of 1962, Pete Conrad was selected as an astronaut by NASA. His first flight was Gemini V, which established the space endurance record and placed the United States in the lead for man-hours in space.

As commander of Gemini XI, he helped to set a world's altitude record. He then served as commander of Apollo XII, the second lunar landing.

On Pete Conrad's final mission, he served as commander of Skylab II, the first United States Space Station.

He was awarded the Congressional Space Medal of Honor (October 1978); two NASA Distinguished Service Medals, and two NASA Exceptional Service Medals

In December 1973, after serving 20 years (11 of which were as an astronaut in the space program), he retired from the U.S. Navy.

In 1990, he became Staff Vice President - New Business for McDonnell Douglas Space Company, where he participated in research and development for the Space Exploration Initiative. Included for research and development in the Space Exploration Initiative are the construction of Space Station Freedom, the return to and colonization of the Moon, and the exploration of Mars. He contributed his expertise on SSTO, the Single-Stage-To-Orbit and return space transportation system called the Delta Clipper. In 1993, he

became Vice President -Project Development.

Pete Conrad will also be long remembered by early trackers as being CapCom at Carnarvon for Gemini III.

He was much loved by his fellow astronauts. This is what Alan Bean had to say, "*Pete Conrad was the best man I ever knew. He treated me like a brother and I loved him like a brother. As the centuries unfold, the Pete Conrads of the future will return to the Moon, will walk on Mars, and explore all the other worldly places where we humans dream and dare to go. The world was a better place because Charles 'Pete' Conrad walked among us*".

Alan Bean was born in Wheeler, Texas, on March 15, 1932. He was a Navy ROTC Student at Texas, and was commissioned upon graduation in 1955. After completing flight training, he was assigned to a jet attack squadron in Jacksonville, Florida. After a four-year tour of duty, he attended the Navy Test Pilot School, then flew as a test pilot on several types of naval aircraft.

Alan Bean was one of the third group of astronauts named by NASA in October 1963. He served as backup astronaut for the Gemini 10 and Apollo 9 missions. He went on to become the lunar module pilot on Apollo XII, man's second lunar landing.

He was spacecraft commander of Skylab Mission II (SL-3), July 29 to September 25, 1973. With him on the 59-day, 24,400,000 mile world record setting flight were scientist-astronaut Dr. Owen K. Garriott and Marine Corps Lieutenant Colonel Jack R. Lousma. Mission II accomplished 150% of its pre-mission forecast goals.

(Continued on page 7)

Miscellanea

Lockheed Martin wins NASA contract

NASA has awarded a multi-billion dollar contract to a group led by Lockheed Martin to design and build the next generation of manned spacecraft.

The craft - called Orion - is intended to carry astronauts on missions into orbit to the Moon and beyond.

NASA's associate administrator Scott Horowitz says the new range of spaceships marks the beginning of a new chapter in space exploration.

"Space is no longer going to be a destination that we visit briefly," he said.

Remember the days of
the timesheet?

AMALGAMATED WIRELESS (AUSTRALASIA) LTD. — FIELD PROJECTS								PAID W/E	
INC. N.S.W.									
NAME _____		CLASSIFICATION _____						Sick Leave _____ Hrs.	
								Paid Leave _____ Hrs.	
								Pub. Holiday _____ Hrs.	
O.R.D.								@	Wk.
O.T.								@	Hr.
D.T.								@	Hr.
Remarks — Adjustments, Etc.								Sfr. Hrs. Sat.	@ %
								Sfr. Hrs. Sun.	@ %
Hrs. Wkd.	Mon.	Tue.	Wed.	Thur.	Fri.	Sat.	Sun.	Day Sft.	@ %
O.T. or Sft.								Anoon Sft.	@ %
Cd. Fed.								Night Em.	@ %
Ond. or								Shift	@ %
Sft. Hrs.								Inducement	
O.T. Hrs.								Station Allowance	
								Deductions	GROSS
								Income Tax	
								Superannuation	
								M.B.F.	
								Provident Fund	
								Rent/Board and Lodgings	
								Hire Purchase	
Supr. Daily Check									
Shift Worked		Employee Sign		Checked—Supervisor		Approved—Stadr			
Battered Shift									
Fluctuating Shift									
Continuous Shift									
Day Worker									
								NET EARNINGS	
								Bank	

Donated by Trevor Mosel

From the *Northern Guardian*, October 2003

METAL fabricator Mick Coffey and his sons have designed the system they hope will pull the lifeboat into shape.

Carnarvon Heritage Group is putting the Kormoran lifeboat through a process to stabilize deterioration and prepare the vessel for placement in an HMAS Sydney display...

Mick and Aaron Coffey designed the overhead jig that kept the boat together for transport and will reshape the hull.

... and from the Grants and Projects Officer, Shire of Carnarvon:

"Just wanted to let you know we have received the Certificate of the Registration of a Business Name for the Western Australian Space Museum Carnarvon."

Apollo XII Crew ctd.

(Continued from page 5)

On his next assignment, Alan Bean was backup spacecraft commander of the United States flight crew for the joint American-Russian Apollo-Soyuz Test Project.

He has logged 1,671 hours and 45 minutes in space—of which 10 hours and 26 minutes were spent in EVAs on the moon and in earth orbit. He helped establish 11 world records in space and astronautics and was awarded two NASA distinguished Service Medals.

He resigned from NASA in June 1981 to devote his full time to painting. He said his decision was based on the fact that, in his 18 years as an astronaut, he was fortunate enough to visit worlds and see sights no artist's eye, past or present, has ever viewed firsthand and he hopes to express these experiences through the medium of art. He is pursuing this dream at his home and studio in Houston.

For a different perspective visit <http://www.alanbeangallery.com/>.

Richard (Dick) Gordon was born October 5, 1929, in Seattle, Washington.

Dick Gordon, a Navy Captain, received his wings as a naval aviator in 1953. He then attended All-Weather Flight School and jet transitional training and was subsequently assigned to an all-weather fighter squadron at the Naval Air Station at Jacksonville, Florida.

He was one of the third group of astronauts named by NASA in October 1963. He served as backup pilot for the Gemini 8 flight.

On September 12, 1966, he served as pilot for the 3-day Gemini XI mission—on which rendezvous with an Agena was achieved in less than one orbit. He executed docking maneuvers with the

previously launched Agena and performed two periods of extravehicular activity which included attaching a tether to the Agena and retrieving a nuclear emulsion experiment package.

Other highlights accomplished by Gordon and command pilot Charles Conrad on this flight included the successful completion of the first tethered station-keeping exercise, establishment of a new altitude record of 850 miles, and completion of the first fully automatic controlled reentry. The flight was concluded on September 15, 1966, with the spacecraft landing in the Atlantic—2 1/2 miles from the prime recovery ship USS GUAM.

Dick Gordon was subsequently assigned as backup command pilot for Apollo 9, and went on to occupy the command module pilot seat on Apollo XII. He served as backup spacecraft commander for Apollo 15.

Dick Gordon completed two space flights, logging a total of 315 hours and 53 minutes in space—2 hours and 44 minutes of which were spent in EVA.

Apart from achieving two FAI records he was awarded the NASA Distinguished Service Medal and the NASA Exceptional Service Medal.

Dick Gordon retired from NASA and the USN in January 1972.

In March 1982 he became President of Astro Sciences Corporation. This company provides a range of services including engineering, project management, project field support teams, to software and hardware system design for control room applications. In the Summer of 1984, Gordon was a Technical Advisor for, and played the part of "Capcom" in, the CBS mini-series 'Space' by James A. Michener.

Material courtesy NASA

The Missing Plaque Mystery Solved

Turns out it wasn't really missing after all! It all depended on which plaque we were looking for.



It started out trying to establish how the Tidbinbilla Space Museum got hold of the CRO foundation plaque, and ended up finding that there were two plaques presented at the closing ceremony.



The plaque that ended up at Tidbinbilla is the one that was affixed to the wall adjacent to the fountain. It was presented to Col Smith for AWA. When AWA finally folded he passed it on to Bob Leslie in Canberra. From him it went to Tidbinbilla.

At a later point in the ceremony, the original plaque from the T&C building was presented to the then Shire President. It had been mounted in a frame with a smaller

dedication plaque beneath it..



The photograph of the then Shire Clerk, Alan Taylor, and Shire President Gordon Meiklejohn is the proof of the pudding.

But wait there's more!



This plaque is currently affixed to a wall in the Shire Council chambers—surrounded by sundry minor trophies. Advice as to its location and the associated photograph have been furnished, thanks to the Shire CEO Graham Wilks.

A plea has been made that when suitable housing is available at the museum, the plaque is moved there.

All of this has come to light as a result of some gentle blackmail by Paul Dench, to whom I am indebted for much of this material.

One Small Step Day

On July 21st this year I sent an email message to all of those for whom I have an email address. In essence it asked them what they were doing on that day in 1969.

Here are the responses:

Probably making breakfast for the STADAN gang!!
L Dorras

Thanks for reminding me, not too good on dates at the moment.
Wendy Lorraine

Wire room at CRO, being a part of history.
John Preece

Just to let you know I am receiving your emails. However they often are included with my business emails which are copious as a result I am sorry to say they don't get replied to. On this day I would most probably been on watch at the FPQ6.
Geoff Linthorne

i went down to usb to watch the guys walkin on the moon (in green) on a cro that somebody had set up., then i went to the gassy and got pi##@d.
Mick Coffey

Good one, Terry - thanks
Alison Gregg

I was a lecturer at the Telecom Technicians Training School, Lord St East Perth. As planned I put our home TV into the boot of the MG Magnette and took it to work. Set it up in the classroom, and knocked the class off for the half day and watched the direct broadcast.
John Lambie

Same as you were, Terry in the Acq Aids and VHF Command
"Jeff" Chandler

Since its Friday 21st I was probably asleep at this time or stuck onto a set of Demods in USB. Yesterday at this time I was probably doing the same thing. If you want a closer match, probably arguing with Kloppenberg.
Max Garth

Yep, I remembered the day, always do as it's a friends birthday. Happy landings day.
Jannette Radford

I remember where you were, but where was I? What's my name again....?
Ian Shardlow

Well, I was actually working for UNIVAC in Sydney. I left CRO in March 1969 because I'd had an offer to join UNIVAC and I also believed that the bottom would fall out of the space business as soon as man set foot on the moon.

Even though I was not there on the day, I still have the pleasure of knowing that I was a member of the world-wide team that landed man on the moon and brought him back again safely.

Joining UNIVAC was a good career move, I suppose, but I've always felt that my five years at CRO were the best, most enjoyable and most productive years of my working life.

I still maintain contact with Fran Stetina (and, indirectly through him with people like Emil Kirwan and Irv Salsberg) whom I met in CRO and, although he is retired from NASA, he now acts as a consultant to NASA and had a most enjoyable career. So, the space business was really good for a lot of us and I'm grateful that you go to the trouble of keeping the memory alive.
Trevor Housley

Sitting at the USB Servo Console for a lot of it!
Geoff Broom (The Yeti)

Sitting in the control center, getting ready to attempt to do something that I did not think we would do on Apollo 11, and ultimately levitating above my chair as we landed on the moon.
Ed Fendell

If the memory holds true I was driving a USB Demod, disbursing Apollo 11 data to PCM TLM and Recorders - in long stints between short sleeps! Glad you are having a happy anniversary.
John Fletcher

Never mind what was happening Up There, we were getting ready to get married down here. And also on this auspicious day Keith has finally retired from the full time work force. Help!
Jean Chant

Funny, ha ha. I really can't remember. Awesome, wasn't it. Thanks for the reminder
Paul Dench

~ LOS ~

Ray Jacomb, CRO Station Director - November 1968 to late 1973

Ray took over as Station Director just before the Apollo missions started. He directed the station's growth from a staff of 160 to 210 for Skylab and helped the station to increase its quality of performance, to face increasingly tight budgets, retrenchments, and the announcement of its ultimate closure – an epic period.

Ray was a gentleman of always moderate language. John Fletcher, called into Ray's office for organising support for a pass during a stop-work meeting, remembers Ray saying "I am most cross" and that he would be "even more cross" if it didn't stop immediately.

He loyally presented the Department of Supply line on all occasions but in confidential memoranda fought furiously to retain the station. My research on CRO's history in the Department's files revealed memo after memo demonstrating why CRO should be retained rather than Orrorral Valley. And when the Department asserted it could no longer tolerate further decreases in the level of competency in technical staff, he accused them of tailoring fact to suit the occasion pointing out that reduced staffing was their deliberate policy to minimise redundancies. I have no doubt that the combination of Ray's 'silent' arguments and the Shire's more public protests led to the Minister's successful plea to NASA to soften the rundown of the station.

Ray's ill health resulted in a premature departure from the station and a return to England after a stint in Canberra. I thank him for his work at CRO and his assistance with my research. Carnarvon was always high in his memories.

Paul Dench

It is with much sadness that we report the passing of Dot Tonkin.

Dot, while not an employee of the Tracking Station, was renowned as the "housemother" at "Criddle Quarters", No. 2 Johnson Street.

In September 1967 her guests included Frank McRae, Facilities; Stuart Sands, Computers; Roger Kilworth, Computers; Norm Pitt, Logistics; and Trevor Mosel., Range and Range Rate. It is reported by one of the tenants that "it was good country style living, Sunday roasts and all the other home comforts. No curfews or other restrictions existed".

Our condolences to Col Death, her loving partner.

Trevor Mosel

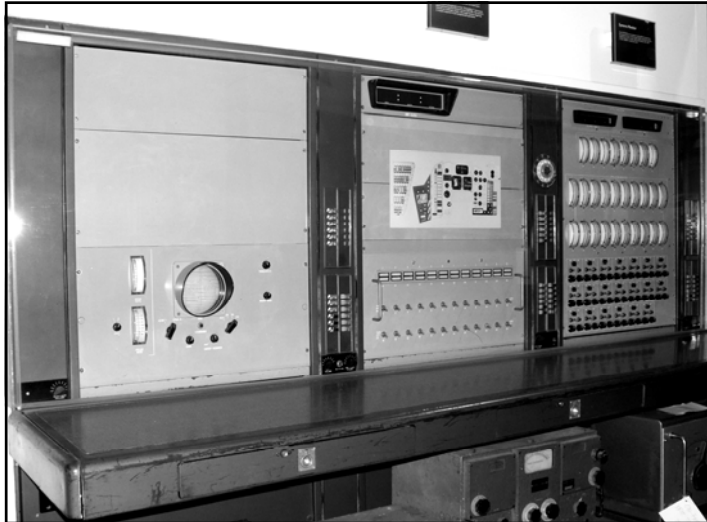
We also sadly report the passing of Nora Wilbourne, ex CRO Logisitics.

They will all be remembered as having played their part in Carnarvon's space history.

Memorabilia

Those few of you who were privileged to have worked at Muchea may, or may not, be aware that some panels from the control room are proudly displayed at the museum on Wireless Hill.

If only someone had the wisdom, or were permitted, to do something similar for Carnarvon.



*Muchea Flight Controller and AeroMed Control Panels
Wireless Hill Museum*

Photograph Terry Kierans



*Gemini Control Room (Gemini X)
Carnarvon Tracking Station*

Photograph Terry Kierans

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CAPITAL 90.5FM
and capture the
"Sounds for Seniors"
... music from the
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Capital 90.5FM is a community radio station operated entirely by volunteers and established to broadcast music, information and services for seniors. For twenty-four hours a day, Monday to Friday, you can hear the evergreen popular music of the forties, fifties and sixties which were the Golden Years of Radio ... all the "Golden Oldies" as well as jazz, rock-and-roll, classics and rockabilly.



Call **CAPITAL 90.5FM** on 9364 9888 for program details ... and say "Hello" to the folks that bring you ... "Sounds for Seniors"

My apologies for the quality of the Gemini Control Room graphic—it has been scanned from an old Kodachrome 35mm slide—available light shot.

We wish to record the passing, on May 23rd 2006, of Kazimierz Klaudiusz Górski. You will remember the name became famous as a result of a reputed, but apocryphal, comment by Neil Armstrong on the occasion of the first lunar landing.

For you fans of a round ball game known as soccer, this Mr Górski was a legendary coach of Poland's national football team and honorary president of the Polish Football Union (Polski Związek Piłki Nożnej, PZPN). He was also a soccer player, capped once for Poland.

Keeping the Memory Alive

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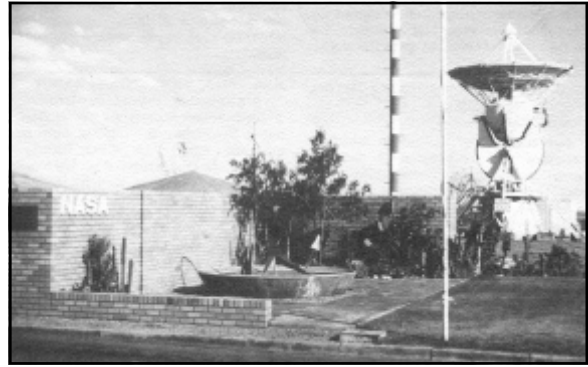
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Vol 4 December 2006

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. Now, in Volume 4, we start to catch up on those yet to be covered.

So our key mission this issue will be Gemini VII, launched in December 1965 and manned by Frank Borman and James Lovell.

Front page news!

I understand that the Carnarvon Tourist Bureau is planning to publish a flier to include correct information relating to the Carnarvon Tracking Station and the OTC Earth Station.

Thank you Gael Palmer.

To celebrate the generosity of some of our subscribers, and the extended life of the Trackers CRONicle, the first stages of our own website at <http://crotrak.com> are up and running. See [p9](#) for a view of the home page, and note our new email address: info@crotrak.com

All contributions and suggestions will be entertained.

Terence (Terry) Kierans
Editor
CRO Trackers
PO Box 93
QUINNS ROCKS WA 6030

Tel: 61 8 9304 6983
email: info@crotrak.com

Gemini VII

The primary object was to conduct a 14-day mission and to evaluate the effects on the crew.

Secondary objectives included:

- Provide a target for Gemini VI-A.
- Station keep with Gemini VI-A and with the second stage of the GLV.
- Conduct 20 experiments.



- Evaluate lightweight pressure suit.
- Evaluate spacecraft reentry capability.
- Conduct system tests.

All primary and secondary objectives were met.

There actual flight duration was 13 days, 18 hours, 35 minutes and 1 second.

Courtesy NASA



*Frank Borman
Commander*



*James Lovell
Pilot*

Biographies

Frank Borman was a veteran of both the Gemini 7, 1965 Space Orbital Rendezvous with Gemini 6 and the first manned lunar orbital mission, Apollo 8, in 1968.

A career Air Force officer from 1950, his assignments included service as a fighter pilot, an operational pilot and instructor, an experimental test pilot and an assistant professor of Thermodynamics and Fluid Mechanics at West Point.

In 1967 he served as a member of the Apollo 204 Fire Investigation Board, investigating the causes of the fire which killed three astronauts

aboard an Apollo spacecraft, reminiscent of the Challenger tragedy.

Later he became the Apollo Program Resident Manager, heading the team that re-engineered the Apollo spacecraft. He also served as Field Director of NASA's Space Station Task Force.

Borman's retirement from the Air Force in 1970 did not end his aviation career. He became a special advisor to Eastern Airlines in early 1969 and in December 1970 was named Sr. Vice President-Operations Group.

(Continued on page 7)

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you to those whose contributions have added just that bit more.

Ed.

Eric	Ainsworth	Ron	Harmes	D	Powell
Gay	Albon	Anne	Harvey	M.J.K	Power
Bill	Arbery	Deidre	Howard	A	Rees
Matt	Barber	B	Hughes	Frank	Rice
John (Allan)	Barber	B	Hunter	Ted	Rosser
Keith	Barnard	Jim	Keenan	Lynne	Rosser
Deidre	Beaumont	D	Kettlety	Stewart	Sands
Elizabeth	Beckett	Joy	King	Ron	Sargeant
Michael	Billings	M	King	Russell	Schwarzer
A	Biscaya	Gloria	Klarie	Lorraine	Scott-Malcolm (Erlandshaw)
Don	Blackman	Peter	Kloppenburg	Michael	Scott-Malcolm
Bill	Boyle	Gloria	Lyon-Roberts	John	Sharples
Hans	Britz	John	Mahaffey	P	Sims
Charlie	Brown	Peter	Maine	Frank	Sloane
J	Burdett	Ian	McDonald	J	Smith
Martin	Burgess	S	McDonald	Mike	Smith
Basil	Byrne	Frank	McGregor	P	Smith
G	Carrick	Don	McLellan	Roger	Smith
Brian	Clifford	Verica	Milanovich	Bill	Smythe
Barbara	Cobcroft	Ray	Mills	Dave	Standbury
F	Dawes	Bill	Mills	John	Stanton
Marilyn	Dick	Peter	Milne	Alex	Stevenson
Phil	Dickinson	Marilyn	Milner (Gobby)	John	Swanney
Neville	Dippell	Ian	Mitchell	Barbara	Teahan
John	Draper	John	Monteith	Des	Terrill
John	Easterbrook	Dennis	Naylor	Alan	Thomas
Dave	Elliot	Terry	Newman	Jack	Thompson
J	Erickson	Ellie	Nicholls?	Don	Thompson
Kerrie	Eyre	Kel	Nickerson	Mike	Travell
Ross	Eyre	John	Noble	Dave	Troup
Les	Figg	Patsy	Nolan (Thompson)	Milton	Turner
W	Frost	Frank	Parkinson	A	Watermeyer
Vic	Gadelvicius	John	Parkinson	Jack	Watson
Jamie	Gardiner	Alan	Paterson	Barbara	Wigley (Vernon)
L	Gardner	Mike	Pender	Roger	Williams
Kim	Gates	Wendy	Petersen	Ray	Zatorski
J	Gerschwitz	Don	Plumb		
Geoff	Hammond	Gerry	Plummer		

I have been given some more information concerning the possible whereabouts of a few of these, but as yet have not been successful in obtaining, or confirming, details.

TK

A Blast from the Past

Courtesy Trevor Mosel

Page 4.

8. RELIGION

Church of England

Catholic

Australian Inland Mission Salvation Army

9. TRANSPORT

9.1. Carnarvon has no regular bus service. However, a local contractor runs a school bus service.

9.2. Taxis are in ample supply at fares ranging from 1/6d. to 3/- per mile, with a 4/- minimum for each trip, Cost per mile depends on the vintage of the vehicle.

9.3. The air service to Perth runs on six days of the week. The service is provided by MacRobertson Miller Airways at a cost of £15.12.0 for a single adult fare. Concession rates for children and students apply.

9.4. A road freight service from Perth delivers goods in 36 hours.

9.5. Drive-your-self vehicles can be hired from local operators. The charges vary, but in general cost £2 per day and 1/- per mile. Facility exists at the air terminal to ring for this and taxi services.

10. LOCAL AMENITIES

Tennis - 6 Courts are available

Golf - The Golf Links are adjacent to the Racing Track.

Bowling - Available at North Carnarvon

Sailing - Facilities exist in the Gascoyne delta

Football - 3 teams (Australian Rules)

Cricket - 3 teams

Swimming - Limited, the Port Hotel has a private fresh water pool.

There is a surfing beach 12 miles North of Carnarvon.

Hunting - Plentiful; Kangaroos, Emus, Rabbits and Ducks

Pictures - Indoor 3 programmes per week

Open air - 5 programmes per week

Drive-in - to be built, site allocated

Horse Racing

- Two meetings per annum, September and 31st December.

11. INCOME TAX CONCESSIONS

Carnarvon is located in Tax Zone A, and employees, who have been resident in excess of 6 months in any one Tax year, are entitled to the following deductions in that year in addition to their normal ones.

	<u>Total Additional Concession</u>
(a) Unmarried	£270
(b) Married - No children (£270+50% of £143)	341
One child - add 50% of £91	386
Two children - add a further 50% of £65	419
Three children-add another 50% of £65	451

To be continued

The March of Progress

Before...

Carnarvon Tracking Station

From Wikipedia, the free encyclopedia

The **Carnarvon Tracking Station** in Western Australia was a tracking station used by NASA. It was built in 1963 for the Gemini program, the second step for NASA's plan to put a human on the Moon.

It replaced the Muchea Tracking Station and used some of the equipment from Project Mercury.

After the conclusion of the Gemini program, Canarvon assisted with the Project Apollo missions to the Moon. It was subsequently used to support the Skylab space station.

The station was closed in 1975 but remains a tourist attraction.

A node of the Birmingham Solar Oscillations Network is situated on this site. Carnarvon ex NASA tracking station.

http://en.wikipedia.org/wiki/Carnarvon_Tracking_Station
20/10/2006



Carnarvon ex NASA tracking station.

After...

The **Carnarvon Tracking Station** in Western Australia was a tracking station used by NASA. It was built in 1963 for the Gemini program, the second step for NASA's plan to put a human on the Moon.

It replaced the Muchea Tracking Station and used some of the equipment from Project Mercury.

After the conclusion of the Gemini program, Carnarvon Tracking Station provided extensive support for the Project Apollo missions to the Moon. By reason of Carnarvon's unique geographical position it was used to uplink the Trans Lunar Injection (TLI) command to the Apollo spacecrafts. It was subsequently used to support the Skylab space station.

The station was closed in 1974. The main building was then used by Radio Australia who were looking for a home after Cyclone Tracy put their Darwin installation out of commission. They closed this facility in June 1996. All Tracking Station equipment was removed and/or buried and all buildings, with the exception of one small one now used by Telstra, were razed. Only the foundations of what is an historical site remain.

Retrieved from "http://en.wikipedia.org/wiki/Carnarvon_Tracking_Station"



Carnarvon ex NASA tracking station.

Correction requests have also been sent, and implemented, for these websites:
<http://www.australiaadventures.com/carnarvon.htm> ,
<http://perljam.net/google-satellite-maps/id/11774> , and
<http://www.lowdown.com.au/history.html>

Thank you to Paul Dench for his assistance with Google and Lowdown.

Another Snippet from the Past

Courtesy an ex-Tracker

CATERING

Lunch can be ordered through the Administrative Officer, Mr W.R. Cameron. This meal is sent to the Station from the Port Hotel and costs 7/6 per day. Sandwiches and pies may also be ordered. Orders must be placed by 9.30 am each day.

The lunch break is from 12.30 to 13.15. Morning and afternoon tea breaks are at 10.00 and 15.00 and last for fifteen minutes. Tea is available in the Crew Room. Visitors of long standing are requested to pay 3/- per week towards the cost of same.

Biscuits, cool drinks, cigarettes are available during working hours, from the Crew Room.

During Missions, meals are provided for all on-station personnel at appropriate times.

Tracking Station Fire-Fighters

From Alan Gilham — 18th September 2006

Reading the latest issue of The CRONicle it suddenly came to me that Ben Ryan organised a fire fighting section.

We spent some time playing with fire — as it were — we did the usual drill of igniting lots of oily rags and putting out the resultant fire using the station fire extinguishers.

We also had the availability of a diesel driven water pump which we used. Couldn't

find much water as I recall!

I think that Geoff Broom was also part of the 'team'.

We also had the grandiose idea of getting an old Dennis fire engine from Perth as it was on sale at the time. After a while it all fizzled out.

Has anyone else any remembrance of those exciting times?

Picnic Day

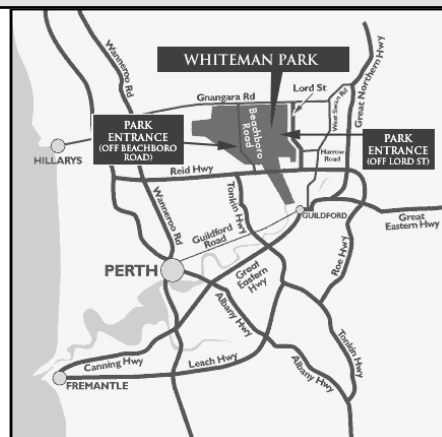
The Perth Chapter of the CRO Trackers will be holding their third annual picnic / barbeque at Whitemans Park, Mussel Pool, some 20 kms and 25 minutes from the Perth CBD.

Date: Sunday April 15 2007

Time: Kick off 11 am

BYO: Everything

Look out for the banner



Biographies ctd.

(Continued from page 2)

He was promoted to Executive Vice President-General Operations Manager and was elected to Eastern's Board of Directors in July 1974. In May 1975 he was elected President and Chief Operating Officer. He was named Chief Executive Officer in December 1975 and became Chairman of the Board in December 1976. Colonel Borman retired from Eastern Airlines in June of 1986.

He received the Congressional Space Medal of Honor from the President of the United States. Colonel Borman also was awarded the Harmon International Aviation Trophy, the Robert J. Collier Trophy, the Tony Jannus Award and the National Geographic Society's Hubbard Medal-in addition to many honorary degrees, special honors and service decorations.

In September of 1990, Colonel Borman along with fellow Apollo 8 astronauts, Lovell and Anders, was inducted into the International Aerospace Hall of Fame. And in October of 1990 received the Airport Operators Council International Downes Award. In March 1993, he was inducted into the U.S. Astronaut Hall of Fame.

James Lovell was selected as an Astronaut by NASA in September 1962. He served as backup pilot for the Gemini 4 flight and backup Commander for the Gemini 9 flight, as well as backup Commander to Neil Armstrong for the Apollo 11 lunar landing mission.

Lovell served as Command Module Pilot and Navigator on the epic six-day journey of Apollo 8 - man's maiden voyage to the moon - December 21-27, 1968.

Apollo 8 was the first manned spacecraft to be lifted into near-earth orbit by a 7-1/2 million

pound thrust Saturn V launch vehicle; and Lovell and fellow crewmen, Frank Borman and William A. Anders, became the first humans to leave the Earth's gravitational influence.

He completed his fourth mission as Spacecraft Commander of the Apollo 13 flight, April 11-17, 1970, and became the first man to journey twice to the moon.

Apollo 13 was programmed for ten days. However, the original flight plan was modified en route to the moon due to a failure of the Service Module cryogenic oxygen system. Lovell and fellow crewmen, John L. Swigert and Fred W. Haise, working closely with Houston ground controllers, converted their lunar module "Aquarius" into an effective lifeboat. Their emergency activation and operation of lunar module systems conserved both electrical power and water in sufficient supply to assure their safety and survival while in space and for the return to earth.

Captain Lovell held the record for time in space with a total of 715 hours and 5 minutes until surpassed by the Skylab flights.

On March 1, 1973, Captain Lovell retired from the Navy and from the Space Program to join Bay-Houston Towing Company in Houston, Texas. He was promoted to the position of President and Chief Executive Officer on March 1, 1975.

On January 1, 1977, Captain Lovell became President of Fisk Telephone Systems, Inc. in Houston, Texas. On January 1, 1981, he was appointed Group Vice President, Business Communications Systems, a Centel Corporation. He retired from Centel Corp as Executive Vice President and member of Board of Directors on January 1, 1991.

Whereabouts Unknown

The associated photograph, by Alan Gilham, shows some of the trophies won by the Tracking Station back in the late sixties.

Does anyone have any idea of what they are, and more importantly, where they are now?



Trivia

When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs.

The SRBs are made by Thiokol at their factory in Utah. The engineers who designed the SRBs would have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site.

The railroad line from the factory happens to run through a tunnel in the mountains.

The SRBs had to fit through that tunnel.

The tunnel is slightly wider than the railroad track, and a railroad track, as you should know, is about as wide as two horses' behinds, based on roads designed originally by the Romans.

So, a major Space Shuttle design feature of what are arguably the worlds most advanced transportation system was determined over two thousand years ago by the width of a horse's ass.

Tune
Radio



Your
To

CAPITAL 90.5FM
and capture the
"Sounds for Seniors"
... music from the
Golden Years Of Radio



Capital 90.5FM is a community radio station operated entirely by volunteers and established to broadcast music, information and services for seniors. For twenty-four hours a day, Monday to Friday, you can hear the evergreen popular music of the forties, fifties and sixties which were the Golden Years of Radio ... all the "Golden Oldies" as well as jazz, rock-and-roll, classics and rockabilly. Call **CAPITAL 90.5FM** on 9364 9888 for program details ... and say "Hello" to the folks that bring you ... "Sounds for Seniors"



More Trivia

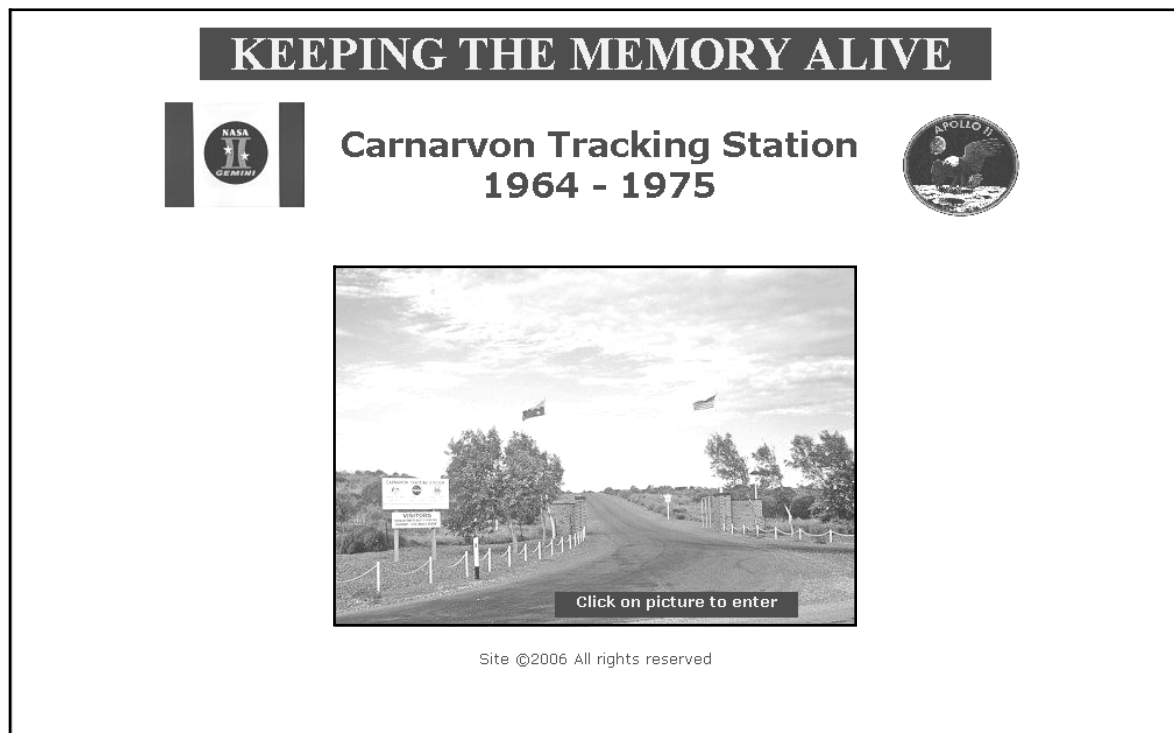
Here's one for those who fancy themselves as mathematicians:
What comes next in the sequence 7, 9, ? And why?

A weeklong online auction started November 8 for naming rights to an artificial reef project organizers hope to establish off the Florida Keys. The artificial reef is to be created by sinking the retired 524-foot U.S. Air Force missile tracking ship General Hoyt S. Vandenberg, which monitored NASA space launches from 1963 to 1983.

Our Own Website (at last)

Work has commenced on a very much needed project — a website for CRO Trackers and their associates. It is going to take a while to complete even the basic structure, but it will be a site to which we can always find something to add. This site will replace the partial one currently hosted on my business site.

Here's the current "home" page — it looks a lot better in colour. You can access it at <http://crotrak.com>.



Whilst I have a supply of material that will keep me busy for a few months to come, I know that there is so much more you could all contribute.

I am in particular need of text material relating to the station and the staff, but photographs too are welcome, the more so since most of mine were destroyed. Acknowledgement, as appropriate, will of course be given.

You will be contributing to what I envisage as a tribute to you all, and the definitive internet presence of who we were, what we did and where we did it. Thank you.

Also, there is another important website on the drawing board, this one being constructed by Paul Dench and Alison Gregg.

The scope of <http://www.carnarvonspace.com> is to include the Carnarvon OTC Earth Station and the Western Australian Space Museum Carnarvon.

I understand from Paul that the principle objective is for the content of the CarnarvonSpace site to directly complement their book; to provide future readers of the book with extension reading.

That Missing 'a'

High-tech analysis may rewrite space history

By MARK CARREAU

Copyright 2006 Houston Chronicle

High-tech detective work apparently has found the missing "a" in one of the most famous phrases ever spoken.

Astronaut Neil Armstrong's first words from the surface of the moon on July 20, 1969, now can be confidently recast, according to the research, as, "That's one small step for *a* man, one giant leap for mankind."

It is the more dramatic and grammatically correct phrasing that Armstrong, now 76, has often said was the version he transmitted to NASA's Mission Control for broadcast to worldwide television.

With the technology of the 1960s, however, his global audience heard his comment without the "a," making it "That's one small step for man, one giant leap for mankind" — a phrase that technically gave the same meaning of human-kind to "man" and "mankind."

The discrepancy has been widely debated for years by historians, academics and fans of space travel, with the "a" sometimes appearing in parentheses in government documents and Armstrong being listed on unofficial Web sites as being guilty of a momentous flub.

The missing one-letter word was found this month in a software analysis of Armstrong's famous phrase by Peter Shann Ford, a Sydney, Australia-based computer programmer. Ford's company, Control Bionics, specializes in helping physically handicapped people use their nerve impulses to communicate through computers.

On Thursday, Ford and Auburn University historian James R. Hansen, Armstrong's authorized biographer, presented the findings to Armstrong and others in a meeting at the Smithsonian Institution's Air and Space Museum in Washington, D.C. They repeated the presentation at NASA's Washington headquarters, which has long backed Armstrong's version of the phrasing.

"I have reviewed the data and Peter Ford's analysis of it and I find the technology interesting

and useful," Armstrong said in a statement. "I also find his conclusion persuasive. Persuasive is the appropriate word."

According to Ford, Armstrong spoke, "One small step for a man ..." with the "a" lasting a total of 35 milliseconds, 10 times too fast for the "a" to be audible.

The "a" was transmitted, though, and can be verified in an analysis using a Canadian sound editing software called GoldWave, Ford said.

Critics have suggested that Armstrong either botched a missive written for him by a government official ahead of his lunar step or that the poor wording was a sign of his lack of awareness of its significance.

The Web site <http://www.slipups.com> notes, "Mr. Armstrong's quote left out that ever important letter 'a'. His quote, 'One small step for man; one giant leap for mankind' should have been 'One small step for a man; one giant leap for mankind,' Without it he basically said, 'One small step for mankind; one giant leap for mankind.' "

Wikipedia, the online encyclopedia of sorts, states in an entry on Armstrong that "for some reason the 'a' was never spoken."

However, Armstrong told biographer Hansen that he composed the phrase during the six hours and 40 minutes between his drama-tinged landing and the time he and Apollo 11 crewmate Buzz Aldrin emerged from their lander, Eagle, to walk on the moon.

In the 2005 book *First Man: The Life of Neil A. Armstrong*, Armstrong told Hansen that others have pointed out that he can often be heard dropping the vowels from his speech in his radio transmissions.

"It doesn't sound like there was time for the word to be there," Armstrong said in the book. "On the other hand, I didn't intentionally make an inane statement, and . . . certainly the "a" was intended, because that's the only way the statement makes any sense.

"So I would hope that history would grant me leeway for dropping the syllable and understand that it was certainly intended, even if it wasn't

(Continued on page 11)

That Missing 'a' ctd.

(Continued from page 10)

said -- although it might actually have been."

Roger Launius), who chairs the space history division at the Air and Space Museum, was among those who heard the experts' presentations this week.

"In the overall scheme of world history, it's probably not that significant. But it's nice to know that what he thought he said, he actually did say, and that because of the nature of the electronic and the communications systems of the time, it just did not get through," said Launius, a former NASA historian.

NASA spokesman David Mould said he has asked NASA's own audio analysts to review Ford's findings.

Ford said he began his detective work two weeks ago after a bicycle ride in Ohio. As he rested, he reflected on a favorite topic from his days as a medical student: the Apollo 11 moon landing.

"When they started in talking about the phrase . . . I thought that was pretty stupid," Ford recalled. "They just put a man on the moon, why worry

about an 'a'? Later, I thought Armstrong was such a good pilot, so precise, it's unlikely he would actually screw up a line."

Ford's interest was fueled as well by his work as a Cable News Network anchorman more than two decades ago, when his duties included news coverage of NASA.

He used his computer to download the audio recording of Armstrong's words from a NASA Web site and analyzed the speech pattern with the GoldWave software. In the graphic tracing, he found a signature for the missing "a," evidence it was spoken and transmitted.

Ford then checked *First Man* and found Hansen's account of Armstrong's historic step off the lunar lander as well as the astronaut's explanation for the missing word. The account matched what he had found with the GoldWave analysis.

Ford contacted Hansen and compiled his findings in the format of a scientific paper.

"It was meant for all mankind, and it's important to have it correct," Hansen said of the phrase. "It's a concise, eloquent statement for the ages at a unique milestone for our species."

Save Skylab!

In view of CRO's involvement in the Skylab project I felt that the following item, reproduced from <http://www.myspacemuseum.com/saveskylab.htm>, deserved some space.

In 1968 NASA ordered two identical flight qualified space stations (Skylab) built along with 3 full scale training mockups.

One flight version, the 1st US Space Station was flown in 1973 and orbited the Earth until 1979; the second flight element is now on display at the National Air and Space Museum. One full scale mockup, used by astronauts and engineers at MSFC during the 3 crewed Skylab missions (73-74) was on display for many years at the US Space and Rocket Center (USRC) located in Huntsville Alabama.

Several years ago the Skylab exhibit was moved outside. The original temporary weather coverings have failed and Skylab has suffered the effects of rain, sun, wind, plants, dust/dirt, mold, animals and vandals. Right now the Skylab artifact is nearing a point of no return.

To save Skylab the Alabama/Mississippi section of the American Institute of Aeronautics and Astronautics (AIAA) started the Skylab Restoration Project (SRP). AIAA is seeking volunteers to help save this unique part the US Space Program. If you're interested in volunteering for SRP please send an email to microgravityguy@yahoo.com.

Our 1st effort will be to stabilize the situation and remove (save) as much historic material as possible. Each volunteer will be given a US Space and Rocket Center Volunteer badge.

Keeping the Memory Alive



RF COMMAND ANTENNAE
CARNARVON TRACKING STATION
W.A.

A very merry Christmas, and a healthy and prosperous New Year to you and your families from the editor.

...and not to forget those immortal words

"And from the crew of Apollo 8, we close with good night, good luck, a Merry Christmas, and God bless all of you—all of you on the good Earth."

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Vol 4 March 2007

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. Now, in Volume 4, we start to catch up on those yet to be covered.

So our key mission this issue will be Gemini VIII, launched in March 1966 and manned by Neil Armstrong and David Scott

Also included in this issue:

WRE HAD Rocket Firings

Conclusion of Trevor Mosel's *Blast from the Past*.

Stars of Australia Awards

Another request for website correction

Relocation of Apollo 1

Perth Trackers Annual Picnic Day

Subscription Renewal Form

Terence (Terry) Kierans
Editor

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Gemini VIII

Gemini VIII was launched on March 16, 1966 at 11:41:02.389.

There was a one day delay in launching the spacecraft due to minor problems with the spacecraft and launch vehicle hardware.

The primary objective was to rendezvous and dock with Gemini Agena target vehicle (GATV-5003) launched on March 16, 1966 from Complex 14 and conduct EVA operations.

Secondary objectives included:

- Rendezvous and dock in 4th revolution.
- Perform docked-vehicle maneuvers,
- Evaluate systems and conduct ten experiments.

Spacecraft weight: 3788kg.
GATV-5003 weight: 8097kg



Gemini-VIII successfully docked with the Gemini Agena target vehicle (GATV) 6 hours 34 min after liftoff.

Because of problems with the spacecraft control system, the crew was forced to undock after approximately 30 minutes.

The spacecraft-target vehicle combination had begun to encounter increasing yaw and roll rates.

The crew regained control of their spacecraft by using the reentry control system, which prompted an early landing in a secondary landing area in the Pacific. No EVA was performed.

The failure was caused by an electrical short in control system. Docking and re-rendezvous secondary objectives were not achieved due to the shortened mission.

Courtesy NASA

(Continued on page 7)



*Neil Armstrong
Commander*



*David Scott
Pilot*

Continued on p7

Where Are They Now?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you to those whose contributions have added just that bit more.

TK

Eric	Ainsworth	Anne	Harvey	D	Powell
Gay	Albon	Stan	Hills	M.J.K	Power
Bill	Arbery	Deidre	Howard	A	Rees
Matt	Barber	B	Hughes	Frank	Rice
John (Allan)	Barber	B	Hunter	Ted	Rosser
Keith	Barnard	Jim	Keenan	Lynne	Rosser
Deidre	Beaumont	D	Kettlety	Stewart	Sands
Elizabeth	Beckett	Joy	King	Ron	Sargeant
Michael	Billings	M	King	Russell	Schwarzer
Don	Blackman	Gloria	Klarie	Lorraine	Scott-Malcolm (Erlandshaw)
Bill	Boyle	Peter	Kloppenburger	Michael	Scott-Malcolm
Hans	Britz	Roy	Lester	John	Sharples
Charlie	Brown	Don	Lindsay	P	Sims
J	Burdett	Gloria	Lyon-Roberts	Frank	Sloane
Martin	Burgess	John	Mahaffey	J	Smith
Basil	Byrne	Peter	Maine	Mike	Smith
G	Carrick	Ian	McDonald	P	Smith
Brian	Clifford	S	McDonald	Roger	Smith
Barbara	Cobcroft	Frank	McGregor	Bill	Smythe
F	Dawes	Don	McLellan	Dave	Standbury
Marilyn	Dick	Verica	Milanovich	John	Stanton
Phil	Dickinson	Ray	Mills	Alex	Stevenson
Neville	Dippell	Bill	Mills	John	Swanney
John	Draper	Peter	Milne	Barbara	Teahan
John	Easterbrook	Marilyn	Milner (Gobby)	Des	Terrill
Dave	Elliot	Ian	Mitchell	Alan	Thomas
J	Erickson	John	Monteith	Jack	Thompson
Kerrie	Eyre	Dennis	Naylor	Don	Thompson
Ross	Eyre	Terry	Newman	Mike	Travell
Les	Figg	Kel	Nickerson	Dave	Troup
Vic	Gadelvicius	John	Noble	Milton	Turner
Jamie	Gardiner	Patsy	Nolan (Thompson)	A	Watermeyer
L	Gardner	Frank	Parkinson	Jack	Watson
Kim	Gates	John	Parkinson	Barbara	Wigley (Vernon)
J	Gerschwitz	Mike	Pender	Nora	Wilbourne
Geoff	Hammond	Wendy	Petersen	Bernie	Wilbourne
Ron	Harmes	Don	Plumb	Roger	Williams
		Gerry	Plummer	Ray	Zatorski

The quest continues. I have been given information concerning the possible whereabouts of a few of these, but have not been successful in obtaining, or confirming, details.

TK

A Blast from the Past

Courtesy Trevor Mosel

Page 5.

12. ACCOMMODATION

12.1 Three hotels are available and provide a reasonable standard of accommodation. They are:

- a) Port Hotel
- b) Gascoyne Hotel
- c) Carnarvon Hotel

Daily and weekly tariffs do not exceed at present £2.15.0 per day for full board and £15.10.0 per week respectively.

12.2. The Department of Supply will provide 3 bedroom unfurnished homes at reasonable rentals for married staff.

12.3 Single quarters will be available at reasonable inclusive prices.

13. REMOVAL AND TRANSFER EXPENSES

13.1 Personnel engaged on the project will be required to take up residence in Carnarvon for the initial contract period of about three (3) years. Arrangements for transfer of employee to and from Carnarvon will be made and paid for by the Company.

13.2 The family of the employee concerned will be similarly transported to and from Carnarvon at Company expense.

13.3 Packing, Removal and Insurance in transit of personal effects, Furniture and Household items as applicable will be arranged and paid for by the Company. Details of the procedures to be followed will be provided.

13.4 Reasonable expenses for living and fares in transit for the employee and his family would be reimbursed at cost.

13.5 Married employees and their families will be reimbursed for reasonable living expenses whilst awaiting arrival of furniture and effects.

14. DETAILS OF TRACKING STATION

14.1 Location

The site, about 500 acres, is situated in the Browns Ranges about 140 feet above sea level on the Eastern side of the highway. to Geraldton. It is about 4 miles due East from Carnarvon as the crow flies. The bitumen access road from Carnarvon runs 4 miles approximately East, to the road junction of Carnarvon, Onslow, Geraldton, and then turns South for another 32 miles to the entry point of the site. Normally a coastal dirt track can be used reducing the total distance to about 42 miles.

WRE HAD Rocket Experiments

Article reproduced, courtesy Paul Dench, from www.carnarvonspace.com.

Since 1962, Australia's fledgling space program had been conducting a series of high altitude density (HAD) experiments at Woomera using a two-stage HAD rocket designed and built by the Weapons Research Establishment (WRE).

Each experiment ejected a 2m diameter inflatable radar-reflective spherical balloon at 130-Km high to fall at speeds of up to 3200 Km/hr until it collapsed at about 30-Km high. Analysis of radar measurements of the falling sphere produced data on air density and temperature as well as wind direction and speed.

Scientists believed simultaneous launches at Carnarvon and Woomera would yield valuable knowledge of "atmospheric tides ... [and the] zonal travel of mesospheric disturbances."^[1]

The Carnarvon launches

A transportable rocket launcher set up in mid-1964 on a supposedly dry clay pan near the race course between the Carnarvon Space Tracking Station (CRO) and the Town of Carnarvon commenced launching HAD rockets 48 Km into Shark Bay in a south-west direction well past the town. CRO lacked Woomera's sophisticated kine-theodolite optical tracking system so a VHF beacon installed in each rocket enabled AcqAid to track them and provide pointing data for FPQ-6. The launcher-CRO interface was tested with a few trial firings — and the 'comedy' began.

The AcqAid antennas (set to linear polarisation to match the beacon and giving an extra 3db gain) failed to acquire the first trial rocket; the signal continuously fading in and out. A spare beacon set up on the FPQ-6 collimation tower indicated no problems so more trial firings were conducted. The next acquisition attempt also failed; probably hindered by

the stronger signal from the collimation tower beacon which had unfortunately been left on. An argument ensued as to whether circular polarisation on the AcqAid antennas would be better suited to the fast spin-stabilisation of the rockets; it was decided to try one antenna on left polarization and the other on right. AcqAid was now able to track and provide pointing data to FPQ-6.^[2]

But then it was FPQ-6's turn to create problems. They tracked a couple of launches successfully but an engineer had forgotten to remove the 'write-lockout ring' on the computer magnetic-tape reel consequently no data was recorded. He can still remember the look of horror on the Operations Supervisor face when he told him.^[3]

During all this the only person enjoying the trials was Hamish Lindsay with a different sort of 'acquisition aid':

"My job was to man a 20mm Oerlikon Mark 20 gun sight modified to connect to the Q6 to slave

it to follow the movements of the gun sight. I followed the rocket's French chalk it as it drifted with the upper atmosphere currents so the Q6 could find and lock onto the signal to track the drift. I was very impressed when I pushed my shoulders into the padded shoulder brackets and watched the dish precisely follow my every movement. Gave me quite a feeling of power. I had no trouble spotting the French chalk, but had to be quick setting the sights on it as I could not see the rocket sending the balloon up until the chalk blossomed out and dissipated fairly quickly, and then we had nothing to

locate the balloon."^[4]

Meanwhile down at the launch pad a different 'comedy' had been developing.

"Large rockets had never been fired before

(Continued on page 10)



Getting ready for a launch at Quobba: Photo
— Glen Secombe

Picnic Day

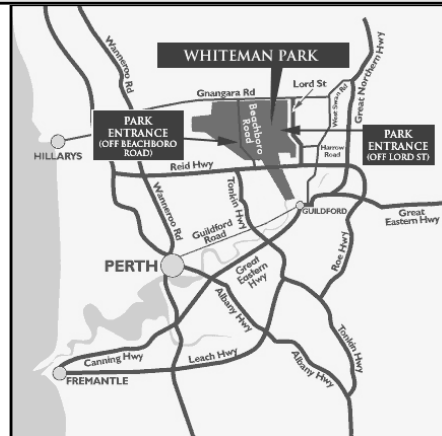
The Perth Chapter of the CRO Trackers will be holding their third annual picnic / barbeque at Whitemans Park, Mussel Pool, some 20 kms and 25 minutes from the Perth CBD.

Date: Sunday April 15 2007

Time: Kick off 11 am

BYO: Everything

Look out for the banner



Apollo 1

J.D. Harrington
Headquarters, Washington
202-358-5241

Chris Rink
Langley Research Center, Hampton, Va.
757-864-6786

Feb. 17, 2007

RELEASE: 07-44

NASA Moves Apollo 1 Capsule to New Storage Facility

HAMPTON, Va. - NASA moved the Apollo 1 capsule and related materials approximately 90 feet to a newer, environmentally-controlled warehouse at NASA's Langley Research Center in Hampton, Va., on Saturday, Feb. 17. The move provides better protection for the spacecraft.

Despite routine repairs made throughout the years, the original secure storage container where the vehicle was housed has been deteriorating. NASA officials determined that, due to its age, the container could not be maintained effectively to preserve the capsule.

~ LOS ~

We sadly report the passing, last August, of Alan Sanderson, ex CRO Security.

Biographies

(Continued from page 2)

From 1949 to 1952, Neil Armstrong served as a naval aviator; he flew 78 combat missions during the Korean War.

He joined NACA, (National Advisory Committee for Aeronautics), NASA's predecessor, as a research pilot at the Lewis Laboratory in Cleveland and later transferred to the NACA High Speed Flight Station at Edwards AFB, California. He was a project pilot on many pioneering high speed aircraft, including the 4,000 mph X-15. He has flown over 200 different models of aircraft, including jets, rockets, helicopters and gliders.

In 1962, Armstrong was transferred to astronaut status. He served as command pilot for the Gemini 8 mission, launched March 16, 1966, and performed the first successful docking of two vehicles in space.

In 1969, Armstrong was commander of Apollo 11, the first manned lunar landing mission, and gained the distinction of being the first man to land a craft on the Moon and the first man to step on its surface.

Armstrong subsequently held the position of Deputy Associate Administrator for Aeronautics, NASA Headquarters Office of Advanced Research and Technology, from 1970 to 1971. He resigned from NASA in 1971.

During 1971-1979, Armstrong was professor of aerospace engineering at the University of Cincinnati, where he was involved in both teaching and research.

David Scott graduated fifth in a class of 633 at West Point and subsequently chose an Air Force career. He completed pilot training at Webb Air Force Base, Texas, in 1955 and then reported for gunnery training at Laughlin Air Force Base, Texas, and Luke Air Force

Base, Arizona.

He was assigned to the 32d Tactical Fighter squadron at Soesterberg Air Base (RNAF), Netherlands, from April 1956 to July 1960. Upon completing this tour of duty, he returned to the United States for study at the Massachusetts Institute of Technology.

He was one of the third group of astronauts named by NASA in October 1963. On March 16, 1966, he and command pilot Neil Armstrong were launched into space on the Gemini 8 mission—a flight originally scheduled to last three days but terminated early due to a malfunctioning thruster. The crew performed the first successful docking of two vehicles in space and demonstrated great piloting skill in overcoming the thruster problem and bringing the spacecraft to a safe landing.

Scott served as command module pilot for Apollo 9, March 3-13, 1969. This was the third manned flight in the Apollo series, the second to be launched by a Saturn V, and the first to complete a comprehensive earth-orbital qualification and verification test of a "fully configured Apollo spacecraft." The ten-day flight provided vital information previously not available on the operational performance, stability, and reliability of lunar module propulsion and life support systems.

In his next assignment, Scott was designated backup spacecraft commander for Apollo 12.

He made his third space flight as spacecraft commander of Apollo 15, July 26 - August 7, 1971.

He has logged 546 hours and 54 minutes in space, of which 20 hours and 46 minutes were in Extravehicular Activity. He is only one of three Astronauts who have flown both earth orbital and lunar Apollo Missions.

Apollo AS-203 (see Paul Dench's message on p9)



The Apollo/Saturn AS-203 mission was an unmanned test of the S-IVB (second stage) and the IU (instrument unit) of the Saturn V to obtain flight information under orbital conditions. The configuration

of the Saturn IB was made to match the Saturn V as closely as possible.

The two-stage launch vehicle boosted a payload consisting of the S-IVB, IU, and a nose cone into a 188 km circular orbit with a period of 88.21 minutes and an inclination of 31.94 degrees. The S-IVB engine burned

once in the Earth's atmosphere and then was shut down. The engine's capability to restart after coast was demonstrated.

Flight information was obtained on venting and chill down systems, attitude and guidance control, thermal control, and performance of the propellant tanks.

Two cameras were mounted to take photos to record the behavior of the liquid hydrogen fuel in the tanks. One of the cameras failed before launch, the other transmitted images to Earth.

During the fourth orbit internal pressures built up in the S-IVB stage while a pressure differential test was being performed. The pressures built up well in excess of design values and the stage fragmented. However, all mission objectives were achieved.

Stars of Australia Awards

From: Terence Kierans

To: Ed Fendell

Sent: Tuesday, January 23, 2007 8:09 PM

Subject: Stars of Australia awards

"...The other people to receive the Stars of Australia awards will be Thomas Reid, a former director of NASA tracking stations in Australia; Ed Fendell, the Head of Communications for the Apollo missions; and Ernest Randall, Network Controller for the Gemini and Apollo Programs..."

Congratulations Ed - I'll have a beer for you on Australia Day.

From: Ed Fendell

Sent: Wednesday, 31 January 2007 4:44 AM

To: Terence Kierans

Subject: Re: Stars of Australia awards

Terry

Thanks for the congrats. The affair put on by the Western Australia Chamber and the Houston Chamber was terrific. About 600 black tie, two cocktail parties with the Australian Ambassador to the US and Dinner and Award ceremonies. Eugene Cernan was the keynote speaker and it went over great. I got to talk with a lot of Aussies about my early days at Carnarvon and they couldn't believe it.

The Dr. from Parkes was there and he is a great guy and we discussed old mutual friends.

Well that is about the story from here, it was great to go back to the old days.

ED

Our Own Website

KEEPING THE MEMORY ALIVE



**Carnarvon Tracking Station
1964 - 1975**



Click on picture to enter

Site ©2006 All rights reserved

<http://crotrak.com>

My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm.

I am sure that there is much more material hidden away somewhere, and putting it up on the website will ensure that it is there for posterity, and doesn't get lost.

...and the Battle Continues

Here's the content of a recent email message from Paul Dench:
Hello Carnarvon Tourist Information

With regard to your tourist description of the OTC dish namely:

"Dominating the Carnarvon skyline is a huge communication satellite dish, which was opened in 1966. Although no longer used the dish still stands as a reminder of days gone by when Carnarvon participated in the space race to put a man on the moon ...

It was from here that Australia received its first satellite television broadcast. The station closed after assisting in tracking Halley's Comet in 1987. The area offers a terrific panoramic view of the town and surrounding countryside."

... there are a couple of historical inaccuracies you might like to correct.

Firstly, the "huge communications satellite dish" was not constructed until 1969 so your first sentence is rather ambiguous. It was the OTC station that was opened in 1966 with the smaller dish - the sugar scoop - used for communications for the NASA station further down the road.

Secondly, "from here that Australia received its first satellite television broadcast" is totally incorrect. Certainly the BIG dish received Western Australia's first satellite broadcast on 21 July 1969 and certainly the SMALL dish transmitted Australia's first satellite television broadcast in November 1966. But what is not so commonly known is that the first TV transmission into Western Australia was even earlier on 5 July 1966 when TV pictures of fuel behaviour in the Apollo-2 launch rocket were transmitted to the USB antenna at NASA Space Tracking Station further down Browns Range - though not broadcast beyond there.

Regards *Paul Dench NASA Space Tracking Station 1963-1975*

WRE HAD Rocket Experiments ctd.

(Continued from page 5)

away from Woomera or other ranges. The first launch site was selected just out of town, on what appeared to be level and solid ground. A combination of high tides and heavy rain turned it into a swamp. ... [When they had finished] the firing team left behind a trail of hopelessly bogged trucks and graders belonging to the Town Council. A good portion of the town's population watched these activities with interest, crowded into the racecourse grandstand which was conveniently adjacent, and listening to a running commentary." [5]

For a more intimate personal account and additional photos read Glenn Secombe's 'Carnarvon Capers' <http://tinyurl.com/2rbdg3>.

The clay pan was not as firm as it was thought. As each rocket was fired, its exhaust apparently created an increasing depression in the soft clay causing the two rear pads of the launcher base to sink a little deeper, which incrementally increased the launch elevation angle.

Eventually part of the final rocket impacted on the edge of the town airport rather than far into Shark Bay and another part on the levy bank near the Gascoyne Hotel where a PWD crew was working on the water main. Leading-hand Ray Sharp recalls it clearly, "*A large piece of the rocket just missed one of my crew. He stormed off, reckoning I was trying to kill him*"; Ray still has a small rocket fragment as a memento. [6]

AcqAid Engineer Ed Goldsmith recalls that final launch from the claypans, "*The elevation and azimuth angles become constant shortly after launch and then instead of the elevation starting to lower as the signal strength decreased (as the rocket started its descent on a parabola away from us) as was usually the case, the angles remained constant and the signal strength started to increase! It only took a few seconds for me to realise that this meant that the rocket was coming back down towards us! For the life of me I don't know why I remained calm and watch[ed] the indications until the signal ceased abruptly.*" [2]

Everyone learnt from those first rocket firings. AcqAid and FPQ-6 realised that 'mission check lists' were as necessary for local exercises as

they were for NASA missions. The launch crew learnt to check their elevation angle before each firing. However, caution being the better part of valour, the launch site was moved to the rocky foundation of cliffs near Quobba Station, 60Km north of CRO. The public was invited to view the next launch series from a vantage point near Quobba Point lighthouse. But before the experiments resumed, a light aircraft carrying a beacon, was flown over the new launch site with Tito Teraci dropping aluminium pudding-bowls to be sure FPQ-6 could distinguish the radar echoes of an aluminium bowl from that of the launch vehicle (the aircraft).

The Quobba launches were more successful. In mid-July rockets were launched within 1½ hours of local midday; two at Quobba and four at Woomera. They all reached a height of about 115 Km. Then late in October four attempts at Quobba yielded two results; one shortly before dawn and one shortly after dusk. More launches followed in May 1965. [7]

These simultaneous 'falling sphere' experiments are still considered one of the best sets of seasonal atmosphere data ever gathered.

References

[1] Minister for Supply, press release, September, 1964.

Note: CRO was the only other place in Australia with radar accurate enough for the experiments

[2] Goldsmith, E., email message to PD

[3] Main, P., email message to PD, 31 July 2005

[4] Lindsay, H., email message to PD, ?????

[5] Morton, P., Fire Across the Desert; Woomera and the Anglo-Australian Joint Project 1946-1980. 1989, p403

[6] Sharp, R., phone conversation with PD, May 2005

[7] NAA: PP538/S2, B87, DoS item 93, 22 October 1964

We also thank Tito Teraci for his input to this page, and Kerrie Dougherty and Bruce Henderson

Rub-a-Dub-Dub

An extract from the Carnarvon Tracking Station Social Club News — December 1970.

Rub-a-Dub-Dub—Three Men in a Tub

Alan had a small tin boat
For crew, young Stan and Ron
They thought they'd go to Snooky's Reef
And see how they got on.

They motored out between the waves
All keen and fighting fit
But which way now? and Ron cried out
Try left hand down a bit.

On, On and On and Up and down
O'er greasy slimy wave
For 'hours on end it seemed to Stan
While trying to be brave.

Gone half the day the journey stopped
Cried Alan, now for fish
Stanley he was all shook up
Dry land was his big wish.

With writhing squirming wriggling catch
And the bilges oily muck
Knuckles white and heaving grin
He tried hard not to chuck.

But nature took the final hand
Young Stanley opened wide
A sudden burst, he lost the lot
Hung grimly o'er the side.

The fishes swimming all around
Cried to each other - look:
A feast of rice and pork and chips
And not a single hook.

Poor Alan's line, now dangled limp
Without a fish to bite
Said Blow you lot, this ain't no good
Go home, I think I might.

And so the day drew to a close
Two sailors home they ran
One lubber too, but Stanley swears
He'll buy a caravan.

— Bob Swaby

Are You a Turtle?

Once upon a time, many years ago there was a man who was of good and noble character, without a trace of impurity in his thoughts. Unfortunately all about him he saw persons with vulgar minds unable to think of anything, except in sexual terms. He bemoaned his inability to find others with a similar high mindness, to his own. Like a turtle, he retreated into his shell.

Then one day, while partaking of a pint of ale (for purely medicinal purposes of course), he realized that there must be others like him. Forced into bars, and saloons, imbibing alcohol as a balm for the ills inflicted by obscene and vulgar persons. He resolved to locate all the other pure minded individuals that he could, even if this meant spending his every waking hour crawling from one bar to the next. This was the beginning of the Turtles.

He embarked upon this quest with vigor and determination, but since he was a man of limited means, quickly ran out of money. Then

one day, he got a tip on a horse running at long odds at the local track. The problem was that he had no money left with which to gamble. So, in desperation he wagered his last and most prized possession a donkey, which he had raised from

birth. Now this donkey was a particularly gentle and temperate animal, with a loving disposition. To lose his donkey would have been devastating, and yet what choice was there if the quest was to continue? Fortunately, he won the wager, and with the money was able to continue in his search for many more years, and begin the Association of Turtles we know today. We have the

International and National Association of Turtles.

And so, to commemorate this event, all members of this esteemed organization when asked, "Are You a Turtle?" must respond immediately without hesitation or fear of embarrassment, in a voice as loud and clear as the voice of the questioner: "Y-B-Y-S-A-I-A". Failure to do so at anytime, will be penalized by having to buy whatever beverage for the one who asked the question.



Keeping the Memory Alive

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Vol 4 June 2007

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. Now, in Volume 4, we start to catch up on those not yet covered.

So our key mission this issue will be Gemini VI-A, launched in December 1965 and manned by the late Walter (Wally) Schirra and Tom Stafford.

A Russian dual mission, launched in June 1963, was Vostok 5 and Vostok 6. Nicknamed Hawk and Seagull they were manned by Valery Bykovsky and Valentina Tereshkova respectively.

Also included in this issue:

Trivia

Subscriptions

Where Are They Now

Perth Trackers Annual Picnic Day

40th Anniversary

LOS

Social Club News—1969

Saturn V May Fly Again

Subscription Renewal Form

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Gemini VI-A

Gemini VI-A was eventually launched on December 15, 1965 at 12:37:26.471 am Zulu — third time lucky.

There was a 51 day delay in launching the spacecraft due to a Gemini Agena target vehicle (GATV) propulsion failure on 25 Oct, 1965.

A second launch attempt on December 12, 1965 failed because of a minor launch vehicle hardware problem.

The primary objective was to rendezvous with Gemini VII.

Secondary objectives included:

- Perform closed-loop rendezvous in fourth orbit.
- Stationkeep with Gemini VII.
- Evaluate reentry guidance capability.
- Conduct visibility tests for rendezvous, using Gemini VII as target, and
- Perform three experiments.

Spacecraft weight: 3546kg.

It was the last U.S. spacecraft to be flown using batteries as the primary power source (except for the Apollo Lunar Module, which used



batteries, but was augmented by the fuel cells on the Apollo Command Module while docked). All remaining Gemini flights used fuel cells.

Their radar first made contact with Gemini VII at 3 hours and 15 minutes when they were 434 kilometers away. A third burn put them into a 270 by 274 kilometer orbit. As they slowly gained, Schirra put Gemini VI-A's computer in charge of the rendezvous.



The crew of Gemini 6 took this photo of Gemini 7 when they were about 7 meters apart.

After several more burns the two spacecraft were only 40 meters apart. The burns had only used 51 kilograms of fuel on Gemini VIA, giving plenty of fuel for some fly arounds.

During the next 270 minutes the crews moved



Wally Schirra
Commander



Tom Stafford
Pilot

(Continued on page 7)

Whereabouts?

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Thank you to those whose contributions have added just that bit more.

TK

Eric	Ainsworth	Anne	Harvey (Brookes)	D	Powell
Gay	Albon	Stan	Hills	M.J.K	Power
Bill	Arbery	Deidre	Howard	A	Rees
Matt	Barber	B	Hughes	Frank	Rice
John (Allan)	Barber	B	Hunter	Ted	Rosser
Keith	Barnard	Jim	Keenan	Lynne	Rosser
Deidre	Beaumont	D	Kettlety	Stewart	Sands
Elizabeth	Beckett	Joy	King	Ron	Sargeant
Michael	Billings	M	King	Russell	Schwarzer
Don	Blackman	Gloria	Klarie	Lorraine	Scott-Malcolm (Erlandshaw)
Bill	Boyle	Peter	Kloppenburg	Michael	Scott-Malcolm
Hans	Britz	Roy	Lester	John	Sharples
Charlie	Brown	Don	Lindsay	P	Sims
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Neville	Dippell	Bill	Mills	John	Swanney
John	Draper	Peter	Milne	Barbara	Teahan
Dave	Elliot	Marilyn	Milner (Gobby)	Des	Terrill
J	Erickson	Ian	Mitchell	Alan	Thomas
Kerrie	Eyre	John	Monteith	Jack	Thompson
Ross	Eyre	Dennis	Naylor	Don	Thompson
Les	Figg	Terry	Newman	Mike	Travell
Don	Frost	Kel	Nickerson	Dave	Troup
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Jamie	Gardiner	Patsy	Nolan (Thompson)	A	Watermeyer
L	Gardner	Frank	Parkinson	Jack	Watson
Kim	Gates	John	Parkinson	Barbara	Wigley (Vernon)
J	Gerschwitz	Mike	Pender	Bernie	Wilbourne
Geoff	Hammond	Wendy	Petersen	Roger	Williams
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		Gerry	Plummer		

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TK

Trivia

Space Exploration

From Gary Treible —
garytreible@yahoo.com

I support space exploration in the following ways:

1. A portion of the federal excise tax on certain beverages goes to fund NASA
2. I'm a long time advocate of roadside "rest stops", eliminating the need for astronauts to have to wear diapers on the 800 mile trip between Houston and the Cape.
3. By ripping "From the Earth to the Moon" I was able to return the originals to the video store more quickly, making them available to more viewers, thus increasing interest in space.
4. I never liked Walter Mondale, and didn't vote for him in 1984.
5. I believe Dannielynn is astronaut material and that's why I'm claiming paternity.
6. My wife shops at Walmart, which supports the Chinese economy, and therefore space exploration
7. I didn't vote for John Glenn, forcing him to return to the astronaut corps, which he did. I consider this my finest achievement!
8. I own a Tom Lehrer album, and urban legend has it, every time you play "That Was The Year That Was", the heirs of Wernher Von Braun receive a royalty.
9. I was an early supporter of the "teacher in space" program. My wife is a teacher. I'm thinking ISS long duration flight.
10. The Saturn first stage burned RP-1, which is essentially kerosene. I have 5 gallons in the garage. If we fly Saturn again, NASA can have it (for free). I want a tax deduction though.

So there. Other people contribute too! Let's just see who can top that.

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Where Are They Now?

Those of you who read the Saturday edition of The West Australian will have enjoyed the article on Sue Gordon (née Giller). One can only admire her achievements.

There was also an article in the Northern Guardian back in January. It is reproduced here as a tribute to her and for you to read: a long haul from her days as a teletype operator as well.

Magistrate's life is a triumph over adversity

MARK ROY

WESTERN Australia's first Aboriginal Magistrate returned to Carnarvon last week as guest speaker at the Carnarvon Rotary Club Australia Day dinner.

Magistrate Sue Gordon was awarded an Order of Australia medal in 1993 for her commitment to Aboriginal people and community affairs.

Born at Belele Station in Meekatharra, Mrs Gordon was removed from her mother at four years of age.

Mrs Gordon said she was forcibly removed by police at Mount Augustus and taken to the Moore River settlement, then raised at Sister Kate's in East Perth.

"We were always told that we were orphans and virtually forbidden to have contact with natives," she said.

"We were being trained as domestics for white farmers."

Mrs Gordon joined the Women's Royal Australian Army Corps in 1961.

Growing up in the orphanage prepared her for the discipline of army life, she said.

In the late 1960s she worked at the Carnarvon Tracking Station on the Gemini and early Apollo moon shots.

"We worked weird hours, sometimes up to 16 hours a day," she said.

"It was very exciting to hear the voices of the astronauts saying 'Carnarvon we have you'."

While working at the tracking station Mrs Gordon stayed at the Port Hotel.

Current Federal MP Wilson 'Iron



Inspirational speaker: Magistrate Sue Gordon with Carnarvon Rotary Club President Kim Gosling at her Australia Day address at the Port Hotel.

Bar' Tuckey ran the hotel at that time.

Mrs Gordon said Mr Tuckey did not realise she was Aboriginal because of her light skin colour and apologised that her room might be a bit noisy because it was "right above the coon bar."

"I told him I was a 'coon' myself," Mrs Gordon said.

Mrs Gordon became a Commissioner of the Aboriginal and Torres Strait Islander Commission in 1990 and, in 2000, chaired the inquiry into family violence and child abuse in Aboriginal communities that became known as the Gordon Inquiry.

Mrs Gordon began her appointment to the Perth Children's Court in 1988, becoming the first full-time Aboriginal magistrate in the State's history.

"I still get 19-year-olds who wander in and ask to see 'Nana Sue'," she said.

Picnic Day

The Perth Chapter of the CRO Trackers held their third annual picnic / barbeque at Whitemans Park, Mussel Pool, on Sunday April 15th.



*Back row: Terry Kierans, John Preece, Derek Major, Brian Milne, Bob Hocking, David Gardiner.
Middle row: Valerie Kierans, Tito Teraci, Barbara Thompson, Alison Gregg, Betty Hocking,
Jim Gregg, Paul Dench.
Front row: John Easterbrook, Gayle Easterbrook, Joan Teraci, Lorraine Glocke, Joan Dench,
Ali Dench.*

Photograph courtesy Lorraine Glocke (aka Teeny Bopper)

It was a wonderful day, meeting up with those whom I had not seen for nearly 37 years. They included Brian Milne, David Gardiner, John and Gayle Easterbrook, and John Preece. Not forgetting Ali Dench who was a very young schoolgirl when last seen by me.

It mustn't pass noting that Derek Major made the six hour trip from Kalgoorlie to attend—facing another six hours on the road for his trip home. Just shows that the memory remains. A lay down misère as winner of the furthest travelled award!

Some of the regular attendees had to miss out this year due to family engagements, but I'm sure they will be there next year. For your calendars—the first Sunday after Easter.

40th Anniversary of 1st Lunar Landing

Write it down—NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Gemini VI-A ctd

(Continued from page 2)

as close as 30 centimetres to 90 meters, talking over the radio. At one stage the spacecraft were stationkeeping so well that neither crew had to make any burns for 20 minutes.

As the sleep periods approached Gemini VI-A made a separation burn and slowly drifted out to 16 kilometers. This ensured that there wouldn't be any accidental collisions in the night. But before everyone went to sleep, the crew of Gemini VI-A had a surprise for everyone.

"Gemini VII, this is Gemini VI. We have an object, looks like a satellite going from north to south, probably in polar orbit.... Looks like he might be going to reenter soon. Stand by one.... You just might let me to pick up that thing.... I see a command module and eight smaller modules in front. The pilot of the command module is wearing a red suit."

At that point, the sound of "Jingle Bells" was

heard played on an 8-hole harmonica and a handful of small bells.

All primary objectives were achieved. A secondary objective experiment, D-8 Radiation in Spacecraft, was aborted because station keeping with Gemini VII interfered with the experiment.

Gemini VI-A reentered the next day landing within 18 km of the planned site, the first truly accurate reentry. It was also the first to be televised live, through a satellite linkup from the recovery aircraft carrier USS Wasp.

The Gemini VII and VI-A missions were supported by the following U.S. Department of Defense resources:

10,125 personnel, 125 aircraft and 16 ships.

Courtesy NASA

Biographies

The late Captain Schirra was one of the seven Mercury Astronauts named by NASA in April 1959.

On October 3, 1962; he piloted the six orbit Sigma 7 Mercury flight; a flight which lasted 9 hours, 15 minutes.

Schirra next served as backup command pilot for the Gemini III Mission, and on December 15-16, occupied the Command Pilot seat on the history-making Gemini 6 flight. The highlight of this mission was a successful rendezvous of Gemini 6 with the already orbiting Gemini 7 spacecraft, thus, accomplishing the first rendezvous of two manned maneuverable spacecraft and establishing another space first for the United States.

Known as a "text book" pilot, Schirra remained in the spacecraft following his Mercury and Gemini flight and is the first Astronaut to be brought aboard recovery ships twice in this manner.

He was the Command Pilot on Apollo VII, the first manned flight test of the United States spacecraft.

Apollo VII began on October 11, 1968, with Command Module Pilot Donn F. Eisele and Lunar Module Pilot Walter Cunningham. Schirra participated in, and executed, maneuvers enabling crew members to perform exercises in transposition and docking and orbit rendezvous with the S-IVB stage from the Saturn IB launch vehicle.

The mission completed eight successful tests and maneuvering ignitions of the service module propulsion engine, measured the accuracy of performance of all spacecraft systems, and provided the first effective television transmission of on-board crew activities.

Captain Schirra has logged a total of 295

(Continued on page 8)

Biographies ctd.

(Continued from page 7)

hours and 15 minutes in space. He is unique in that he is the only Astronaut to have flown Mercury, Gemini, and Apollo.

Schirra retired from the Navy as a captain and left NASA on July 1, 1969 and ventured into business. He started in 1984, with Betty Grissom (Gus Grissom's widow) and surviving Mercury astronauts, the Mercury Seven Foundation to raise money for college scholarships for science and engineering.

General Stafford was selected among the second group of astronauts in September 1962 by the National Aeronautics and Space Administration (NASA) to participate in Projects Gemini and Apollo.

In December 1965, he piloted Gemini VI to the first rendezvous in space, and helped develop techniques to prove the basic theory and practicality of space rendezvous.

In June 1966 he commanded Gemini IX and performed a demonstration of an early rendezvous that would be used in Apollo, the first optical rendezvous, and a lunar orbit abort rendezvous.

From August 1966 to October 1968 he headed the mission planning analysis and software development responsibilities for the astronaut group for Project Apollo.

General Stafford was the lead member of the group, which helped formulate the sequence of missions leading to the first lunar landing mission. He demonstrated and implemented the theory of a pilot manually flying the Saturn booster into orbit and the translunar injection maneuver.

General Stafford was commander of Apollo 10 in May 1969, first flight of the lunar module to the moon, performed the first rendezvous around the Moon, and performed the entire lunar landing mission

except the actual landing.

He also made reconnaissance and tracking on future Apollo landing sites. General Stafford was cited in the Guinness Book of World Records for highest speed ever attained by man, that occurred during Apollo 10 reentry when the spacecraft attained 24,791 statute miles per hour.

He was assigned as head of the astronaut group in June 1969, responsible for the selection of flight crews for projects Apollo and Skylab.

In June 1971, General Stafford was assigned as Deputy Director of Flight Crew Operations at the NASA Manned Space flight Center.

He logged his fourth space flight as Apollo commander of the Apollo-Soyuz Test Project (ASTP) mission, July 15-24, 1975, a joint space flight culminating in the historic first meeting in space between American Astronauts and Soviet Cosmonauts.

General Stafford assumed command of the Air Force Flight Test Center November 4, 1975. He was promoted to the grade of Major General August 9, 1975, with date of rank of June 1, 1973.

Gen. Stafford was promoted Lt. Gen. on March 15, 1978 and on May 1, 1978 assumed the duties as the Deputy Chief of Staff, Research, Development and Acquisition, HQ USAF, Wash., DC. During this time Gen. Stafford was personally involved in initiating the F-117A Stealth Fighter. In early 1979, he wrote the initial desired specifications on and started the advanced technology bomber development, now designated the B-2 "Stealth Bomber".

Gen. Stafford retired from the Air Force in November 1979.

Courtesy N.A.S.A.

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



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<http://crotrak.com>

My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm.

I am sure that there is much more material hidden away somewhere, and putting it up on the website will ensure that it is there for posterity, and doesn't get lost.

Currently the 1989 and 1994 Reunion pages have been updated and photographs from the 2007 Perth Picnic are also published

Procurement of Master Planning Services

"The Shire of Carnarvon invites consultants for the preparation of a Master Plan for OTC Satellite Earth Station (fmr) Carnarvon. The aim of the Master Plan is to produce a framework that can be used to guide and set realistic priorities for future use of the place."

It goes on to say, "... The team is likely to comprise expertise in the areas of heritage master planning, heritage property management and development, heritage

architecture, conservation, landscape (sic), tourism, business development and interpretation..."

Forgive me if I am lacking in comprehension, but what, if anything, is happening with regard to the proposed WA Space Museum. As Allison Gregg has asked, "*Will it collect everything relevant to Space research / flight / science in WA, or concentrate on Carnarvon (or northwest) connections?*"

Editor

~ LOS ~

We sadly report the passing of Col Death who went to join his mate Dot in April. He was the Logistics Supervising Officer (from about Sep '63 to Sep '67) in control of stores and purchasing from CRO's beginning until Field Projects reassigned him to supervise a large installation contract at NW Cape.

Paul Dench

Social Club News

November 1969

TWX

PRIORITY

31/0930Z

FM MSFN

TO STADAN

DLD ALL STATION SHIFT SUPVRS/GCC

SUBJECT: EQUIPMENT AVAILABILITY - REVISED PROCEDURE.

IN ORDER TO IDENTIFY FURTHER THE EQUIPMENT AVAILABILITY PERCENTAGE FIGURE, IT WILL BE THE RESPONSIBILITY OF PERSONNEL AT THE MORNING BRIEFING TO CATEGORISE EQUIPMENT FAILURES AS FOLLOWS:

1. GD/E R&RR EQUIPMENT FAILURE (JUNK). STATION COULD NOT POSSIBLY HAVE REPAIRED THE EQUIPMENT.
2. BIOS EQUIPMEMENT FAILUKE (MUNK). FAILURE CAUSED BY PRIMATE MALFUNCTION.
3. STEERABLE ANTENNA AND/OR ENCODER FAILURE (CLUNK). EQUIPMENT FAILED DURING OPELIATIONS, PERSONNEL MAY OR MAY NOT HAVE HAD THE GOOD OIL.
4. EQUIPMENT FAILURE DUE TO RAIN OR HIGH HUMIDITY (SUNK). OPERATORS MAY BE WET.
5. EQUIPMENT ERRONEOUSLY REPORTED AS SERVICEABLE (OR VICE VERSA). CAN ALSO BE ATTRIBUTED TO INCORRECT PASSUMS.
6. EQUIPMENT DAMAGED BEYOND REPAIR (FUNK). USED WHEN OPERATOR RUNS SCREAMING OUT OF EQUIPMENT ROOM ON SIGHTING FLAMES LEAPING OUT OF EQUIPMENT RACKS.
7. EQUIPMENT FAILURE DUE INCORRECT ADJUSTMENT (SWAN), FAILURE DIRECTLY ATTRIBUTABLE TO SHIFT SUPERVISOR'S STATE OF HEALTH.

THESE CODE LETTERS WILL BE ENTERED IN THE CAUSE COLUMN ON THE FAILURE REPORT FORMS WHEN THEY ARE RECEIVED ON STATION.

COFF SENDS

31/0932Z OCT ACRO

Saturn V May Fly Again!

From the Washinton Post-Herald
by Bart Caseing

“Retired US Army general Cove Hampton has written a confessional book that details a secret, unnamed, 1960’s US plan to preserve three complete, but unassembled, Saturn V moon rockets in an underground storage facility in Alabama. The President George W. Bush administration now plans to use these rockets to put America back on the moon if Congress refuses to adequately fund America’s return to the moon. In early 2004, President Bush announced as part of his “Vision for Space Exploration”, that America should return to the moon

Cove provides fascinating details of the secret operation. In late 1963, U.S. President Lyndon Johnson began to express serious doubts about the willingness of the American electorate to continue support the NASA Apollo moon landing program. Johnson, one of the architects of the Apollo challenge, did not feel overly confident that America would follow through on the moon landing commitment of the late President, John F. Kennedy. President Kennedy had appointed Johnson to lead the task force of experts that recommended the man-on-the-moon goal to Kennedy. JFK announced that America would land a man on the moon and return him safely to the earth, “within the decade of the sixties”.

Johnson, a Cold Warrior to the core of his soul, was very concerned tat the Soviets would lay claim to the moon and base advanced weapon-systems on the lunar surface. Johnson realized that the charismatic Kennedy possessed the force of personality that would be required to keep the American taxpayer firmly behind the moon program. Johnson was worried about his own ability to maintain public support for the US moon program.

Johnson, who was given the oath of office during the memorable November 22, 1963 Air Force One flight from Dallas to Washington following Kennedy’s assassination, had a very vivid nightmare during his first night in the White House. Johnson dreamed that the Apollo program would be canceled by Congress before the first astronauts flew on the mighty Saturn V rocket.

Johnson met with his closest aides about his concerns, and although he never mentioned his nightmare, the group agreed to set into action a plan to guarantee that America would have three Apollo moon rockets in reserve.

A giant, top secret underground storage facility was constructed near Fort McClellan, Alabama. Fort McClellan was, and still is, a storage facility fro US chemical weapons reserves. It was a perfect place to hide something as large as disassembled moon rockets.

The Johnson plan was a costly and complicated operation that involved unwitting assistance from the Apollo Saturn rocket contractors. One by one, individual Saturn rocket components were tagged for salvage after they falsely “failed” NASA quality inspections. It is unsure if the inspectors were a part of the secret operation, or if their inspection equipment was doctored to provide false negative results.

The tagged components traveled a convoluted route to Fort McClellan via various transportation modes. At McClellan, all of the shipments were secretly placed into the special storage facility. A classified mixture of what Hampton describes as, inert gases” has kept the Saturn components as good as new. “We place a lot of other items, including several showroom condition 1969 Chevy Impalas into that facility in order to periodically verify the quality of the storage. I was there when we drove one of those Impalas out of the facility on the 4th of July in 2002!”

“April Fools!” Hampton added. We gotcha!

[This April Fool’s hoax is dedicated to the memory of Daniel Hagood, Hampton’s good friend. Dan passed away on April 1, 2006. Dan was the greatest prankster of all time, and he would have loved this prank. The occasional pranks keeps us on our toes and helps us recognize “real” hoaxes”.. Jim]

Editor’s note:

This is published by courtesy of Project Apollo news group. I republish it in memory of Wally Schirra — arguably the originator of the “gotcha” and its greatest proponent.

Keeping the Memory Alive

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Vol 5 September 2007

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. Now, in Volume 5, we continue to catch up on those not yet covered.

So our key mission coverage this issue will be Apollo 15, launched in July 1971 and manned by David Scott, Alfred Worden and James Irwin.

Also included in this issue:

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Apollo XV

Apollo 15 was the fourth mission in which humans walked on the lunar surface and returned to Earth.

Its primary scientific objectives were to observe the lunar surface, survey and sample material and surface features in a preselected area of the Hadley-Apennine region, setup and activate surface experiments, and conduct inflight experiments and photographic tasks from lunar orbit.

This mission was the first flight of the Lunar Roving Vehicle which astronauts used to explore the geology of the Hadley Rille/Apennine region. The LRV allowed the astronauts to venture further from the Lunar Module than in previous missions.

The space vehicle was launched on schedule from the NASA Kennedy Space Center, Fla., at 14:34:00 a.m. GMT on July 26, 1971.

At 22:04:09 GMT on July 30, the LM descent propulsion system was fired for powered-descent initiation. The LM landed approximately 12 minutes later with



sufficient propellant remaining to provide an additional hover time of 103 seconds, had it been required.

During a lunar stay of 66 hr 54 min 53 sec, a 33-min standup extravehicular activity (EVA) and three periods of surface EVA totaling approximately 18.5 hr were performed.

The astronauts were able to collect samples from the low dark plains (maria), the Apennine highlands, and the area along Hadley Rille, a long, narrow winding valley.

Approximately 76 kg of lunar material including soil, rock, core-tube, and deep-core samples were returned to Earth.

Liftoff of the LM ascent stage occurred at 17:11:23 GMT on August 2 and was monitored by the ground-command television assembly mounted on the LRV.

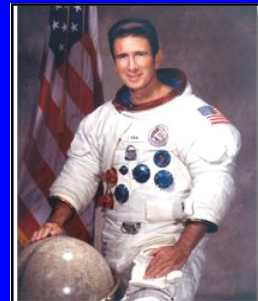
Commanded from Earth, the television assembly was planned to provide coverage after liftoff of the lunar surface and of a lunar eclipse on August 6. Although the television assembly operated successfully during all three EVA periods, the elevation



*Alfred Worden
Command Module
Pilot*



*David Scott
Commander*



*James Irwin
Lunar Module Pilot*

(Continued on page 7)

Whereabouts?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you to those whose contributions have added just that bit more.

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Keith	Barnard	D	Kettlety	Lynne	Rosser
Deidre	Beaumont	Joy	King	Stewart	Sands
Elizabeth	Beckett	M	King	Ron	Sargeant
Michael	Billings	Gloria	Klarie	Russell	Schwarzer
Bill	Boyle	Peter	Kloppenburg	Lorraine	Scott-Malcolm (Erlandshaw)
Hans	Britz	Roy	Lester	Michael	Scott-Malcolm
Charlie	Brown	Don	Lindsay	John	Sharples
J	Burdett	Gloria	Lyon-Roberts	P	Sims
Martin	Burgess	John	Mahaffey	Frank	Sloane
Basil	Byrne	Peter	Maine	J	Smith
G	Carrick	Ian	McDonald	Mike	Smith
Brian	Clifford	S	McDonald	P	Smith
Barbara	Cobcroft	Frank	McGregor	Roger	Smith
F	Dawes	Don	McLellan	Bill	Smythe
Marilyn	Dick	Verica	Milanovich	Dave	Standbury
Phil	Dickinson	Ray	Mills	John	Stanton
Neville	Dippell	Bill	Mills	Alex	Stevenson
John	Draper	Peter	Milne	Barbara	Stevenson (Vernon)
Dave	Elliot	Marilyn	Milner (Gobby)	John	Swanney
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J	Gerschwitz	John	Parkinson	A	Watermeyer
Geoff	Hammond	Mike	Pender	Jack	Watson
Ron	Harmes	Wendy	Petersen	Bernie	Wilbourne
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	(Brookes)	Gerry	Plummer		

The quest continues. I have been given information concerning the possible whereabouts of a few of these, but have not been successful in obtaining, or confirming, details. Thanks to Hamish Lindsay I have caught up with Don Blackman however.

TK

Apollo Image Archive

In 1961, President John F. Kennedy announced an ambitious goal of sending an American safely to the Moon before the end of the decade. NASA answered the challenge in 1969 with the successful landing of the Apollo 11 Lunar Module (LM).

To record their historic voyages and collect scientific observations many thousands of photographs were acquired with hand-held and automated cameras during all the Apollo missions. After returning to Earth, the film was developed and stored at [Johnson Space Center \(JSC\)](#), where they still reside. Due to the historical significance of the original flight films, typically only duplicate (2nd or 3rd generation) film products are currently available for study and used to make prints.

To allow full access to the original flight films for both researchers and the general public, Johnson Space Center and Arizona State University's [Space Exploration Resources](#) are scanning and creating an online digital archive of all the original Apollo flight films. Through this online interface, users may browse through the archive and download any of the images. This web site also provides a suite of resources regarding the images and the cameras that were used during the Apollo program. Finally, the scanning process is estimated to take three years with the first production scans recorded in late June 2007.

Procedure for scanning the film

All the original Apollo film can be found in the Film Archive (Building 8) at Johnson Space Center (JSC). Due to the importance in preserving these films, the original film is not allowed to leave the building.

The film is stored in a freezer (0° F), which is located in a large refrigerator that is maintained at 55° F. The staff at JSC has

developed a procedure, and used it many times, for removing film from the freezer for scanning and making copies of the film.

1. The sealed film canister is identified and then transferred from the freezer to the refrigerator where it is allowed to equilibrate for 24 hours.
2. The sealed canister is then removed from the refrigerator and placed in room temperature environment and allowed to equilibrate for an addition 24 hours.
3. The film is then removed from the canister and scanned.
4. The film is placed back in the canister, sealed, and then placed back in the cold vault.

The Scans

An important aspect of this project is the effort to record as much of the information content of the film very as possible. Scans are being acquired with a Leica DSW700 photogrammetric scanner allowing for very high geometric and radiometric fidelity. In addition, the films are being scanned at very high spatial resolutions (up to 200 pixels/mm) and an extended bit depth (14-bit A/D) in order to insure that as much of the information content of the film is preserved.

The scanning process will take about three years to complete. First, all the 35-mm photographs were scanned (about 620 frames). Currently, the Metric camera's 10,153 frames (BW) are being scanned, and next the 4,612 frames from the Panoramic camera (BW) will be scanned. Finally, the approximately 20,000 Hasselblad photographs (BW and color) will be scanned.

<http://apollo.sese.asu.edu/index.html>

Where Are They Now?

Hello to all; (“We have AOS!”). Greetings from the foot of the Colorado Rockies. The Internet certainly changes things—including bringing to me pictures of people and places I thought I’d never see again. Fiddling around with Wikipedia and Google on a hot Sunday evening here, I found information on various “hush-hush” sites like Pine Gap; then, info on Tidbinbilla (which I visited on my round tour after I left CRO/ CVQ for good in June ‘71, getting shown round by Col Smith, ex-CRO Company Manager., who’d hired me in Perth; I’ve also seen Pine Gap’s radomes from Mt. Gillen which I climbed twice); then, I was led to the “[Crotrak](#)” site. It was rich; I paged through it with amazement, looking at scenes from the station, reunions with many pictures of people I knew or worked with, and so on. Many left interesting messages.

About myself, I’ll be brief before I start a book. Having migrated from the US in ‘66-’67, I was hired for CRO by Col Smith in Perth in ‘69, and left for there the long way around, via Tom Price and Wittenoom as well as Woodstock Station with its aboriginal petroglyphs in the Chichester Ranges. I worked at the station, mostly in USB as the timing tech (my predecessor, Roger McMurtrie, appeared at a reunion or picnic; I met him at ANU on the way back from the “*Loran-C Junket*”), ‘69-’71. Said “*Junket*” was a jet-set trip to Goddard in Maryland and back I lucked out and was sent on; I used all but some 30 miles of my Qantas “*mileage ticket*”, if anyone remembers those.

I lived with Phil Vigilante at 978 or 43B Babbage Island Road, next to Tito Teraci who appears too. I have good memories of the station; it was a great experience and tremendous good luck when I spotted the “*Help Wanted*” (“*Situations Vacant*”) ad in The West Australian, applied and was hired. We survived a cyclone while I was there; it

pulled the “*bird bath*” 30’ USB antenna around through its brakes but did little damage.

Naturally, much happened since I left CRO/ CVQ (the airport code) in June ‘71. I climbed many of the high points I’d missed on the year-long safari out to Perth, on one twice as long going back including a round tour of “*Oz*”—on which I visited Tom Lysaght at AWA-Nowra, climbed Mt. Kozzi and others. I also made it up Kilimanjaro and accomplished many other things, and more since including many of Colorado’s mountains and more overseas. I got back to Australia on tourist visas, including a trek down the Larapinta, another of Rex Ellis’ outback safaris (I did one right after I left CRO), skiing in Oz & NZ, and I even called on Stan Yan of USB in Sydney (and did the “*bridge climb*”). I also met, accidentally, Rob & Sue Frost of Computers, now living in Murwillumbah NSW where I climbed Mt. Warning which I’d seen from the Lamington Plateau or McPherson Ranges.

Along the way, I chanced on another field or outback type job, this one at climatic observatories with NOAA of the US Govt. They sent me to Barrow, Alaska in the Arctic and then Tafuna in American Samoa, the opposite! Another incredible experience. To make a long story short, I fetched up back in Boulder, Colorado, a college town some 50 km NW of Denver where I live in retirement. I hope to get back to Perth in a couple of years and do “*the Bibb*”. I passed through it in ‘02 on the way to Mauritius with a mate from Cairns, and met up with Bob Unwin, a workmate at CRO, (after taking the train from Cairns via Sydney, Adelaide and Alice Springs).



Roger Williams

TDRSS

The Tracking and Data Relay Satellites (TDRS) comprise the communication satellite component of the Tracking and Data Relay Satellite System (TDRSS). TDRSS is a communication signal relay system which provides tracking and data acquisition services between low earth orbiting spacecraft and control and/or data processing facilities. The system is capable of transmitting to and receiving data from spacecraft over at least 85% of the spacecraft's orbit.

The TDRSS space segment consists of six on-orbit Tracking and Data Relay Satellites located in geosynchronous orbit. Three TDRSSs are available for operational support at any given time. The operational spacecraft are located at 41, 174 and 275 degrees west longitude. The other TDRSSs in the constellation provide ready backup in the event of a failure to an operational spacecraft and, in some specialized cases, resources for target of opportunity activities.

Courtesy National Space Science Data Center

Mingenew at the Forefront

The Midwest Times
May 31 2007

MINGENEW will be at the forefront of Australia's involvement in international space projects when a new million-dollar Tracking and Data Relay Satellite System (TDRSS) is built in coming months.

Mingenew Shire recently supported an application by CSIRO in conjunction with American space colossus NASA to construct a new satellite tracking facility to add to two already based on privately owned land at Yatharagga.

The Australian TDRSS Facility, which Shire president Ian Fitzgerald said was expected to be completed by the end of 2007, will be installed by Honeywell Technology and CSIRO.

Yatharagga station manager Vince Noyes said the facility would send up signals to move the TDRS-7 satellite, currently

located above South America at the equator, thousands of kilometres east. "Satellite TDRS-3, which supports such NASA missions as the Hubble Space Telescope and the International Space Station, is getting a bit crook and needs to be replaced. The TDRSS facility at Mingeneew will move TDRS-7 3° per day to replace TDRS-3."

Mingenew Shire had advertised the proposal in case of public opposition but Mr Fitzgerald said no complaints had been received. "The locals wouldn't worry about it, it's been out here for years," he said. "It brings in a little bit of income and puts Mingeneew on the map to an extent."

Yatharagga also houses a Satellite Laser Station and Universal Space Network tracking station. Those dishes were initially involved in NASA's abandoned Triana mission but now are used to download data from passing satellites.

Courtesy Trevor Mosel

40th Anniversary of 1st Lunar Landing

Write it down—NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Apollo XV ctd

(Continued from page 2)

clutch began to slip during the second EVA, and operation deteriorated during the rest of the mission. When activated about 40 hr after LM liftoff, the unit operated satisfactorily for 13 minutes then failed.

Although entry was nominal and all three main parachutes deployed initially, one parachute collapsed before splashdown. However, the CM was landed safely at 20:45:53 GMT, August 7, 1971.

Courtesy NASA

Biographies

David Scott was one of the third group of astronauts named by NASA in October 1963.

On March 16, 1966, he and command pilot Neil Armstrong were launched into space on the Gemini 8 mission—a flight originally scheduled to last three days but terminated early due to a malfunctioning thruster. The crew performed the first successful docking of two vehicles in space and demonstrated great piloting skill in overcoming the thruster problem and bringing the spacecraft to a safe landing.

Scott served as command module pilot for Apollo 9, March 3-13, 1969. This was the third manned flight in the Apollo series, the second to be launched by a Saturn V, and the first to complete a comprehensive earth-orbital qualification and verification test of a “fully configured Apollo spacecraft.” The ten-day flight provided vital information previously not available on the operational performance, stability, and reliability of lunar module propulsion and life support systems.

Highlight of this evaluation was completion of a critical lunar-orbit rendezvous simulation and subsequent docking, initiated by James McDivitt and Russell Schweickart from within the lunar module at a separation distance which exceeded 100 miles from the command/service module piloted by Scott.

He made his third space flight as spacecraft commander of Apollo 15, July 26 - August 7, 1971.

He has logged 546 hours and 54 minutes in space, of which 20 hours and 46 minutes were in Extravehicular Activity. He is only one of three Astronauts who have flown both earth orbital and lunar Apollo Missions.

He retired from the Air Force in March 1975 with the rank of Colonel and over 5600 hours of flying time.

Colonel Irwin was commissioned in the Air Force upon graduation from the Naval Academy in 1951. He received his flight training at Hondo Air Base and Reese Air Force Base, Texas.

Prior to reporting for duty at the Manned Spacecraft Center, he was assigned as Chief of the Advanced Requirements Branch at Headquarters Air Defense Command. He was graduated from the Air Force Aerospace Research Pilot School in 1963 and from the Air Force Experimental Test Pilot School in 1961.

He was one of the 19 astronauts selected by NASA in April 1966.

He was crew commander of lunar module (LTA-8)—this vehicle finished the first series of thermal vacuum tests on June 1, 1968. He also served as a member of the astronaut support crew for Apollo 10 and as backup lunar module pilot for the Apollo 12 flight.

(Continued on page 8)

Biographies ctd.

(Continued from page 7)

Irwin served as lunar module pilot for Apollo 15, July 26 to August 7, 1971.

In completing this, his first flight, Irwin logged 295 hours and 11 minutes in space—19 hours and 46 minutes of which were in EVA.

Irwin was the first automobile passenger on the moon, since he was not the driver of the Lunar Roving Vehicle (LRV) carried along for this mission in the Lunar Module (LM) Falcon's Descent Stage.

Colonel Irwin resigned from NASA and the Air Force in July 1972, to form a religious organization, High Flight Foundation, in Colorado Springs, Colorado. He was Chairman of the Board.

Beginning in 1973, Irwin led several expeditions to Mount Ararat, Turkey in search of the remains of Noah's Ark. His expeditions failed to find any sign of the Ark. In 1982, he was injured during the descent from the mountain and had to be carried for part of the way.

Irwin suffered a serious heart attack near his home in Colorado Springs, Colorado. He died on August 8, 1991 as the result of a subsequent heart attack in Glenwood Springs, Colorado.

A patch cut by Irwin from the backpack abandoned on the Moon during Apollo 15 was auctioned at Christie's in 2001 for \$310,500 in a consignment of material from

Irwin's estate that garnered "a combined \$500,000".

Alfred Worden was one of the 19 astronauts selected by NASA in April 1966. He served as a member of the astronaut support crew for the Apollo 9 flight and as backup command module pilot for the Apollo 12 flight.

Worden served as command module pilot for Apollo 15, July 26 - August 7, 1971.

Worden logged 38 minutes in extravehicular activity outside the command module, "Endeavour." In completing his three excursions to "Endeavour's" scientific instrument module bay, Worden retrieved film cassettes from the panoramic and mapping cameras and reported his personal observations of the general condition of equipment housed there.

In completing his space flight, Worden logged 295 hours and 11 minutes in space.

During 1972-1973, Worden was Senior Aerospace Scientist at the NASA Ames Research Center, and from 1973 to 1975, he was chief of the Systems Study Division at Ames.

After retirement from active duty in 1975, Worden became President of Maris Worden Aerospace, Inc., and is currently Staff Vice-President of BG Goodrich Aerospace Brecksville, Ohio.

Courtesy N.A.S.A. and Wikipedia.org

Trivia

"The Desktop I'm using to send this post has more computer power than a whole Apollo Tracking Station had in 1969, and one of those \$5 musical Birthday cards you can buy at Hallmark has more computer power than what existed in the whole world in 1950."

From: Brian Riehle - ex Guam M&O

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



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<http://crotrak.com>

My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm.

I am sure that there is much more material hidden away somewhere, and putting it up on the website will ensure that it is there for posterity, and doesn't get lost.

~ LOS ~

We sadly report the passing of Doug (DW) Beaney in July, just a few days before his 76th birthday. Born in East Coolgardie 4th August 1931, he died on 28th July 2007.

He, Trevor Mosel and the late Bill Graham all worked together many years before the Tracking Station days. He lost a lung over 20 years ago and his kids paid for him and wife Jan to come to that first Carnarvon reunion in 1989 as they thought that he was not long for this earth. Sadly his wife died the next year. So he has done well.

Doug was a tower of strength at those reunions. He came a week early and helped us a great deal. In fact I don't think that there would have been a reunion without him. Whatever needed doing or fetching or carrying, Doug was there.

References to his Tracking Station days, and extracts from first lunar landing broadcast, were highlights of his funeral service at Karakatta Cemetery.

Val Mosel

I have also been advised by Ken Anderson that yet another CRO Tracker has passed on. Martin Fenney, ex FPQ-6, died of a heart attack 8th March 2007.

Social Club News

November 1969

Page 8.

"A DAY IN THE LIFE OF THE STADIR"

-as performed by the inmates of the Carnarvon Tracking Station under the direction of the Marquis de Sade.

SCENE : The action takes place in the Stadir's office.
At rise of curtain we see the CSR, the Deputy Stadir, the DOS Admin Officer, Stadir, a mountain devil, and two emus standing around the Stadir's desk.

DOS Admin. Officer : (To CSR) Have these emus got security clearances?

CSR : How the hell would I know. Ask them yourself.

(Enter the Safety Officer in yellow helmet)

Stadir: Whitworth, get rid of those two obnoxious animals immediately.

(Safety Officer exits dragging the Deputy Stadir and the DOS Admin Officer by the scruff of the neck)

Stadir : Don't forget the mountain devil.

CSR : If you lay a hand on me Whitworth, you're fired.

(Barry Campbell enters disguised as a diesel engine. Barry's entry is rather unorthodox in that he is lowered head first from the chandelier)

Stadir : What the devil are you doing up there, Campbell?

Barry : *(Shrugging)* Just hanging around

(At that instant, the chandelier breaks and Barry falls head first to the floor)

CSR : Good thing he fell on his head, otherwise he might have hurt himself.

Courtesy Wendy Yarnold

To be continued

Buzz Aldrin Plans Spaceflight Raffle

By Tariq Malik

Staff Writer

Posted: 17 April 2007

NEW YORK — Former Apollo astronaut Buzz Aldrin is drawing up plans for a lottery-like contest, with space experiences for prizes, in hopes of making orbital spaceflight available to more than just wealthy entrepreneurs.

Billed as the ShareSpace Stakes, the contest is envisioned to function as part of Aldrin's ShareSpace Foundation, a firm designed to promote interest in human spaceflight and science education.

"It's something akin to a sweepstakes or a raffle," Aldrin said Tuesday during the Space Investment Summit here, adding that many details remain to be determined. "We have yet to set up the rules and regulations."

Aldrin said any entrants would have to be age 18 or older to enter the ShareSpace Stakes, and any winners would likely be required to satisfy the appropriate health requirements for spaceflight.

Currently, the only orbital flights available for space tourists head to the International Space Station and are brokered with Russia's Federal Space Agency by the Virginia-based firm Space Adventures for a cost of between \$20 million and \$25 million. U.S. entrepreneur Charles Simonyi, 58, is currently in the midst of such a flight aboard the space station as the outpost shifts between the Expedition 14 to Expedition 15 missions.

Aldrin, who made history on July 20, 1969 during NASA's Apollo 11 mission when he became the second human ever to set foot on the Moon, said some 400,000 people, each paying about \$50 a ticket, could cover the cost of an orbital tourist flight in one vision of the Stakes raffle. Other prizes could include weightless flights aboard Zero G aircraft or other experiences, he added.

"Our intent is to open the spaceflight experience," Aldrin said. "There's no question that space travel is poised to go from the few to the many."

Courtesy Space.com

The Shadow of the Moon

The adventure of exploring another world is shown in a fascinating new documentary by Larry Evans, September 2007

"It was a time when we made bold moves."

James Lovell, Apollos 8 and 13

Countless documentaries have attempted to capture the essence of what it was like to fly to the Moon during the glory days of the Apollo program. Some have been fairly successful, but usually still feature the standard talking heads and grainy umpteenth-generation film footage.

One notable previous exception was Al Reinert's 1989 work, *For All Mankind*. This was the first attempt to get Apollo footage onto a large theater screen, and is regarded favorably by most who had the opportunity to see it in that format.

Now, nearly 20 years later, we finally have a

worthy successor in David Sington's *In the Shadow of the Moon*. Unlike so much that has come and gone before, Sington has reinvented the Apollo documentary format. Where the earlier film left us wanting much more, this time around we finally get that which we've been waiting for so long. Beautiful and rarely seen footage has been taken from the archives at NASA, transferred to high-definition video, and given new life in a way never before imagined.

Speaking with numerous Moon Voyagers—at least one from each Apollo lunar mission—we hear their thoughts and feelings about their apocryphal experiences. These are not glossed-over propaganda statements, but heart-felt and honest reminiscences from these astronauts, giving us insights that have never before been the subject of a space documentary.

Courtesy Space.com

Keeping the Memory Alive

NASA Pays \$19m for Loo

Correspondents in Cape Canaveral

July 06, 2007

NASA has agreed to pay \$US19 million (\$A22.2 million) for a Russian-built toilet system for the international space station.

The figure may sound astronomical for a toilet, but NASA officials said it was cheaper than building their own. "It's akin to building a municipal treatment centre on Earth," NASA spokeswoman Lynnette Madison said, explaining the cost of the new toilet system.

Also, astronauts are familiar with how it works since it is similar to one already in use at the space station. The new system will be able to transfer urine to a device that can produce drinking water.

The new system is scheduled to be delivered to the US side of the space station in 2008. It will offer more privacy than the old toilet system, which will definitely be needed: The space station crew is expected to grow from three to six people by 2009.

The system will be installed on the American side, and the current toilet system on the

Russian side will remain in place.

The space station toilet physically resembles those used on Earth, except it has leg restraints and thigh bars to keep astronauts and cosmonauts in place.

Fans suck waste into the commode. Crew members also have individual urine funnels which are attached to hoses, and the urine is deposited into a wastewater tank.

Crew members using the current toilet system on the Russian side must transfer tanks of their urine to a cargo ship, which burns up in Earth's atmosphere once undocked from the station.

The \$19 million toilet system was part of a larger contract valued at \$46 million that NASA signed this week with RSC Energia, a Russian aerospace company.

The extra equipment includes software updates for the station's inventory management system, a spare air pump and engineering support for a mechanism which allows space shuttles to dock with the space station.

Courtesy Australian IT

If undelivered, please return to:

CRO Trackers

PO Box 93, Quinns Rocks, WA 6030



Vol 5 December 2007

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. In Volume 4 we started to catch up on those not yet covered. Now, in Volume 5, we continue to catch up on those not yet covered.

So, our key mission coverage this issue will be Apollo 17, launched in December 1972 and manned by Eugene Cernan, Ron Evans (deceased) and Harrison (Jack) Schmitt.

Also included in this issue:

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Apollo XVII

The first phase of man's active exploration of the Moon came to an end with the Apollo 17 mission. Many questions about lunar science were answered during the intensive activity of the Apollo missions, but many more remain to be answered.

Some of the unanswered questions will be answered in the future from data already returned but as yet not fully analyzed, and some will have to wait for data yet to be returned from instruments already in place on the lunar surface. Still other questions must await further exploration.

Apollo 17 was launched December 07, 1972, 12:33:00 a.m. EST from Kennedy Space Center. The CSM, LM and SIVB booster stage were inserted 11 min 53 sec after launch into an Earth parking orbit of 91.2 by 92.5 n.mi. After two revolutions, at 08:45:37 GMT, Apollo 17 was inserted into translunar coast.

At 09:15:29 GMT on 12/7/72, the CSM was separated from the SIVB. Approximately 15 min later, the CSM docked with the LM. After CSM/LM extraction from the SIVB, the SIVB was targeted for lunar impact,



which occurred on December 10 at 20:32:43 GMT. The impact location was approximately 84 nm northwest of the planned target point and the event was recorded by the passive seismic experiments deployed on the Apollo 12, Apollo 14, Apollo 15 and Apollo 16 missions.

At 14:35:00 GMT on 12/11/72, the Commander and Lunar Module Pilot

entered the LM to prepare for descent to the lunar surface. At 18:55:42 GMT on 12/11/72, the LM was placed into an orbit with a perilune altitude of 6.2 nm. Approximately 47 min later, the powered descent to the lunar surface began. Landing occurred at 19:54:57 GMT on 12/11/72 at lunar latitude 20 degrees 10min North and longitude 30 degrees 46min East.

The 1st EVA was 7 hr 12 min long and was completed at 07:06:42 GMT on 12/12/72. The second EVA was begun at 23:28:06 GMT on 12/12/72. It lasted 7hr 37min and ended at 07:05:02 GMT on 12/13/72. The final EVA began at 22:25:48 GMT on 12/13/72 and ended at 05:40:56 GMT on 12/14/72.



Ron Evans
Command Module
Pilot



Eugene Cernan
Commander



Harrison Schmitt
Lunar Module Pilot

(Continued on page 7)

Whereabouts?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you to those whose contributions have added just that bit more.

TK

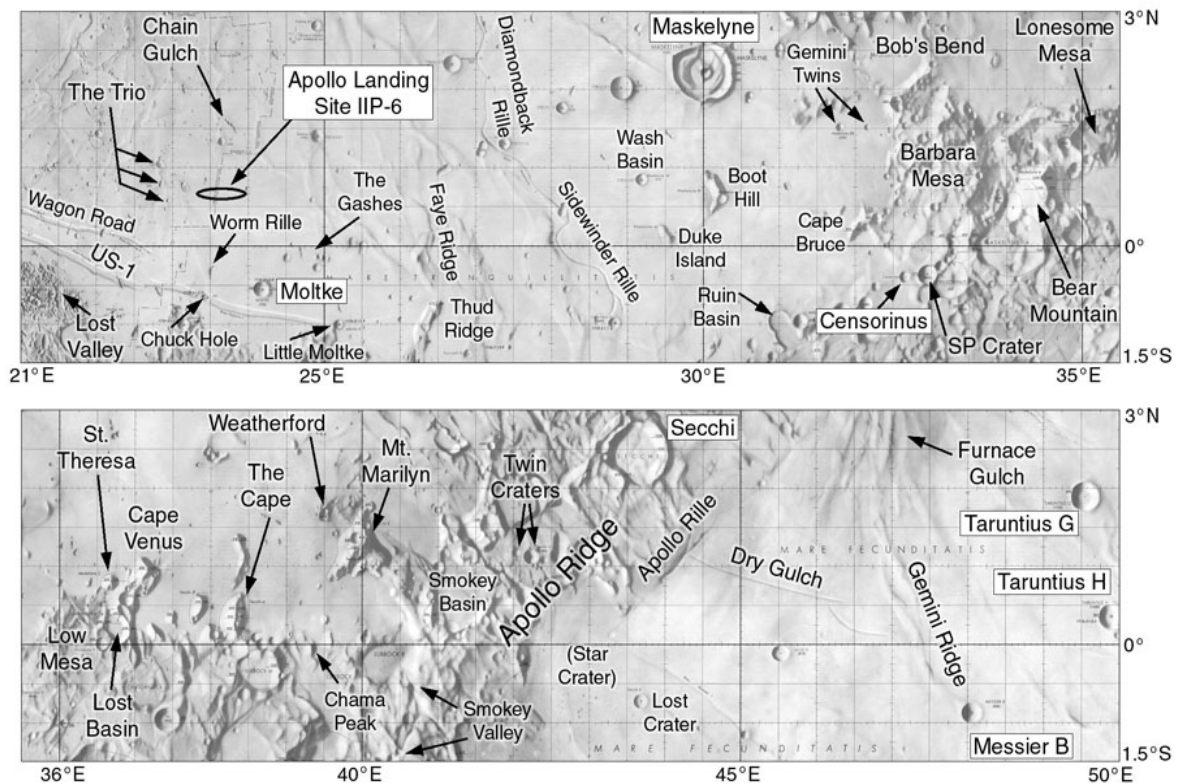
Eric	Ainsworth	Stan	Hills	D	Powell
Gay	Albon	Deidre	Howard	M.J.K	Power
Bill	Arbery	B	Hughes	A	Rees
Matt	Barber	B	Hunter	Frank	Rice
John (Allan)	Barber	Jim	Keenan	Ted	Rosser
Keith	Barnard	D	Kettlety	Lynne	Rosser
Deidre	Beaumont	Joy	King	Stewart	Sands
Elizabeth	Beckett	M	King	Ron	Sargeant
Michael	Billings	Gloria	Klarie	Russell	Schwarzer
Bill	Boyle	Peter	Kloppenburg	Lorraine	Scott-Malcolm
					(Erlandshaw)
Hans	Britz	Gloria	Lyon-Roberts	Michael	Scott-Malcolm
Charlie	Brown	John	Mahaffey	John	Sharples
J	Burdett	Peter	Maine	P	Sims
Martin	Burgess	Ian	McDonald	Frank	Sloane
Basil	Byrne	S	McDonald	J	Smith
G	Carrick	Frank	McGregor	Mike	Smith
Brian	Clifford	Don	McLellan	P	Smith
Barbara	Cobcroft	Verica	Milanovich	Roger	Smith
F	Dawes	Ray	Mills	Bill	Smythe
Marilyn	Dick	Bill	Mills	Dave	Standbury
Phil	Dickinson	Peter	Milne	John	Stanton
Neville	Dippell	Marilyn	Milner (Gobby)	Alex	Stevenson
John	Draper	Ian	Mitchell	Barbara	Stevenson
					(Vernon)
Dave	Elliot	John	Monteith	John	Swanney
J	Erickson	Dennis	Naylor	Barbara	Teahan
Kerrie	Eyre	Terry	Newman	Des	Terrill
Ross	Eyre	Kel	Nickerson	Alan	Thomas
Don	Frost	John	Noble	Jack	Thompson
Vic	Gadelvicius	Patsy	Nolan (Thompson)	Don	Thompson
Jamie	Gardiner	Frank	Parkinson	Mike	Travell
L	Gardner	John	Parkinson	Dave	Troup
Kim	Gates	Mike	Pender	A	Watermeyer
J	Gerschwitz	Wendy	Petersen	Jack	Watson
Geoff	Hammond	Don	Plumb	Bernie	Wilbourne
Ron	Harmes	Gerry	Plummer	Ray	Zatorski
Anne	Harvey				
	(Brookes)				

The quest continues; the list seems just as long. I have been given information concerning the possible whereabouts of a few of these, but have not been successful in obtaining, or confirming, details. Thanks to Hamish Lindsay I have caught up with Milton Turner.

TK

US-1 AND OTHER SIGNPOSTS

If you are going to the Moon you need more names than are required for Earthly observers. In preparation for their rehearsal of Apollo 11's landing, the Apollo 10 crew created more than 40 informal placenames to use as landmarks and to communicate to the mission controllers in Houston where they were on approach to the Apollo 11 landing site (IIP-6 on the chart).



map from [Phil Stooke](#)

The names are either descriptive - The Trio, Sidewinder Rille, and The Cape, or personal Marilyn is Jim Lovell's wife, Weatherford is the town where Tom Stafford was born, and SP Crater is a crater near Flagstaff, AZ, which the astronauts undoubtedly visited during their training. Once again, perhaps these names would have been lost except for Phil Stooke's recovery and inclusion of them in his new [The International Atlas of Lunar Exploration](#). I thank Phil for sharing with LPOD in advance of publication of his book!

Chuck Wood

Technical Details:

Phil discovered the hand-lettered originals of these maps in the library of the Lunar and Planetary Institute; apparently they have never been published. The boxed names on the chart are official nomenclature. Other official names existed but the Apollo 10 crew chose not to use them.

Courtesy [LPOD](#)

Where Are They Now?

Milton Turner

I left Carnarvon in September 1969 after spending three years there as the then Department of Supply's Administrative Officer and working under Station Directors Lewis Wainwright and Ray Jacomb.

With my wife Jan, and two young children, Geoff and Karen we moved to Canberra to take up the position of Administrative Officer at the Tidbinbilla Tracking Station under Station Director Tom Reid. Following a three month term at the TDSCC, I moved to an equivalent position at Honeysuckle Creek Tracking Station under Station Director Don Gray. In 1969 we purchased a home in the southern suburb of Pearce.

My time at Honeysuckle Creek was most enjoyable although it was a hectic time there with Apollo and Skylab missions the main activity. I became involved with the local media by providing information about the activities and problems experienced by the crew of some of these missions.

In 1975 I moved to a position in the head office of the Department of Supply for about 12 months where I was involved with financial arrangements related to the contracts the department had for the operation of the tracking stations in Australia.

I transferred to the Department of Health in 1976 where I worked in the Social Health branch which had responsibilities for occupational health, smoking, and other related matters. I was writing ministerials (replies to letters to the minister) related to these areas. The move against smoking in public was to the one of the major areas I was involved with and gave me an interesting

insight into the workings of government and the amount of lobbying that goes on.

For my final stint in the workforce, in about 1984, I moved to the Commonwealth Grants Commission as their Executive Officer and was responsible for the administration aspects of Commission activities. This involved staffing and financial administration and assistance with Commission meetings and hearings in Canberra and interstate. Briefly, the Commission is responsible for recommending to the government the state's shares of the income tax collected by the government on behalf of the states. Established in 1933 the Commission's recommendations have always been accepted by the government of the day. I retired from the Commission and full time employment in 1995.

During our time in Canberra we took up bushwalking and travelling and enjoyed the healthy active outdoor experiences that it provides. In 2001 we decided to move back to Adelaide as our daughter was living there with three children and our son was living in WA. We live in Tea Tree Gully in the north-eastern area of Adelaide and are still involved in bushwalking. Our major walks completed include the Heysen Trail (SA), the Great North Walk (NSW) and we plan to walk the Bibbulmun Track in WA commencing in 2008.

We have fond memories of Carnarvon and visited there in 2002. We recall Mrs Memory and the bakery, the Gascoyne in flood in 1968, the Port Hotel and the mayor.

Greetings to those who read this and remember us.

Milton and Jan Turner (08) 8263 2393

RECENTLY LOCATED

Don Blackman — Living in Summerhill, TAS.
Roy Lester — Living in Greenock in the Barossa Valley, SA.

Want to be an astronaut?

NASA announced that it is now taking applications for the job of astronaut. The agency expects to hire 10 to 15 candidates who wish to have the opportunity to journey into space, and perhaps to land on the moon.

The requirements include a bachelor's degree in engineering, science or math and three years of relevant professional experience. It's helpful to have experience in the fields of engineering or science, or expertise in flying high-performance jet aircraft.

The screenshot shows the USAJOBS website interface. At the top, there are navigation tabs: Search Jobs, My USAJOBS, Info Center, Veterans, Forms, and Employer Services. The main header area displays the Lyndon B. Johnson Space Center logo and the following details: Department: US National Aeronautics & Space Administration, Agency: Lyndon B. Johnson Space Center, Sub Agency: NASA, Flight Crew Operations Directorate, and Job Announcement Number: JS07A0176. Below this, there are tabs for Overview, Duties, Qualifications & Evaluations, Benefits & Other Info, and How to Apply. The Overview tab is selected, showing a link to Back to Search Results. The main content area is titled 'Astronaut Candidate' and includes the following information: SALARY RANGE: 59,493.00 - 130,257.00 USD per year; SERIES & GRADE: GS-0801-11/14; PROMOTION POTENTIAL: 15; WHO MAY BE CONSIDERED: This announcement is open to all qualified U.S. citizens.; OPEN PERIOD: Tuesday, September 18, 2007 to Tuesday, July 01, 2008; POSITION INFORMATION: Full-Time Permanent appointment; DUTY LOCATIONS: Few vacancies - Houston. A JOB SUMMARY section follows, stating that NASA is seeking outstanding scientists, engineers, and other talented professionals. At the bottom, it notes that NASA uses the USAJobs resume as the basic application document.

NASA will take applications through July 1, 2008, and will announce the final selections in early 2009. Astronauts will begin training at the Johnson Space Center in Houston in the summer of 2009. To apply [click here](#).

Credit: usajobs.gov

40th Anniversary of 1st Lunar Landing

Write it down—NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Apollo XVII ctd.

(Continued from page 2)

The LM ascent stage lifted off the moon at 22:54:37 GMT on 12/14/72. After a vernier adjustment maneuver, the ascent stage was inserted into a 48.5nm by 9.4nm orbit. The LM terminal phase initiation burn was made at 23:48:58 GMT on 12/14/72. This 3.2 sec maneuver raised the ascent stage orbit to 64.7 by 48.5 nm. The CSM and LM docked at 01:10:15 GMT. The LM ascent stage was jettisoned at 04:51:31 GMT on 12/15/72. Deorbit firing of the ascent stage was initiated at 06:31:14 GMT on 12/15/72 and lunar impact occurred 19 min 7 sec later approximately 0.7 nm from the planned target at latitude 19deg 56min North and longitude 30 degrees 32min East.

The ascent stage impact was recorded by the four Apollo 17 geophones and by each ALSEP at Apollo-12, Apollo-14, Apollo-15 and Apollo-16 landing sites.

Evans performed a trans-Earth EVA at 20:27:40 GMT on 12/17/72 lasting 01 hour 06 minutes during which time the CMP retrieved the lunar sounder film and the panoramic and mapping camera film cassettes.

Apollo-17 hosted the first scientist-astronaut to land on Moon, Schmitt. Sixth automated research station was set up. LRV traverse total 30.5 km. Lunar surface stay-time, 75 hours. In lunar orbit 17 hours. 110.4 kg (243 lbs) of material gathered.

Courtesy N.A.S.A.

Biographies

Captain Cernan was one of fourteen astronauts selected by NASA in October 1963.

He occupied the pilot seat alongside of command pilot Tom Stafford on the Gemini IX mission. During this 3-day flight which began on June 3, 1966, the crew used three different techniques to effect rendezvous with the previously launched Augmented Target Docking Adapter; and Cernan, the second American to walk in space, logged two hours and ten minutes outside the spacecraft in extravehicular activities.

Cernan subsequently served as backup pilot for Gemini 12 and as backup lunar module pilot for Apollo 7.

On his second space flight, he was lunar module pilot of Apollo 10, May 18-26, 1969, the first comprehensive lunar-orbital qualification and verification flight test of an Apollo lunar module. He was accompanied on the 248,000 nautical sojourn to the moon by Thomas P. Stafford (spacecraft commander) and John W. Young (commander module pilot).

Cernan's next assignment was backup spacecraft commander for Apollo 14.

He made his third space flight as spacecraft commander of Apollo 17--the last scheduled manned mission to the moon for the United States--which commenced at 11:33 P.M. (CST), December 6, 1972, with the first manned nighttime launch, and concluded on December 19, 1972.

With him on the voyage of the command module "America" and the lunar module "Challenger" were Ronald Evans (command module pilot) and Harrison H. (Jack) Schmitt (lunar module pilot).

In maneuvering "Challenger" to a landing at Taurus-Littrow, located on the southeast edge of Mare Serenitatis, Cernan and Schmitt activated a base of operations from which they completed three highly successful excursions to the nearby craters and the Taurus mountains, making the Moon their home for over three days. This last mission

(Continued on page 8)

Biographies ctd.

(Continued from page 7)

to the moon established several new records for manned space flight that include: longest manned lunar landing flight (301 hours 51 minutes); longest lunar surface extravehicular activities (22 hours 6 minutes); largest lunar sample return (an estimated 115 kg (249 lbs.); and longest time in lunar orbit (147 hours 48 minutes).

Captain Cernan has logged 566 hours and 15 minutes in space-of which more than 73 hours were spent on the surface of the moon.

In September, 1973, Cernan assumed additional duties as Special Assistant to the Program Manager of the Apollo spacecraft Program at the Johnson Space Center. In this capacity, he assisted in the planning, development, and evaluation of the joint United States/Soviet Union Apollo-Soyuz mission, and he acted for the program manager as the senior United States negotiator in direct discussions with the USSR on the Apollo-Soyuz Test Project.

On July 1, 1976, Captain Cernan retired after over 20 years with the U.S. Navy. He concurrently terminated his formal association with NASA.

Captain Cernan was the second American to have walked in space having spanned the circumference of the world twice in a little more than 2-1/2 hours. He was one of the two men to have flown to the moon on two occasions, and as commander of the last mission to the moon, Apollo 17, had the privilege and distinction of being the last man to have left his footprints on the surface of the moon.

Captain Evans was one of the 19 astronauts selected by NASA in April 1966. He served as a member of the astronaut support crews for the Apollo 7 and

Apollo 11 flights and as backup command module pilot for Apollo 14.

On his first journey into space, Captain Evans occupied the command module pilot seat for Apollo 17 which commenced at 11:33 p.m. (CST), December 6, 1972, and concluded on December 19, 1972-the last scheduled manned mission to the moon for the United States.

While Cernan and Schmitt completed their explorations of the Taurus-Littrow landing area down on the lunar surface, Evans maintained a solo vigil in lunar orbit aboard the "America", completing assigned work tasks which required visual geological observations, hand-held photography of specific targets, and the control of cameras and other highly sophisticated scientific equipment carried in the command module SIM-bay.

Completing his first space flight, Captain Evans logged 301 hours, 51 minutes in space-1 hour, 6 minutes of which were spent in extravehicular activity. He holds the record of more time in lunar orbit than anyone else in the world.

Evans was backup command module pilot for the Apollo-Soyuz Test Project (ASTP) mission. This joint United States-Soviet Union earth-orbital mission, launched successfully in July 1975, was designed to test equipment and techniques that would establish an international crew rescue capability in space, as well as permit future cooperative scientific missions.

Evans retired from the United States Navy on April 30, 1976, with 21 years of service, and remained active as a NASA astronaut involved in the development of NASA's Space Shuttle Program. He served as a member of the operations and training group, within the astronaut office, responsible

(Continued on page 11)

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



Click on picture to enter

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<http://crotrak.com>

My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm.

Some new material and links have been added, and there is a lot more to come I am sure. Please rake through those boxes of mementoes of yesterday and tell me what you have found. I can arrange copying, scanning, whatever so as to get them up on our website; so you can have no fears regarding their safety.

~ LOS ~

We sadly report the passing of James (Harry) Whitworth on October. Born in Rochdale, UK in 1926, he died on 20th October 2007. He is survived by his wife of 63years, Maggie, and daughters Susanne and Deborah. He worked at the Tracking Station as a Fire and Safety Officer. The attendees at his funeral in Osborne Park included five ex-trackers.



Regrettably, the last time I saw Harry was at my farewell breakfast party. He is portrayed here assisting in bailing up the AWA staff bus after the party.

Social Club News

November 1969

Page 9.

"A DAY IN THE LIFE OF THE STADIR" - ctd.

(Enter Rasputin the Mad Monk disguised as Terry Kierans

Rasputin : Any bothy theen my theiss?

Stadir : Would you mind spraying that again?

Rasputin : (Pointing to his mouth) My theiss.

CSR : He means his teeth. He's lost them again. Never mind Raspy old chap, there's a mouse trap out in logistics that you can use to chew with until your tats turn up again.

Rasputin : A fine thet of bothom dentures that makes. (He exits in high dugeon).

Stadir : (Explosive sigh of relief). Now perhaps we can get down to business, CSR... What's the first item on the agenda?

CSR : We have a problem in Computers, One of the operators has to go to Perth for a surgical operation.

Stadir : We can't spare anyone now, What's the trouble?

CSR : It's one of the girls. She's got this big hexagonal bolt screwed into her navel and she has to have it removed

Stadir : A big hexagonal bolt screwed into her navel? This I've got to see.

(Enter Evonne Martell in a bikini. She has a large golden hexagonal bolt in her navel. CSR and Stadir examine it minutely.)

Stadir : (Pulling at bolt). Does it hurt, dear?

Evonne : Only when I laugh.

CSR : (Excitedly) I thought I felt it move that time. Sit down over here dear, and I'll see if I can get it out.

Courtesy Wendy Yarnold

To be continued

Biographies ctd.

(Continued from page 8)

for launch and ascent phases of the Shuttle flight program.

Evans retired from NASA in March 1977 to become a coal industry executive.

Born November 10, 1933, in St. Francis, Kansas. Died April 6, 1990, in Scottsdale, Arizona, of a heart attack. He is survived by his wife Jan and two children.

Dr. Schmitt was selected as a scientist-astronaut by NASA in June 1965. He later completed a 53-week course in flight training at Williams Air Force Base, Arizona. In addition to training for future manned space flights. He was instrumental in providing Apollo flight crews with detailed instruction in lunar navigation, geology, and feature recognition. Schmitt also assisted in the integration of scientific activities into the Apollo lunar missions and participated in research activities requiring geologic, petrographic, and stratigraphic analyses of samples returned from the moon by Apollo missions..

Schmitt was a teaching fellow at Harvard in 1961 where he assisted in teaching a course in ore deposits. Prior to his teaching assignment, he did geological work for the Norwegian Geological Survey on the west coast of Norway, and for the U.S. Geological Survey in New Mexico and Montana. He also worked for two summers as a geologist in southeastern Alaska.

Before joining NASA, he was with the U.S. Geological Survey's Astrogeology

Center at Flagstaff, Arizona. He was project chief for lunar field geological methods and participated in photo and telescopic mapping of the Moon, and was among USGS astrogeologists instructing NASA astronauts during their geological field trips.

In July of 1973 Dr. Schmitt was appointed as one of the first Sherman Fairchild Distinguished Scholars at the California Institute of Technology. His appointment was extended to run through July 1975. This appointment ran concurrently with his other activities in NASA.

In February 1974, Schmitt assumed additional duties as Chief of Scientist-Astronauts.

Dr. Schmitt was appointed NASA Assistant Administrator for Energy Programs in May 1974. This office has the responsibility for coordinating NASA support to other Federal Agencies conducting energy research and development and for managing NASA programs applying aeronautics and space technology to the generation, transmission, storage, conservation, utilization and management of energy for terrestrial applications.

In August of 1975, Dr. Schmitt resigned his post with NASA to run for the United States Senate in his home state of New Mexico. He was elected on November 2, 1976, with 57% of the votes cast.

Courtesy N.A.S.A.

Random Quotes

"SUPER! I really enjoyed it!" -The complete transcript of what Pete Conrad used to tell people who asked him what it was like to walk on the Moon.

"If everything were going along and we were going to do what we did the last three decades for the next three decades, I wouldn't want this job."—Mike Griffin (looking forward to the future), NASA Administrator.

Courtesy forum.nasaspaceflight.com

Keeping the Memory Alive



A Happy and Healthy Christmas Wish
from
The Editor and Family
to
You All

If undelivered, please return to:

CRO Trackers

PO Box 93, Quinns Rocks, WA 6030



Vol 5 March 2008

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. In Volume 4 we started to catch up on those not yet covered. Now, in Volume 5, we continue to catch up on those not yet covered.

So, our key mission coverage this issue will be Gemini IV, launched in June 1965 and manned by James McDivitt, and Edward White (deceased).

Also included in this issue:

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Terence (Terry) Kierans
Editor

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<http://crotrak.com>

Gemini 4

Gemini 4, launched June 3 (4) 1965, was the first multi-day space-flight by the United States. Primary objectives were:

- Evaluate the effects of prolonged space flight;
- Demonstrate and evaluate the performance of spacecraft and systems in 4-day flight, and
- Evaluate procedures for crew rest and work cycles, eating schedules, and real time flight planning.

Secondary objectives included:

- Demonstrate and evaluate EVA and control by use of HHMU (Hand Held Manoeuvring Unit) and tether;
- Station keep and rendezvous with second stage of GLV.

All but one of the primary objectives were met. Computer controlled reentry, in the demonstration and evaluation of spacecraft systems objective, was not flown because of inadvertent alteration of computer memory.

All secondary objectives were met except one. The secondary objective of station



keeping and rendezvous was only partially successful because separation and rendezvous was not attempted due to fuel consumption.

The mission's highlight turned out to be White's 22-minute space walk, with McDivitt's photographs being published worldwide.



Reentry came on the 62nd revolution and landing occurred 4 Days, 1 hour, 56 min, 12 seconds after lift-off.

Courtesy NASA and Wikipedia



*James McDivitt
Command Pilot*



*Edward White
Pilot*

(Continued on page 7)

Whereabouts?

We are still trying to locate the whereabouts of a number of ex-trackers and associates to give them the opportunity of staying in touch. If you have any knowledge of the whereabouts of any of the following would you please let me know their details. I will also facilitate renewing contact, with due regard to privacy.

Thank you to those whose contributions have added just that bit more.

TK

C	Abott	Anne	Harvey (Brookes)	Gerry	Plummer
Eric	Ainsworth	Stan	Hills	D	Powell
Gay	Albon	Deidre	Howard	M.J.K	Power
Bill	Arbery	B	Hughes	A	Rees
Matt	Barber	B	Hunter	Frank	Rice
John (Allan)	Barber	Vera	Kastropil	Ralph	Richmond
Keith	Barnard	Mike	Keen	Ted	Rosser
Deidre	Beaumont	Jim	Keenan	Lynne	Rosser
Elizabeth	Beckett	D	Kettlety	Stewart	Sands
Michael	Billings	Joy	King	Ron	Sargeant
G	Bond	M	King	Russell	Schwarzer
Bill	Boyle	Gloria	Klarie	Lorraine	Scott-Malcolm (Erlandshaw)
B	Bradley	Peter	Kloppenburg	Michael	Scott-Malcolm
Hans	Britz	Gloria	Lyon-Roberts	John	Sharples
Charlie	Brown	John	Mahaffey	P	Sims
J	Burdett	Peter	Maine	J	Smith
Martin	Burgess	Ian	McDonald	Mike	Smith
Basil	Byrne	S	McDonald	P	Smith
G	Carrick	Frank	McGregor	Roger	Smith
Jim	Cleary	Don	McLellan	Bill	Smythe
Brian	Clifford	Verica	Milanovich	Dave	Standbury
Barbara	Cobcroft	R	Miller	John	Stanton
F	Dawes	Ray	Mills	Alex	Stevenson
Marilyn	Dick	Bill	Mills	Barbara	Stevenson (Vernon)
Phil	Dickinson	Peter	Milne	John	Swanney
Neville	Dippell	Marilyn	Milner (Gobby)	Barbara	Teahan
John	Draper	Ian	Mitchell	Des	Terrill
Dave	Elliot	John	Monteith	Alan	Thomas
J	Erickson	Dennis	Naylor	Jack	Thompson
Kerrie	Eyre	Terry	Newman	Don	Thompson
Ross	Eyre	Kel	Nickerson	L	Tink
Don	Frost	John	Noble	Mike	Travell
Vic	Gadelvicius	Patsy	Nolan (Thompson)	Dave	Troup
Jamie	Gardiner	?	O'Brien	Tony	Vingerhoets
L	Gardner	Frank	Parkinson	A	Watermeyer
Kim	Gates	John	Parkinson	Jack	Watson
J	Gerschwitz	Mike	Pender	Bernie	Wilbourne
Geoff	Hammond	Wendy	Petersen	Ray	Zatorski
Ron	Harmes	Don	Plumb		

The quest continues; the list never seems to get any shorter. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details.

TK

Fundamental Document Found

What follows relates to a genuine TITAN-III pre-mission document and early version of a pre-op check list (re-formatted and typos corrected).

This is an extract from a five page roneoed undated document detailing personnel assignments and a list of specific duties for each operational position.

As a member of that team and having knowledge of the people involved and their later re-assignments, I'm sure it does not have a correct title. It could only have been for the **Gemini-1** mission launched on a **Titan II**, the first CRO support of an orbital MSFN vehicle on 4 April 1964 this year marks the 44th anniversary). The unmanned Gemini capsule remained attached to the launch vehicle for the entire 64 orbits.

This mission was also distinguished by the complete loss of CRO ground communications just before launch due to a lightning strike just south of Gascoyne Junction. Our acquisition date throughout the night was relayed by voice through the postmistress at Hamelin Bay Post Office.

Thanks to Brian Milne discovering this treasure amongst his souvenirs and forwarding it to me. — *Paul Dench*

TITAN III PERSONNEL OPERATIONAL ASSIGNMENTS

1. FM/TM TELEMETRY		6. FACILITIES SUPPORT
System Supervisor	Simons	Supervisory
RF Operator	Hall	Thomas (1700-1900 & 2400-term)
Tape Recorder Operator	Sands	McRae (2100-term)
Sanborn Operator	Dykstra	Housley (2100-term)
		Sheenan (1700-2100)
2. ACQUISITION		
Acq Bus Operator	Stevenson	Plant Operators
Acq Aid No 1 Operator	Thompson	de Lacy (1630-term)
Acq Aid No 2 Operator	Cross	Tink (2030-0830)
Sanborn Operator	McLennan	Brandenburg (1630-2030)
		Electrician
3. FPQ-6 RADAR		
System Supervisor	Algate	Diemel (1700-2100 Power House)
Diarist & Intercom	Burgess	Hermans (2100-term; on call)
Range Control Operator	Allan	Fitters
Angle Control & Az hand wheel	Blackman	Parkinson (1700-2100)
Elev hand wheel	Gerschwin	Kettley (2100-term)
Sanborn Recorder Operator	Marsh	Air-conditioning Tech
Data Tape & D-TTY Operator	Main	Davies (1800-term)
Time Standard Monitor	Power	Transport
		Baker (1700-term)
4. COMMUNICATIONS		
G.C.C.	Durie	Watchman
Teletype Operators	Klarie	as rostered
	Thomson	Traffic Controller
Intercom Technicians	Linnane	Biscaya (1630-term)
	McLennan	
Timing Technician	Lindsay	
5. PCM & DISPLAY		
System Supervisor	Dench	
PCM 2 Operator	Byrne	
Display Operator	Harrison	
Real Time Readouts	Kempees	

(Continued on page 6)

Where Are They Now?

Forwarded email message from **Roy Lester**.
Courtesy Les Bateman.

I am pleased to report that the news of my demise has been greatly exaggerated!!!

Graham told me some time ago that I was on the list of "Where are they now?"s in the CRONicle. I have received a couple of copies of the CRONicle from various sources, but as I told Graham I tend not to live in the past any more than I can help so have not followed up subscription or whatever. But I have no objection to people knowing where I am.

We now live in Greenock in the Barossa Valley. We have a very good, strong Classic Motorcycle Club here that I am heavily involved with.

I have a 1979/80 BMW with a Velorex sidecar and Hazel and I enjoy getting around on/in it, mostly to Classic 'bike rallies. The Montessa is long gone. I sold it when leaving Carnarvon in 80/81 after my stint with Frank Vinton on the fishing boats.

Post Tracking Station I mainly stayed with AWA Field Projects ending up with the Jindalee OTHR in Alice Springs.

After my first retirement in 1987 Hazel and I travelled around Australia for a couple of years in our motorhome with the BM and side car on a trailer. Aunty AWA sucked me



back in in 1990 to write technical manuals at DSTO for the Jindalee project until I finally retired fully in Sept '94.

Graham has been over here several times and has stayed with us for a few days. Also Gary Westcott and Frank Vinton. Always a pleasure to catch up with old friends. I occasionally get news of Gary Westcott, Laurie Ladhams etc via Ian. Doesn't sound like any of you get much time for motorcycling these days

We are very happy in the Barossa. It is far enough out of the city to be truly rural yet not being "outback". There is, of course, the added benefit of helping the local industry by regularly sampling the product.

The attachment is several years old now. I have had a haircut since!!!!

Another Small Step

Your editor and Paul Dench decided that the Wikipedia page for Carnarvon Tracking Station was in need of a face lift after I changed the photograph of the OTC Earth Station dish to that of the well known USB dish.

http://en.wikipedia.org/wiki/Carnarvon_Tracking_Station .

Paul felt, quite rightly, that the addition of a page on the OTC site would further help differentiate between the two sites and their purpose. He then proceeded to write the text for the page and inserted an appropriate photograph.

http://en.wikipedia.org/wiki/OTC_Earth_Station_Carnarvon .

We both believe that this is yet one small step in the right direction.

Picnic Day

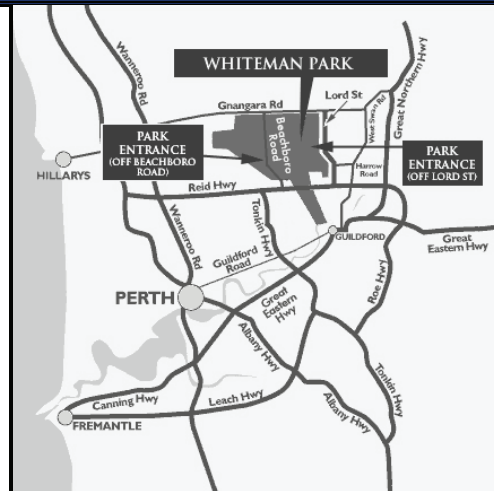
The Perth Chapter of the CRO Trackers will be holding their fourth annual picnic / barbeque at Whitemans Park, Mussel Pool, some 20 kms and 25 minutes from the Perth CBD.

Date: Sunday March 30 2007

Time: Kick off 11 am

BYO: Everything

Look out for the banner



Fundamental Document Found ctd.

(Continued from page 4)

7. ADMIN SUPPORT

Admin Supervision
Cameron
Telephonist
King (0845-2100)
Rooney (2100-term)
Storeman
Roberts
Courier (Trials Assistant)
Cross
Catering Attendant
Coombs



8. OPERATIONS SUPERVISION

M & O Supervisor
Oke
M & O Supervisor Asst
Bell
Comms & Timing Gen Sup'n
Headford
Telemetry & Acq'n Sup'n
Kempees

Each operator above had a list of assigned duties beneath the role name.

For example:

Tape Recorder Operator
change Tapes
monitor inputs
pre-conditioning checks and patching
assist pre & post-pass cals.
Start & stop recorders
B.S.T's
Calibrate and set up Sanborn recorders

Biographies

James McDivitt joined the Air Force in 1951 and retired with the rank of Brigadier General. He was selected as an astronaut by NASA in September 1962.

He was the first NASA astronaut to make his debut orbital flight (Gemini 4) in the role of Commander or Command Pilot, when he was selected as the command pilot for Gemini 4, a 66-orbit 4-day mission that began on June 3, and ended June 7, 1965.

This is something only four astronauts have done since — Frank Borman, Neil Armstrong, Gerald Carr and Joe Engle.

He was also the first Roman Catholic to fly into space.

He was commander of Apollo 9, a 10-day earth orbital flight launched on March 3, 1969. This was the first flight of the complete set of Apollo hardware and was the first flight of the Lunar Module.

He became Manager of Lunar Landing Operations in May 1969, and led a team that planned the lunar exploration program and redesigned the spacecraft to accomplish this task. In August 1969, he became Manager of the Apollo Spacecraft Program and was the program manager for Apollo 12, 13, 14, 15 and 16.

James McDivitt was inducted into the U.S. Astronaut Hall of Fame on March 19, 1993 and was honoured for his involvement in the Gemini and Apollo space programs with the presentation of the Ambassador of Exploration Award in October 2006.

The award is a small sample of lunar material encased in Lucite and mounted for public display. The material is part of the 842 pounds of samples brought back to Earth during the six Apollo lunar expeditions from 1969 to 1972.

He retired from the USAF and left NASA in June 1972, to take the position of Executive Vice-President, Corporate Affairs for Consumers Power Company.

Edward White, an Air Force Lieutenant Colonel, received flight training in Florida and Texas, following his graduation from West Point.

He attended the Air Force Test Pilot School at Edwards Air Force Base, California, in 1959.

White was named as a member of the astronaut team selected by NASA in September 1962.

He was pilot for Gemini 4, which was a 66-revolution, 4-day mission that began on June 3, and ended on June 7, 1965. During the third revolution, he carried out the first extra vehicular activity in the United States manned space flight program. He was outside Gemini 4 for 21 minutes, and became the first man to control himself in space during EVA with a maneuvering unit.

Other highlights of the mission included cabin depressurization, opening of cabin doors, and 12 scientific and medical experiments.

He received the NASA Exceptional Service Medal and the U.S. Air Force Senior Astronaut Wings for this flight.

On March 21, 1966, he was named as one of the pilots of the AS-204 mission, the first 3-man Apollo flight.

Lieutenant Colonel White died on January 27, 1967, in the Apollo spacecraft flash fire during a launch pad test at Kennedy Space Center, Florida.

Courtesy N.A.S.A and the Astronaut Scholarship Foundation

Two More Small Steps

Subject: Thank you for contacting Tourism Western Australia
<http://www.westernaustralia.com/en/Pages/Attraction.aspx?pid=9003372>

You state on this web page that, "...The Big Dish was once a NASA tracking station..."

With due respect this is untrue. This dish was part of the OTC "earth station" built solely for the two-way relay of voice and data between the NASA Carnarvon Space Tracking Station and the US via a geo-stationary Pacific satellite.

The NASA Carnarvon Space Tracking Station closed in April 1975; all equipment and antennae were removed and buildings razed.

Until that date the OTC earth station never tracked NASA spacecraft nor did they receive signals directly from the moon.

Regards

Terence

ex-Operations Supervisor

NASA Carnarvon Space Tracking Station

Subject: RE: Feedback on westernaustralia.com

Hello Terence

Apologies for the lateness in my response.

Thank you for providing updated correct information for our website. We have updated the Big Dish listing on westernaustralia.com to reflect the information you provided. The direct link to the page is http://www.westernaustralia.com/au/Pages/Attraction.aspx?n=Big_Dish&pid=9003372.

Kind regards

Victoria James

Online Content Coordinator

Subject: Enquiry to www.West-Oz.com

Below is the result of your feedback form. It was submitted by
 (info@crotrak.com) on Tuesday, September 11, 2007 at 19:56:08

 This message was submitted at: www.west-oz.com/locations/carnarvon.asp

Name: Terence Kierans

Location: Quinns Rocks

Comments: Your photograph displayed at <http://www.west-oz.com/images/panoramic/carnarvon4.jpg> is not of the NASA Tracking Station but of the OTC Earth Station Antenna. I would appreciate it if you will correct the caption since it is misleading to tourists.

Hi Terence,

Thank you for your update. Based on your note, I have removed all reference to the OTC Station as it does not currently serve much value to your average tourist. I may add a mention back in if a planned Space Museum opens in the old building.

Kind regards,

General Manager:

West-Oz Web Services. www.West-Oz.com Your Window to Western Australia™

KEEPING THE MEMORY ALIVE



**Carnarvon Tracking Station
1964 - 1975**



Site ©2006 All rights reserved

<http://crotrak.com>

My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm.

Some new material and links have been added, and there is a lot more to come I am sure. Please rake through those boxes of mementoes of yesteryear and tell me what you have found. I can arrange copying, scanning, whatever so as to get them up on our website; so you can have no fears regarding their safety.

40th Anniversary of 1st Lunar Landing

Write it down—NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Astronaut Quiz

1. Who is the only astronaut to go to the moon twice—but never walk on it?
2. Who is the only astronaut to fly Mercury S/C, Gemini S/C, and Apollo CM?
3. Who is the only astronaut to have orbited the moon alone, and walked on its surface?
4. Who were the only CM pilots to also walk on the moon?
5. Who were the only astronauts to experience water and runway touchdowns?

Answers in the June issue

Social Club News

November 1969

Page 10.

"A DAY IN THE LIFE OF THE STADIR" - ctd.

(Evonne sits. Stadir produces a large golden spanner from his drawer).

Stadir : Try it with that, CSR, old man.

(CSR unscrews the bolt with the golden spanner).

CSR : (Triumphantly) There you are. I knew I could do it. (Pats Evonne on the shoulder).
You can go now, my dear.

(As Evonne gets up to exit, her backside falls off).

Stadir : Ah well - back to the drawing board.
(Brightly) Any more business, CSR?

CSR : There's this account from Sole Brothers Circus for fifty elephants.

Stadir : What account from Sole Brothers?
(Examining account) Fifty elephants at five K dollar each - that's two hundred and ten thousand nikker
(Counting on his fingers) I think....
(Stadir attacks problem with slide rule and paper).

CSR : All hands to panic stations.

Stadir : Why do we need elephants on the Station, CSR? You haven't sacked all the senior engineers have you?

CSR : No - but it's a thought.....

Stadir : Good grief CSR, stop beating about the bush and tell me this account's all about.

CSR : Well, you recall the day the circus arrived in town, the elephants parading up and down...?

Stadir : How could I forget it? They made a comfort stop outside my place. I'm still carting barrow loads of the stuff away.

Courtesy Wendy Yarnold

To be continued

Lunar Reconnaissance Orbiter

From the "Project Apollo Digest" courtesy Brian Riehle, ex Guam M&O.

Posted by: "Brian Riehle" bariehle@cfl.rr.com guambr66

Just a reminder to the Group that on Oct. 31, 2008 (yes, this year) NASA plans to launch the Lunar Reconnaissance Orbiter (LRO). The trip out will take about 4 days, and 4 to 6 days later it will be placed in polar orbit about 50km above the surface to map the moon for about a year. The on board camera will be able to identify objects less than 0.5m high and approx. 1.0m wide. The camera has a resolution of 50cm/pixel so all that's needed is an overhead pass of an Apollo landing site to get an image of the descent stage of a LEM.

Astronaut's Ashes Committed to the Sea

*By Mass Communication Specialist
Seaman Torrey W. Lee,
USS Ronald Reagan Public Affairs*

USS RONALD REAGAN, At Sea (NNS)

The ashes of retired Navy Capt. and astronaut Walter M. "Wally" Schirra, along with eight other Navy veterans, were committed to the sea Feb. 11 during a special burial at sea ceremony on board USS Ronald Reagan (CVN 76).

Schirra, a former Navy test pilot who was one of the original seven Mercury astronauts, died at the age of 84 on May 3, 2007. He holds the distinction of being the only astronaut to fly in each of the Mercury, Gemini and Apollo programs.

Schirra, who also had special ties to Ronald Reagan shipmates, visited the aircraft carrier and signed autographs for the crew in 2005.

In 1962, Schirra became the fifth American in space and the third American to orbit the Earth,

circling the globe six times in a flight that lasted more than nine hours.

Schirra once wrote, "We shared a common dream to test the limits of man's imagination and daring. Those early pioneering flights of Mercury, the performances of Gemini and the trips to the moon established us once and for all as what I like to call a spacefaring nation.

Like England, Spain and Portugal crossing the seas in search of their nations' greatness, so we reached for the skies and ennobled our nation."

Ronald Reagan's command religious ministries department, along with help from the ship's honor guard, organized the morning ceremony.

"I'm in awe of these people in their commitment to their country, their service, and especially their families," said Cmdr. Lee Axtell, Ronald Reagan's command chaplain. "It's Navy tradition to stop for the day and pay tribute."

Random Quotes

"It only seems interesting to the public if it's the first exploration of another planetary body, or if you're having a problem." — Fred Haise.

"It's an interesting place to be. I recommend it." — Neil Armstrong, referring to the lunar surface.

Courtesy forum.nasaspaceflight.com

"We can continue to try and clean up the gutters all over the world and spend all of our resources looking at just the dirty spots and trying to make them clean. Or we can lift our eyes up and look into the skies and move forward in an evolutionary way." — Buzz Aldrin

Keeping the Memory Alive

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Vol 5 June 2008

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. In Volume 4 we started to catch up on those not yet covered. Now, in Volume 5, we continue to catch up on those not yet covered.

So, our key mission coverage this issue will be Gemini IX-A, with Commander Thomas Stafford, and Pilot Gene Cernan. The original crew of Gemini-IX, Elliott M. See and Charles Bassett, were killed in an airplane crash on February 28, 1966.

Ironically, the hangar into which their aircraft crashed was the very building where the Gemini IX spacecraft was being built.

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Gemini IX-A

Gemini IX was postponed when TLV 5303 with Gemini Agena target vehicle GATV-5004 malfunctioned on May 17.

In its place, a substitute target was used for Gemini IX-A; the Augmented Target Docking Adapter (ATDA) was launched by an Atlas on June 1, 1966 (TLV-5304) from Launch Complex 14.

However, Gemini IX-A was not launched the same day as planned due to a guidance system computer problem. After a brief hold, the spacecraft was launched on the 3rd day.

Primary objective of rendezvous and docking was only partially achieved because the shroud on the ATDA failed to jettison.

Stafford described, "It looks like an angry alligator out here rotating around". The crew described how the shroud's explosive



ATDA, a.k.a. the "Angry Alligator",

bolts had fired, but two neatly taped lanyards were holding the shroud together. It was decided that it would be too dangerous for an astronaut to cut the lines, as there were too many sharp edges around.

Instead Gemini IX-A performed a number of rendezvous maneuvers, including a simulation of lunar module rendezvous.

EVA time was 2 hours, 9 minutes, a new EVA endurance record. During EVA maneuvers, Cernan's visor became fogged, and he was unable to test the Air Force astronaut maneuvering unit.

Secondary objective experiment S-10, Agena Micrometeorite Collection experiment was not attempted because EVA did not take place near the Gemini Agena target vehicle (GATV).

Courtesy NASA & Wikipedia



Gemini 9 original prime crew (front row, L-R) Elliott See, Charles Bassett; and backup crew (back row, L-R) Tom Stafford, Gene Cernan (NASA)

(Continued on page 7)

Whereabouts?

As a result of Paul Dench supplying his “staffing list”, augmented courtesy Brian Milne, the “Whereabouts” table of those for whom we have no contact details has expanded to more than one page.

TK

C	Abott	Keith	Clifton-James	Jamie	Gardiner
Eric	Ainsworth	Barbara	Cobcroft	L	Gardner
Gay	Albon	Ted	Cockram	S	Garner
Bill	Arbery	Bill	Comstock	Eddie	Garrett
George	Armitt	??	Coombs	Kim	Gates
Allan	Barber	Jim	Crossland	C	George
John (Allan)	Barber	Noel	Cunningham	Joe	George
Matt	Barber	Brian	Davies	J	Gerschwitz
Keith	Barnard	F	Dawes	Vida	Gibson
	Barrow	Peter	Dawson	G	Goodlace
Deidre	Beaumont	Peter	Del Fante	L	Gore
Elizabeth	Beckett	Andrew	Dempster	Lyn	Grant
	Beveridge	Jean	DeVis	Claude	Granville
Michael	Billings	Marilyn	Dick	Bob	Halse
Maria	Bird	Olive	Dick	Geoff	Hammond
D	Black	Phil	Dickinson	R	Hanes
G	Bond	Neville	Dippell	Bea	Hardman
S	Boyce	Cheryl?	Dixon	Peter	Hardwicke
Bill	Boyle	L	Donkin	Ron	Harmes
B	Bradley	John	Draper	Anne	Harvey (Brookes)
Daphne	Brindal	Mike	Dresser	D	Hatch
Phil	Brindley	Bruce	Duff	Gail	Heileman
Hans	Britz	I	Dunleavy	Stan	Hills
Dave	Brooks	Bob	Dwyer	Ernie	Hindley
Charlie	Brown	Dave	Elliot	Dave	Hine
T.F.A	Brown	J	Erickson	Geoff	Hoad
W	Brown	Lorraine	Erlandsen	A	Holgate
J	Burdett	Kerrie	Eyre	Phyllis	Hook (Watson)
R	Burdett	Ross	Eyre	J	Hopkins
Martin	Burgess	Ross	Eyre	Joan	Hopper
Robert	Burns	Ian	Few	Vivienne	Hopper
Basil	Byrne	Ian	Findlay	Ted	Hopper (Lawer)
Joe	Cabone	Joan	Fitzgerald	Deidre	Howard
Joy	Cameron	Robyn	Fort	B	Hughes
Geoff	Cardwell	G	Francis	B	Hunter
G	Carrick	Ben	Franklin	D	Hutchins
Darryl	Cass	David	Froom	Leonie	Jennings
Brian	Clarke	Don	Frost	Ian	Jones
Jim	Cleary	Vic	Gadelvicius	S	Judd
Brian	Clifford			Vera	Kastropil

(Continued on page 4)

The quest continues; the list never seems to get any shorter. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. There are also a few who do not wish to be contacted.

TK

Whereabouts? - ctd.

(Continued from page 3)

John	Keane	Patsy	Nolan (Thompson)	Dorothy	Shaw (Glover)
Mike	Keen	?	O'Brien	Doug	Shaw
Jim	Keenan	Joan	Oats	?	Sheehan
John	Kelman	Wes	Oke	Jeff	Shuttleworth
D	Kettlety	W	Oliver	Dave	Sims
Joy	King	Denis	Owens	P	Sims
M	King	John	Paddon	Ray	Skender
L	King	??? Mrs	Parkinson	George	Small
Roy	Kjellgren	Frank	Parkinson	Lyn	Smart (Willis)
Gloria	Klarie	John	Parkinson	J	Smith
Peter	Kloppenburg	Alan	Paterson	Mary	Smith
Henry	Larsen	G	Paull	Mike	Smith
Russ	Leighton	Mike	Pender	P	Smith
G	Linney	Wendy	Petersen	Roger	Smith
F	Lippett	Don	Pettitt	Bill	Smythe
Alex	Liu	T	Phillips	Hazel	Snook (Howse)
Evelyn	Lomas (Northover)	Lou	Pinelli	Dave	Standbury
Leslie	Lomas	Diane	Pitman (Housley)	John	Stanton
Gloria	Lyon-Roberts	John	Platten	Alex	Stevenson
Ross	MacDonald	Don	Plumb	Barbara	Stevenson (Vernon)
John	Mahaffey	Gerry	Plummer	John	Swanney
Peter	Maine	D	Powell	Barbara	Teahan
Roy	Mallinson	M.J.K	Power	Barbara	Teasdale
Bob	Marr	Wendy	Puccinelli	Des	Terrill
Keith	Mathieson	A	Rees	Alan	Thomas
Alec	Matthews	Dave	Rendell	Christine	Thomas
K	McCarson	Frank	Rice	Howard	Thomas
Ian	McDonald	Doug	Richards	Don	Thompson
S	McDonald	D	Richardson	Jack	Thompson
Frank	McGregor	Harry	Richmond	Patsy	Thompson (Nolan)
E (Mrs)	McKenzie Clark	Ralph	Richmond	L	Tink
Eileen	McLaughlan	Dave	Rickards	G	Tiver
Don	McLellan	Brian	Robinson	Chris	Todd
Verica	Milanovich	Lynne	Rosser	Larry	Tomkins
R	Miller	Ted	Rosser	Frank	Toomey
Bill	Mills	Lindsay	Sage	Mike	Travell
Ray	Mills	Stewart	Sands	Norma	Turner
Peter	Milne	Ron	Sargeant	Ernst	Uhl
Marilyn	Milner (Gobby)	Russell	Schwarzer	Tony	Vingerhoets
John	Monteith	Bob	Scott	Dave	Walker
Sharon	Morgan (Todd)	Jack Dempsey	Scott	Mrs B	Ward
J	Murray	Michael	Scott-Malcolm	Tom	Ward
Dennis	Naylor	Lorraine	Scott-Malcolm (Erlandshaw)	N	Wardle
Gloria	Neal	Dorcas	Sefton-Bellion	A	Watermeyer
Terry	Newman	George	Sefton-Bellion	Jack	Watson
Shirley	Newman (Temple)	Ron	Shand	Irene	West
Ellie	Nichols	Fred	Sharland	Bernie	Wilbourne
Kel	Nickerson	E	Sharples	Garnet	Wilmott
Graham	Nielsen	John	Sharples	Brian	Wilson
John	Noble			Ray	Zatorski

Message from Ed Fendell (With a GT-4 Addendum)

Thanks for keeping me on your mail and distribution list.

I had a few minutes so I thought I would tell you a couple of things. The secondary objectives which are the EVA stuff were added post mission. I carried the secret flight plan called Flight Plan X in sealed envelopes in my foot locker to CRO.

My team members did not know we had done the planning in secret for the EVA, and had no knowledge in advance what was going on. By the way, as one of the three planners, I still have a copy of Flight Plan X.

Secondly, you always put the Astronaut crew in your paper, but you never mention the flight control team members who came to CRO and took over the site from your

STADIR and M&O supervisor, or mention some of the things that happened at CRO during that mission. That would be interesting.

GT-4

Capcom: Ed Fendell

Gemini Systems Engineers: Joe Fuller and Harry Smith

Flight Surgeons: Richard Pollard and two Australian RAAF Doctors
–Walsh, Murray or Alson

Sim Supe: John Ferry

Observer: Dave Scott

Have a great day.

Ed.

Flight Control Team — Gemini IX-A

In answer to Ed's second point—regrettably I have no records of what transpired during that era; and, in deference to a great idea here is the flight control team for Gemini IX-A, as supplied by Ed.

Capcom: Garvin / Brizzolara

Gemini Systems: Barker / Digenova

Agema Systems: Puddy / Perkins

Surgeon: Walsh

Astronaut Quiz

1. Only Mercury astronaut to serve as an Apollo backup crew member?
2. Number of Moon-walkers still alive?
3. Oldest remaining Apollo astronaut?
4. Oldest Apollo astronaut at launch?
5. Shortest-lived astronaut?
6. Only all-Air Force crew?
7. Astronaut with the longest total Apollo flight time?
8. Only Commander to gain weight during an Apollo mission?
9. Mission with the most revolutions in Earth orbit?
10. Mission with the most revolutions in lunar orbit?

All questions pertain to Apollos 7 to 17 inclusive.

Answers in September issue

NOW HEAR THIS!

The manuscript for
One Giant Leap for a Town: Carnarvon and Apollo
 (provisional title)
 was handed to UWA Press on 29th May 2008
 Congratulations to Alison Gregg and Paul Dench

Hoax Believers

I am indebted to Martin Walls of Belmont NSW, for permission to reproduce his thoughts on this subject.

As for me, I am sorely tempted to do a Buzz Aldrin when I am told with such conviction that the landing never took place. However, Martin's policy is obviously preferable in the interests of "good behaviour".

"Given that some hoax-believers will never be convinced otherwise, I now adopt the following when I encounter such a person.

I now ask "Are you absolutely convinced the moon landings were faked, or are you just unsure?"

If they claim to be certain it was a hoax, I respond that my view is the opposite and leave it at that. I know it will be a waste of time and energy if there is no likelihood of them being open to the possibility they may be mistaken.

It is very different if someone is willing to admit they are uncertain.

The conversation then becomes very worthwhile as I enquire as to the reasons that have led them to have doubts. This gives me a great opportunity to utilise my reasonable knowledge of Project Apollo (I love any chance to talk Apollo!) to explain why the "evidence" used by the hoax believers is flawed.

If there is not enough time to discuss specifics, the 3 quick points I make are:

1. Nixon couldn't keep Watergate a secret, so what chance a moon conspiracy?
2. The USSR or China would have gladly announced to the world if it was a hoax.
3. As Charlie Duke said in "In the Shadow Of The Moon", why fake it 9 times? (Including a "failed" Apollo 13)""

Oldest Man-Made Object in Orbit

50 years ago, on March 17, Vanguard 1 was successfully (a word not often used in conjunction with Vanguard) launched into earth orbit, where it still is and will be for a few hundred years more, defending its distinction as the oldest man-made object still in orbit.

Sending back a wealth of information on the size of the Earth, its air density and temperatures, it was the first to use solar power.

On the anniversary of its launch it had made more than 196,990 Earth orbits.

The satellite had travelled 5.7 billion miles; it was the second successful satellite launched by the United States but it has remained in orbit longer than any of its predecessors, all of which burnt up on re-entry.

At the time of its launch, *Vanguard I* was reported to be capable of staying in orbit for five or ten years, though it later became clear that it was designed to last for 200 years. More recent analysis suggests it will continue circling the Earth for 2,000 years unless it is knocked off course.

One of the satellite's most important achievements was to test solar cells in space, allowing spacecraft using them to continue much longer in orbit than those with conventional batteries.

While other satellites ran out of power after about three weeks, Vanguard I's solar power enabled it to continue transmitting information back to Earth for seven years

Courtesy "Times Online"

Biographies

General Stafford graduated with honors in 1952 from the U.S. Naval Academy, Annapolis, Maryland, and was commissioned a second lieutenant in the United States Air Force. He received his pilot wings at Connally AFB, Waco, Texas, in September 1953.

He was selected among the second group of astronauts in September 1962 by NASA to participate in Projects Gemini and Apollo.

In December 1965, he piloted Gemini VI the first rendezvous in space, and helped develop techniques to prove the basic theory and practicality of space rendezvous.

In June 1966 he commanded Gemini IX-A and performed a demonstration of an early rendezvous that would be used in Apollo, the first optical rendezvous, and a lunar orbit abort rendezvous.

He was the lead member of the group, which helped formulate the sequence of missions leading to the first lunar landing mission. He demonstrated and implemented the theory of a pilot manually flying the Saturn booster into orbit and the translunar injection maneuver.

He was commander of Apollo 10 in May 1969, first flight of the lunar module to the moon; performed the first rendezvous around the Moon, and performed the entire lunar landing mission except the actual landing.

General Stafford was cited in the Guinness Book of World Records for highest speed ever attained by man, that occurred during Apollo 10 reentry when the spacecraft attained 24,791 statute miles per hour.

He logged his fourth space flight as Apollo commander of the Apollo-Soyuz Test Project (ASTP) mission, July 15-24, 1975, a joint space flight culminating in the historic first meeting in space between American Astronauts and Soviet Cosmonauts.

He has flown over 127 different types of aircraft and helicopters and four different types of spacecraft and assumed command of the Air Force Flight Test Center on November 4, 1975.

Captain Cernan was one of fourteen astronauts selected by NASA in October 1963.

He occupied the pilot seat alongside of command pilot Tom Stafford on the Gemini IX-A mission. During this 3-day flight which began on June 3, 1966, the spacecraft achieved a circular orbit of 161 statute miles; the crew used three different techniques to effect rendezvous with the previously launched Augmented Target Docking Adapter; and Cernan, the second American to walk in space, logged two hours and ten minutes outside the spacecraft in extravehicular activities.

Cernan subsequently served as backup pilot for Gemini 12 and as backup lunar module pilot for Apollo 7.

On his second space flight, he was lunar module pilot of Apollo 10, May 18-26, 1969, the first comprehensive lunar-orbital qualification and verification flight test of an Apollo lunar module.

Cernan's next assignment was backup spacecraft commander for Apollo 14.

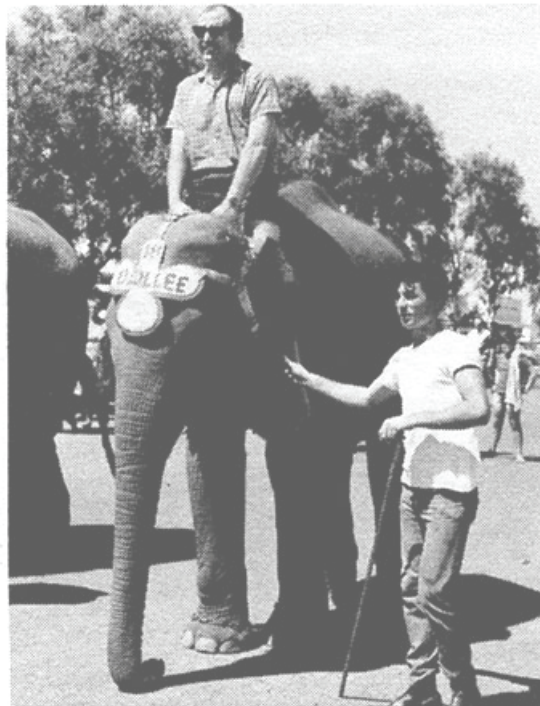
He made his third space flight as spacecraft commander of Apollo 17—the last scheduled manned mission to the moon for the United States—which commenced at 11:33 P.M. (CST), December 6, 1972, with the first manned nighttime launch, and concluded on December 19, 1972.

On July 1, 1976, Captain Cernan retired after over 20 years with the U.S. Navy. He concurrently terminated his formal association with NASA.

Courtesy N.A.S.A.

Elephant Race

CARNARVON, AUSTRALIA (MSFN). Paul Dench, Tracking Systems Supervisor at Carnarvon, gets set to compete in the "Great Carnarvon Elephant Race." The race was held in the town's main street to raise funds for the construction of a community swimming pool. Four elephants, ridden by the Mayor of Carnarvon and the presidents of three local service clubs, competed in the race over a course of one hundred yards. "Mr. Dench placed second, but might have won if Dollee had not been forced to sidestep a parked automobile," reports Station Director Ray P. Jacomb.



-from 'GODDARD NEWS', November 10, 1969; Vol. 17, No. 8, p.9

Note from Paul: I was commandeered from the crowd to take Wilson Tuckey's place as he didn't turn up.

2008—2009 Subscriptions

Subscribe—NOW!

Not whingeing, but with rising costs it is not easy keeping subscriptions at the same level (for Australian residents anyway) as when the Trackers' CROnicle first became available.

Unless the number of subscriptions reaches even a break-even level, it will mean I would have to subsidise it — and that I cannot afford to do, despite "Keeping the Memory Alive" being my passion. I can also not expect those who have made donations to feel that they should do it again.

So, ignore the moths, and send in your subs as soon as possible please so that we can continue to publish.

The subscription form is on the back page, and for Australians, I would prefer a bank transfer, cheque or money order please.

Thanks guys.

The Editor

KEEPING THE MEMORY ALIVE



**Carnarvon Tracking Station
1964 - 1975**



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My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm.

Some new material and links have been added, and there is a lot more to come I am sure. Please rake through those boxes of mementoes of yesteryear and tell me what you have found. I can arrange copying, scanning, whatever so as to get them up on our website; so you can have no fears regarding their safety.

40th Anniversary of 1st Lunar Landing

Write it down—NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Astronaut Quiz Answers

1. Who is the only astronaut to go to the moon twice—but never walk on it?—Jim Lovell
2. Who is the only astronaut to fly Mercury S/C, Gemini S/C, and Apollo CM?—Wally Shirra
3. Who is the only astronaut to have orbited the moon alone, and walked on its surface?
—John Young
4. Who were the only CM pilots to also walk on the moon?—Dave Scott and John Young
5. Who were the only astronauts to experience water and runway touchdowns?—John Young: GT3, GT10, Apollo 10, Apollo 16, STS-1 and STS-9. Thomas Mattingley III: Apollo 16, STS-4, STS-51C. Thomas Stafford: Apollo 10, ASTP.

Social Club News

November 1969

Page 11.

"A DAY IN THE LIFE OF THE STADIR" - final.

CSR : Yes well, you remember the grand parade along Robinson Street, the fifty elephants in single file, each one holding the tail of the elephant in front, in its trunk?

Stadir : Ofcourse, ofcourse. A magnificent sight.

CSR : Well, the parade had almost passed the Port Hotel when an AWA van shot out of Alexandria Street and collected the last elephant.

Stadir : You mean it bumped into it?

CSR : Killed it - cold as a boarding house pudding. That's what the account is all about,

Stadir : The van killed one elephant, you say? Then why are Sole Brothers charging us for fifty elephants when we only killed one of the wretched things?

CSR : (Cautiously) Well...it was the last elephant in the line...

Stadir : (Exploding) What the devil's that got to do with it? We only killed one elephant, didn't we?

CSR : Yes, but the impact ripped the backsides out of the other forty nine:

(Stadir starts to beat CSR over the head with a swivel chair as the lights fade and the curtain slowly falls.)

Courtesy Wendy Yarnold

Lunar Reconnaissance Orbiter NASA's First Step Back to the Moon

Send Your Name to the Moon Aboard LRO!

NASA invites people of all ages to join the lunar exploration journey with an opportunity to send their names to the moon aboard the Lunar Reconnaissance Orbiter, or LRO, spacecraft.

The Send Your Name to the Moon Web site enables everyone to participate in the lunar adventure and place their names in orbit around the moon for years to come.

Participants can submit their information at

<http://lro.jhuapl.edu/NameToMoon/index.php>,

print a certificate and have their name entered into a database. The database will be placed on a microchip that will be integrated onto the spacecraft. The deadline for submitting names is June 27, 2008.



“Everyone who sends their name to the moon, like I'm doing, becomes part of the next wave of lunar explorers,” said Cathy Peddie, deputy project manager for LRO at NASA's Goddard Space Flight Center in Greenbelt, Md. “The LRO mission is the first step in NASA's plans to return humans to the moon by 2020, and your name can reach there first. How cool is that?”

The Lunar Reconnaissance Orbiter is being built at Goddard. The mission also will be managed at the center for NASA's Explorations Systems Mission Directorate in Washington.

Send Your Name to the Moon is a collaborative effort among NASA, the Planetary Society in Pasadena, Calif., and the Johns Hopkins Applied Physics Laboratory in Laurel, Md.

Random Quotes

“Yabba-Dabba-Doo!” — Wally Schirra, Apollo 7, reacting to the first manned SPS engine burn.

“Politicians should read science fiction, not westerns and detective stories.”
— Arthur C. Clarke

“It's a very sobering feeling to be up in space and realize that one's safety factor was determined by the lowest bidder on a government contract.” — Alan Shepard

“Whoopee! Man, that might have been a small one for Neil, but that's a long one for me!”
— Pete Conrad's first words from the surface of the Moon

Keeping the Memory Alive

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Vol 6 September 2008

THE TRACKERS'

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Keeping the memory alive

In Volume 2 we looked at anniversaries of missions that took place in the coming months. In Volume 3 we covered anniversaries of missions that took place in the preceding months. In Volumes 4 and 5 we started to catch up on those not yet covered. Now, in Volume 6, we continue to catch up on those few not yet covered.

So, our key mission coverage this issue will be Apollo XIII, with James Lovell—Commander, Fred Haise—LM Pilot and John Swigert—CM Pilot (deceased). This will complete our coverage of the manned Gemini and Apollo missions.

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Apollo XIII

During the first two days of the mission the crew ran into a couple of minor surprises, but generally Apollo XIII was looking like the smoothest flight of the program.

At 46 hours, 43 minutes Joe Kerwin, the CapCom on duty, said, *"The spacecraft is in real good shape as far as we are concerned. We're bored to tears down here."* It was the last time anyone would mention boredom for a long time.

Who will ever forget the call to Mission Control at GET 55:55:20 from John Swigert, *"Okay, Houston, we've had a problem here."*

While looking outside, Lovell reported to Houston, *"We are venting something out into the- into space"*. Jack Lousma, the CAPCOM replied,

"Roger, we copy you venting."

Lovell said, *"It's a gas of some sort."* It was oxygen gas escaping at a high rate from the second, and last, oxygen tank. A formidable task ahead for both crew and ground control, plans now changed. The crew moved to the Lunar Module to escape

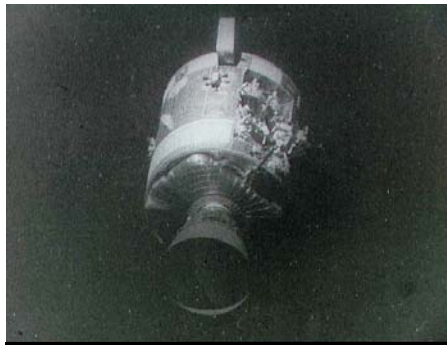


the decreasing air pressure in the Service Module. The crew had to conserve food and water. To get around the Moon and then go home, the Lunar and Command Modules needed to conserve fuel.

Due to debris from the explosion the navigation system was unreliable. The crew used the Sun as a navigation point to guide the crippled craft back to Earth.

While enduring discomfort and little sleep, the crew moved back into the cold Command Module, then ejected both the Lunar and Service Modules.

Four hours before landing, the crew shed the service module; Mission Control had insisted on retaining it until then because everyone feared what the cold of space might do to the unsheltered CM heat shield. Photos of the Service



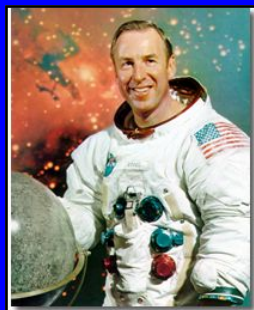
View of damaged Apollo 13 Service Module
Photograph JSC Digital Image Collection

Module showed one whole panel missing, and wreckage hanging out, it was a sorry mess as it drifted away. Three hours later the crew left the Lunar Module Aquarius and then splashed down gently in the Pacific Ocean near Samoa.

Courtesy NASA



John Swigert
Command Module
Pilot



James Lovell
Commander



Fred Haise
Lunar Module Pilot

(Continued on page 7)

Whereabouts?

As a result of Paul Dench supplying his “staffing list”, augmented courtesy Brian Milne, the “Whereabouts” table of those for whom we have no contact details has expanded to more than one page. Thanks to Barb Thompson and Leslie Gilbert for some updates.

TK

C	Abott	Barbara	Cobcroft	L	Gardner
Eric	Ainsworth	Bill	Comstock	S	Garner
Gay	Albon	??	Coombs	Eddie	Garrett
Bill	Arbery	Jim	Crossland	Kim	Gates
George	Armitt	Noel	Cunningham	C	George
Allan	Barber	Brian	Davies	Joe	George
John (Allan)	Barber	F	Dawes	J	Gerschwitz
Matt	Barber	Peter	Dawson	Vida	Gibson
Keith	Barnard	Peter	Del Fante	G	Goodlace
	Barrow	Andrew	Dempster	L	Gore
Deidre	Beaumont	Jean	DeVis	Lyn	Grant
Elizabeth	Beckett	Marilyn	Dick	Claude	Granville
	Beveridge	Olive	Dick	Bob	Halse
Michael	Billings	Phil	Dickinson	Geoff	Hammond
Denis	Black	Neville	Dippell	R	Hanes
G	Bond	Cheryl?	Dixon	Bea	Hardman
S	Boyce	L	Donkin	Peter	Hardwicke
Bill	Boyle	John	Draper	Ron	Harmes
		Mike	Dresser	Anne	Harvey (Brookes)
B	Bradley	Bruce	Duff	D	Hatch
Phil	Brindley	I	Dunleavy	Gail	Heileman
Hans	Britz	Bob	Dwyer	Stan	Hills
Dave	Brooks	Dave	Elliot	Ernie	Hindley
Charlie	Brown	J	Erickson	Dave	Hine
T.F.A	Brown	Lorraine	Erlandsen	Geoff	Hoad
W	Brown	Kerrie	Eyre	A	Holgate
J	Burdett	Ross	Eyre	Phyllis	Hook (Watson)
R	Burdett	Ross	Eyre	J	Hopkins
Martin	Burgess	Martin	Fenney	Vivienne	Hopper
Robert	Burns	Ian	Few	Ted	Hopper (Lawer)
Basil	Byrne	Ian	Findlay	Deidre	Howard
Joe	Cabone	Joan	Fitzgerald	B	Hughes
Joy	Cameron	Robyn	Fort	B	Hunter
Geoff	Cardwell	G	Francis	D	Hutchins
G	Carrick	Ben	Franklin	Leonie	Jennings
Darryl	Cass	David	Froom	Ian	Jones
Brian	Clarke	Don	Frost	S ???	Judd
Jim	Cleary				

(Continued on page 4)

The quest continues; the list never seems to get any shorter. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. There are also a few who do not wish to be contacted.

TK

Whereabouts? - ctd.

Brian	Clifford	Vic	Gadelvicius	Vera	Kastropil
Keith	Clifton-James	Jamie	Gardiner	John	Keane
Mike	Keen	Patsy	Nolan (Thompson)	?	Sheehan
Jim	Keenan	Graham	Nielsen	Doug	Shaw
John	Kelman	John	Noble	Jeff	Shuttleworth
D	Kettlety	?	O'Brien	Dave	Sims
Joy	King	Joan	Oats	P	Sims
M	King	W	Oliver	Ray	Skender
L	King	Denis	Owens	George	Small
Roy	Kjellgren	John	Paddon	Lyn	Smart (Willis)
Gloria	Klarie	??? Mrs	Parkinson	J	Smith
Peter	Kloppenburg	John	Parkinson	Mary	Smith
Henry	Larsen	Alan	Paterson	Mike	Smith
Russ	Leighton	G	Paull	P	Smith
G	Linney	Mike	Pender	Roger	Smith
F	Lippett	Wendy	Petersen	Bill	Smythe
Alex	Liu	Don	Pettitt	Hazel	Snook (Howse)
Evelyn	Lomas (Northover)	T	Phillips	Dave	Standbury
Leslie	Lomas	Diane	Pitman (Housley)	John	Stanton
Gloria	Lyon-Roberts	John	Platten	Alex	Stevenson
Ross	MacDonald	Don	Plumb	Barbara	Stevenson (Vernon)
John	Mahaffey	Gerry	Plummer	John	Swanney
Peter	Maine	D	Powell	Barbara	Teahan
Roy	Mallinson	M.J.K	Power	Barbara	Teasdale
Bob	Marr	Wendy	Puccinelli	Des	Terrill
Keith	Mathieson	A	Rees	Alan	Thomas
Alec	Matthews	Dave	Rendell	Christine	Thomas
K	McCarson	Frank	Rice	Howard	Thomas
Ian	McDonald	Doug	Richards	Don	Thompson
S	McDonald	D	Richardson	Jack	Thompson
Frank	McGregor	Harry	Richmond	Patsy	Thompson (Nolan)
Eileen	McLaughlan	Ralph	Richmond	L	Tink
Don	McLellan	Dave	Rickards	Chris	Todd
Nola	Meiklejohn (O'Byrne)	G	Riley	Larry	Tomkins
Verica	Milanovich	Brian	Robinson	Frank	Toomey
R	Miller	Lynne	Rosser	Mike	Travell
Bill	Mills	Ted	Rosser	Dave	Troup
Ray	Mills	Lindsay	Sage	Norma	Turner
Peter	Milne	Stewart	Sands	Ernst	Uhl
Marilyn	Milner (Gobby)	Ron	Sargeant	Tony	Vingerhoets
Ian	Mitchell	Russell	Schwarzer	Dave	Walker
John	Monteith	Bob	Scott	Mrs B	Ward
Sharon	Morgan (Todd)	Michael	Scott-Malcolm	Tom	Ward
J	Murray	Lorraine	Scott-Malcolm (Erlandshaw)	N	Wardle
Dennis	Naylor	Dorcas	Sefton-Bellion	A	Watermeyer
Gloria	Neal	George	Sefton-Bellion	Irene	West
Terry	Newman	D	Selby	Bernie	Wilbourne
Terry	Newman	Ron	Shand	Bernie	Wilbourne
Shirley	Newman (Temple)	Fred	Sharland	Garnet	Wilmott
Ellie	Nichols	E	Sharples	Brian	Wilson
Kelton	Nickerson	John	Sharples	Ray	Zatorski
		Dorothy	Shaw (Glover)		

More Gemini FC Info



Gemini 4 Flight Control Team in Gemini Control Room

Back row: Dick Simons, Fred Mitchell, Lewis Wainwright, Dave Scott

Front row: Dr Walsh, Harry Smith, Murray Alson?, John Ferry, Ed Fendell, Joe Fuller, Dick Pollard

Photograph—Hamish Lindsay

Answers to Astronaut Quiz

1. Only Mercury astronaut to serve as an Apollo backup crew member?
Alan Shepard
2. Number of Moon-walkers still alive?
Nine
3. Oldest remaining Apollo astronaut?
Frank Borman
4. Oldest Apollo astronaut at launch?
Alan Shepard
5. Shortest-lived astronaut?
Jack Swigert died of cancer on December 27, 1982, at the age of 51.
6. Only all-Air Force crew?
Apollo 15
7. Astronaut with the longest total Apollo flight time?
David Scott
8. Only Commander to gain weight during an Apollo mission?
Alan Shepard
9. Mission with the most revolutions in Earth orbit?
Apollo 7
10. Mission with the most revolutions in lunar orbit?
Apollo 15

Biographies ctd.

John Swigert held a position as engineering test pilot for North American Aviation, Inc., before joining NASA. He was also an engineering test pilot for Pratt and Whitney from 1957 to 1964.

He served with the Air Force from 1953 to 1956 and, upon graduation from the Pilot Training Program and Gunnery School at Nellis Air Force Base, Nevada, was assigned as a fighter pilot in Japan and Korea.

Mr. Swigert was one of the 19 astronauts selected by NASA in April 1966. He served as a member of the astronaut support crew for the Apollo 7 mission.

Mr. Swigert was next assigned to the Apollo 13 backup crew and subsequently called upon to replace prime crewman Thomas K. Mattingly as command module pilot. The substitution was announced 72 hours prior to launch of the

mission following Mattingly's exposure to the German measles.

In completing his first space flight, Mr. Swigert logged a total of 142 hours, 54 minutes.

Mr. Swigert took a leave of absence from NASA in April 1973 to become Executive Director of the Committee on Science and Technology, U.S. House of Representatives.

Mr. Swigert resigned from NASA and the committee in August 1977, to enter politics.

In 1979 he became Vice President of B.D.M. Corporation, Golden, Colorado. In November 1982 he was elected to the U.S. House of Representatives.

He died on December 28, 1982 of bone cancer, before he could be sworn in.

Courtesy N.A.S.A. and Wikipedia

Astronauts Invent "Honeybilla"

The *West Australian*, Friday 18 July 1969, page 16

"The Apollo 11 astronauts have coined a new word in space terminology: "Honeybilla."

Passing over Australia yesterday, they found the names of the Australian tracking stations, Honeysuckle Creek and Tidbinbilla, too much of a mouthful in their conversations with ground control. They decided to abbreviate them to one manageable word and chose Honeybilla.

Staff at the two stations are understood to be a bit sensitive about this new bit of space jargon. They maintain that they are two quite distinct and independent stations, though both are near Canberra and only 14 miles apart.

Tidbinbilla is a deep space tracking station which makes interplanetary probes. Honeysuckle Creek station was specially designed to track flights to the moon.

Both stations have 85ft dish aerals and are playing important parts in the Apollo 11 mission."

"A J" Roy, RIP

[NASAWATCH](#) reports that veteran NASA pilot Arda J. 'AJ' Roy has died. Arda acted as capcom on the tracking ship Rose Knot and at the NASA Australia tracking station for the early test flights of the Apollo/Saturn (AS202 and 203).

Hoax Believers

I was saddened to hear from another contributor to the Project Apollo Digest that Martin Walls of Belmont NSW, the contributor of this article in the last issue, died at his home from cancer. Our sympathies are with his family.

Biographies

Captain Lovell was selected as an Astronaut by NASA in September 1962.

During his Naval career he had numerous aviator assignments, including a 4-year tour as a test pilot at the Naval Air Test Center, Patuxent River, Maryland.

While there he served as Program Manager for the F4H "Phantom" Fighter. A graduate of the Aviation Safety School of the University of Southern California, he also served as Safety Engineer with the Fighter Squadron 101 at the Naval Air Station, Oceana, Virginia.

He subsequently served as backup pilot for the Gemini 4 flight and backup Commander for the Gemini 9 flight, as well as backup Commander to Neil Armstrong for the Apollo 11 lunar landing mission.

On December 4, 1965, he and Frank Borman were launched into space on the history-making Gemini 7 mission. The flight lasted 330 hours and 35 minutes and included the first rendezvous of two manned maneuverable spacecraft.

The Gemini 12 mission, commanded by Lovell with Pilot Edwin Aldrin, began on November 11, 1966. This 4-day, 59-revolution flight brought the Gemini program to a successful close.

Lovell served as Command Module Pilot and Navigator on the epic six-day journey of Apollo 8 - man's maiden voyage to the moon - December 21-27, 1968.

He completed his fourth mission as Spacecraft Commander of the Apollo 13 flight, April 11-17, 1970, and became the first man to journey twice to the moon, and the only man to have flown twice to the moon without landing.

Captain Lovell held the record for time in space with a total of 715 hours and 5 minutes until surpassed by the Skylab flights.

On March 1, 1973, Captain Lovell retired from the Navy and from the Space Program to join Bay-Houston Towing Company in Houston, Texas.

Along with Jeffrey Kluger, Lovell wrote a book on the Apollo 13 mission, *Lost Moon: The Perilous Voyage of Apollo 13*. This book was

the basis for the later Ron Howard movie Apollo 13 starring Tom Hanks as Lovell.

In 1998, actor Tim Daly portrayed Lovell in portions of the HBO miniseries *From the Earth to the Moon*. The film depicts Lovell during his missions aboard Gemini 12, Apollo 8, and Apollo 13, though he is not seen on screen during the latter mission.

Lovell is one of the astronauts featured in the documentaries *In the Shadow of the Moon* and *When We Left Earth*.

Haise was a research pilot at the NASA Flight Research Center at Edwards, California, before coming to Houston and the Lyndon B. Johnson Space Center.

His NASA career began as an Aeronautical Research Pilot at Lewis Research Center in 1959. Further assignments were held as a Research Pilot at the NASA's Dryden Flight Research Center in 1963 and as an astronaut at the Johnson Space Center in 1966.

Haise was the first of the 1966 group to be assigned to Apollo duties - ahead of some group 3 members. He served on the back-up crew for the Apollo 8, Apollo 11, and Apollo 16 moon missions.

Haise was the lunar module pilot on Apollo 13 (April 11-17, 1970) and has logged 142 hours and 54 minutes in space. He was also scheduled as commander for the cancelled Apollo 19 mission.

He later flew five flights as the Commander of the space shuttle Enterprise, in 1977, for the Approach and Landing Tests Program at Edwards Air Force Base, and was selected to command the original STS-2 mission to rescue the Skylab space station in 1979, but this was cancelled due to the long delays in the Shuttle's development as well as the break-up of the Skylab in mid-1979.

Haise retired from NASA in June 1979, and became a manager with Grumman Aerospace Corporation, before retiring in 1996. In 1995,

Haise was inducted into the Aerospace Walk of Honor.

(Continued on page 6)

The Hero of GT3

As narrated by *John Lambie*



*Mrs O'Donahue, Postmistress—Hamelin Pool
Photograph—John Lambie*

Carnarvon first support of manned flight was *Gemini Titan 3*. About an hour before we were due to pick up the count, a rain storm with severe lightning struck near Gascoyne Junction and damaged the trunk line. This "open wire" trunk line carried the 12 channel voice carrier system, plus the voice frequency telegraph system.

The lightning strike had vaporised 3 metres of heavy copper wire and the outage caused the town to be cut off from the outside world. This was before troposcatter systems and OTC Intelsat communication backup so the tracking station was also without SCAMA and Teletype connection to the worldwide NASCOM network, and Goddard Space Flight Centre, Maryland, USA.

Quick thinking by staff in the Perth main trunk room terminated the NASCOM telegraph traffic channel to Carnarvon, and in collaboration with the technician staff at Mullewa looked at the options to pass information to Carnarvon.

In the late 19th century and early days of the 20th century when electric Morse communications had been established along the coast they had suffered with salt spray build-up and unreliability. When voice telephony systems were planned it was thought reliability would be improved by choosing an inland trunk route from Carnarvon, via Gascoyne Junction, and the pastoral town of Mullewa, then on down to Perth.

Primitive single wire, earth return circuits still ran down the coast from Carnarvon to Hamelin Pool and then to Shark Bay. Similar single wire circuits ran across country from Mullewa to Northampton, and from

Northampton to Hamelin Pool. The lines from Mullewa to Northampton and Northampton to Hamelin had recently been made redundant and sold off for scrap. By a stroke of luck the contractor had not begun the job of recovering the wire and poles, and a circuit link was a possibility.

Mrs O'Donahue was raised on the ringdown magneto line and told of the predicament. She grasped the situation and quickly dressed.

Meanwhile pages of numeric pointing data from the teletype page was relayed by PMG (now Telstra) technical staff from the Perth Trunk room to the Mullewa telephone exchange, transcribed and repeated from Mullewa to Hamelin Pool. Mrs O'Donahue repeated the numbers to the supervising technician, Cameron Clarke at Carnarvon Telephone exchange. Cameron repeated the strings of numbers directly to Arch Durie at CRO. Manual input into the stations' command systems then enabled the station tracking systems to begin acquiring a signal from the spacecraft on the next orbit pass.

Mrs O'Donahue was recognised by NASA and given a special award.

The story made headlines in the world press, even if a bit embellished. I remember reading reference to the signal being carried on the top wire of ranch fencelines.

KEEPING THE MEMORY ALIVE



**Carnarvon Tracking Station
1964 - 1975**



Click on picture to enter

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My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm.

Some new material, including photographs by John Lambie and Hamish Lindsay, and links have been added, and there is a lot more to come I am sure. I can arrange copying, scanning, whatever so as to get them up on our website; so you need have no fears regarding their safety.

40th Anniversary of 1st Lunar Landing

REUNION DINNER

Write it down—NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Random Quotes

"Yeah, you caught me-I came up here by myself last week to practice."—Jim Lovell, aboard Apollo 8, after being complimented on the accuracy of his celestial navigation skills.

"We leave as we came and God willing as we shall return, with peace and hope for all mankind."
—Gene Cernan - Apollo 17

"We walked up and down the aisle of our big spacecraft."—Gordo Cooper on Day 6 of Gemini V

"Man must explore, and this is exploration at its greatest."—Dave Scott, Apollo 15.

"It is correct to say that we landed on the moon with 152 Kbytes of computer memory."
—Don Eyles

Social Club News

November 1969

Page 2.

STATION NEWS

This has been an exciting three months since the last issue of our magazine. Nearly every section on the Station has been involved in one project or another.

Range and Range Rate are in their new building and have completed their equipment installation. Logistics have their new building completed and are now busily planning the move to it. Facilities are heavily involved, as always, with general maintenance but more importantly, are now in the planning stage of major modifications to the T&C building and of the installation of air conditioning in the new Logistics building.

Most sections were involved in the aircraft simulations - we received a very good report on that and we have been involved with a considerable variety of minor missions.

Outside the Station, we have had the Ball which is still a subject of conversation among the senior guests who attended, and the Tropical Festival exhibition. More recently, the Halloween dance was a great success.

The first ten houses have been completed at Morgantown and we are now well into the planning stage for the second lot of ten.

Even our visitors have had an unusual variety about them - from Miss Australia to visiting engineers. Our last group of 11nericab engineers from General Dynamics have now left and for the first time in many months, we have no visiting American engineers.

The most recent event has been the visit of the astronauts to Perth and although they were unable to come to the Station, they passed some very complimentary remarks concerning us during their speech on the Esplanade. The Station has always had a good reputation within the Network and I am very pleased that this has now been publicly acknowledged and I am sure that we shall continue to live up to it, particularly in the Apollo 12 mission which, at time of writing, is less than two weeks away.

R.P. JACOMB

Courtesy Wendy Yarnold

The Saga Continues...

Looks like a case of “one out of three aint bad.”.

1. Joe McGrade forwarded a cutting from the Northern Guardian, dated 9 July 2008. In a letter to that paper relating to the upcoming 40th anniversary of the first lunar landing it was stated, and I quote , “...*The big dish, as it is known on Browns Range, played a vital role in the landing,...*”.

This elicited a rapid response to the editor of that paper from Paul Dench, including, “...*We compliment Tom Day on his suggestion that Carnarvon should plan to celebrate the 40th anniversary of man's first step on the Moon since the town had so much to do with supporting the Apollo program.*

However, Tom, like very many others, perpetuates a local misconception of the true role of the OTC's 'big dish' - its installation was not even complete (at) that stage. Also the Moon had not yet risen in Carnarvon when Neil Armstrong took that first step, so not even the OTC's small dish was providing a communications link for the NASA Space Tracking Station just down the road from OTC....”.

To my knowledge, no correction was ever published.

I also wrote to Mr Day, saying, “*Please accept my thanks, and no doubt the thanks of many ex-Trackers, for your recent letter to the Northern Guardian promoting the 40th anniversary of the lunar landing.*

A celebration in the town that was home to the largest manned space flight tracking station outside of mainland USA would indeed be a wonderful event.

However, with respect, I must point out that the part of your letter that refers to the OTC "big dish" is totally incorrect...”.

Paul Dench also advised Mr Day that, “...*both Terry or I are on line several times a day should you need accurate information at any time and will be very glad to help...*”

No response was received by me; however I am not in his electorate.

2. Mal Cameron forwarded an article in the Geraldton Guardian dated 23rd July 2008. The article referred to calls being made for the OTC Antenna to be restored to mark the 40th anniversary

of man's landing on the moon. It quoted the WA Nationals' leader as saying, “...*the Carnarvon dish played a key role in the 1969 moon landing...*”.

Once again, this was a “call to arms”.

I sent a quick response to the editor of the GG, including the usual, as per the email message sent to the Northern Guardian. In addition, I sent a similar message to Brendon Grylls.

He was courteous enough to ask for my telephone number so that we could talk. When I spoke with him a day or so later he was very apologetic and said that he had received his information from the Shire of Carnarvon Council. He doubted that the GG would publish a correction since they only published about one in ten of his letters.

Again, no correction has been sighted.

3. It was somewhat of a shock to receive from Joe a cutting of an article in the Northern Guardian dated 30th July 2008. This one deserves framing.

Headlined “*Space-age icon may serve again*”, it referred to the possibility of Carnarvon's OTC Satellite Earth Station Antenna being restored to honour the town's role in the 1969 moon landing.

It went on to quote Mr Gryll as believing Carnarvon's role, “...*should be commemorated in time for the 40th anniversary...*”

It goes on to say “...*Although the dish was yet to be operational at that stage, he said it was a landmark figure in the town...*”.

It also concluded with a statement from the Carnarvon Shire Council CEO, Graham Wilks, “*Carnarvon, which housed the largest manned space flight tracking station outside of mainland USA, should be 'acknowledged for the part it played in the historic event'*”.

In all sincerity, congratulations to Brendon Grylls, and the writer of the article for setting things straight at long last. Thanks as well to Graham Wilks.

The editor of the GG turned down my request to let me publish the actual article.

Like I said—one out of three aint bad.

The Editor

Keeping the Memory Alive

Burning Tree Cut Space Station Link

The West Australian, Friday 18 July 1969, page 16

"A smouldering tree which fell across telephone lines between Perth and the Eastern States yesterday afternoon cut communications between the Carnarvon and Honeysuckle Creek space tracking stations. Honeysuckle Creek is near Canberra.

Post Office engineers restored the situation in two minutes when they made a detour round the broken line eight miles east of Northam by making connections from Northam north of the break and back into the network beyond it.

At Carnarvon, a spokesman said that no vital messages were being passed at the time of break. Carnarvon was a back-up station and Honeysuckle Creek had the option of using data from it.

Had the break occurred at a time that was vital to the Apollo mission, a communications satellite could have been used.

He said that the count-down for the mission had gone so well that the break went almost unnoticed.

Burning off

A spokesman for the P.M.G. Department said that the 60ft tree which fell had been smouldering for some days after burning-off operations.

It fell across the lines about 1:10 p.m. cutting four bays of wires extending more than 100 yards. This cut more than 150 channels carrying trunk line communications between the two tracking stations, as well as telephone and telegraph links between Perth and the Eastern States.

Calls between Perth and Merredin, Southern Cross, Kalgoorlie and Norseman were also affected.

Six technicians from Northam repaired the line progressively and two hours later full communications were restored. While the lines were down, three stand-by radio channels were used to help cut delays."

If undelivered, please return to:

CRO Trackers

PO Box 93, Quinns Rocks, WA 6030



Vol 6 December 2008

THE TRACKERS'

C R O N I C L E



Keeping the memory alive

Since we've covered all the manned Gemini and Apollo spaceflight, this issue moves on to the Skylab Project, commencing with Skylab 1.

Designed for long duration mission, Skylab program objectives were twofold. To prove that humans could live and work in space for extended periods, and to expand our knowledge of solar astronomy well beyond Earth-based observations.

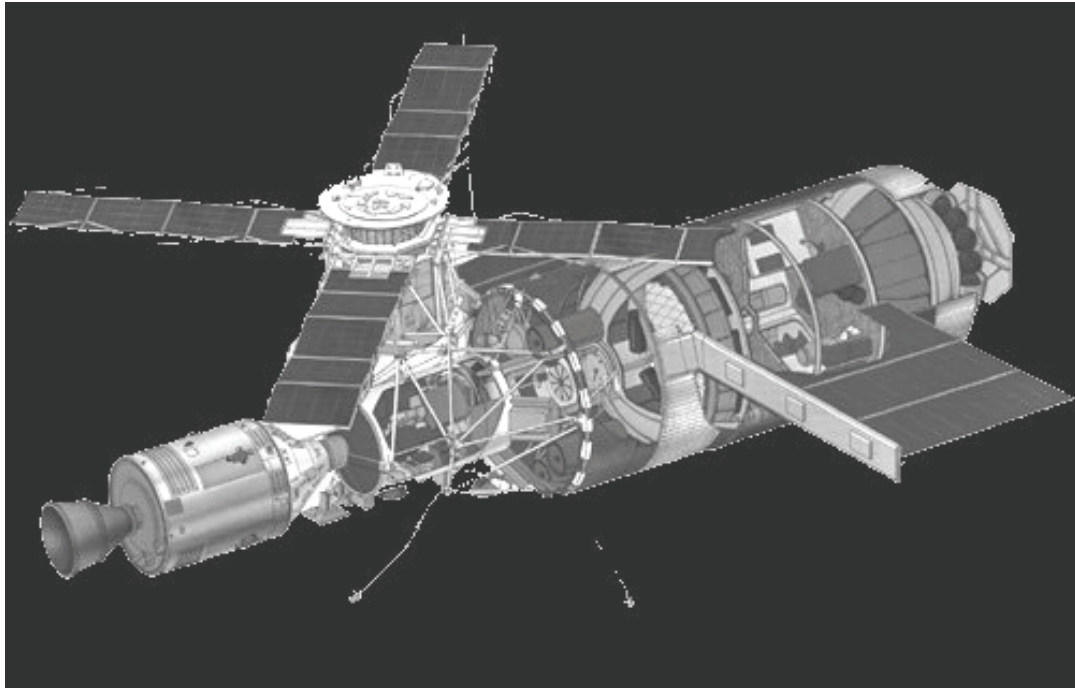
Also included in this issue:

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SKYLAB 1



Skylab was America's first manned space station. It was built from the S-IVB stage of a Saturn V Moon rocket, its hydrogen tank being converted at the factory into spacious two-storey accommodation for a three-man crew. The bottom section contained a ward room, sleep compartments and a zero-g washroom/toilet; above was the spacious workshop. The total internal volume of Skylab with Apollo Command and Service modules docked was about 368 m³ — approximately the same as a small two-bedroom house.

Courtesy thinkquest.org

The Skylab space station was launched May 14, 1973, from the NASA Kennedy Space Center by a huge Saturn V launch vehicle, the moon rocket of the Apollo Space Program.

Sixty-three seconds after lift-off, the meteoroid shield — designed also to shade Skylab's workshop — deployed inadvertently. It was torn from the space station by atmospheric drag. This event and its effects started a ten-day period in which Skylab was beset with problems that had to be conquered before the space station would be safe and habitable for the three manned periods of its planned eight-month mission.

When the meteoroid shield ripped loose, it disturbed the mounting of workshop solar array "wing" two and caused it to partially deploy. The



exhaust plume of the second stage retro-rockets impacted the partially deployed solar array and literally blew it into space. Also, a strap of debris from the meteoroid shield overlapped solar array "wing" number one such that when the programmed deployment signal occurred, wing number one was held in a slightly opened position where it was able to generate virtually no

power. All confirmed via Carnarvon telemetry.

In the meantime, the space station had achieved a near-circular orbit at the desired altitude of 435 kilometers (270 miles). All other major functions including payload shroud jettison, deployment of the Apollo Telescope Mount (Skylab's solar observatory) and its solar arrays, and pressurization of the space station occurred as planned.

Courtesy NASA

Whereabouts?

As a result of Paul Dench supplying his “staffing list”, augmented courtesy Brian Milne, the “Whereabouts” table of those for whom we have no contact details has expanded to more than one page. Thanks to Chris Todd and Meg Limb for some updates.

TK

C	Abott	Keith	Clifton-James	L	Gardner
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Gay	Albon	Bill	Comstock	Eddie	Garrett
Bill	Arbery	??	Coombs	Kim	Gates
George	Armitt	Jim	Crossland	C	George
Allan	Barber	Noel	Cunningham	Joe	George
John (Allan)	Barber	Brian	Davies	J	Gerschwitz
Matt	Barber	F	Dawes	Vida	Gibson
Keith	Barnard	Peter	Dawson	G	Goodlace
	Barrow	Peter	Del Fante	L	Gore
Deidre	Beaumont	Andrew	Dempster	Lyn	Grant
Elizabeth	Beckett	Jean	DeVis	Claude	Granville
	Beveridge	Marilyn	Dick	Bob	Halse
Michael	Billings	Olive	Dick	Geoff	Hammond
Denis	Black	Phil	Dickinson	R	Hanes
G	Bond	Neville	Dippell	Bea	Hardman
S	Boyce	Cheryl?	Dixon	Peter	Hardwicke
Bill	Boyle	L	Donkin	Ron	Harmes
B	Bradley	John	Draper	Anne	Harvey (Brookes)
Phil	Brindley	Mike	Dresser	D	Hatch
Hans	Britz	Bruce	Duff	Gail	Heileman
Dave	Brooks	I	Dunleavy	Stan	Hills
Charlie	Brown	Bob	Dwyer	Ernie	Hindley
T.F.A	Brown	Dave	Elliot	Dave	Hine
W	Brown	J	Erickson	Geoff	Hoad
J	Burdett	Kerrie	Eyre	A	Holgate
R	Burdett	Ross	Eyre	Phyllis	Hook (Watson)
Martin	Burgess	Ross	Eyre	J	Hopkins
Robert	Burns	Martin	Fenney	Vivienne	Hopper
Basil	Byrne	Ian	Few	Ted	Hopper (Lawer)
Joe	Cabone	Ian	Findlay	Deidre	Howard
Joy	Cameron	Joan	Fitzgerald	B	Hughes
Geoff	Cardwell	Robyn	Fort	B	Hunter
G	Carrick	G	Francis	D	Hutchins
Darryl	Cass	Ben	Franklin	Leonie	Jennings
Brian	Clarke	David	Froom	Ian	Jones
Jim	Cleary	Don	Frost	S ???	Judd
Brian	Clifford				

(Continued on page 4)

The quest continues; the list never seems to get any shorter. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. There are also a few who do not wish to be contacted.

TK

Whereabouts? - ctd.

(Continued from page 3)

Vera	Kastropil	Kelton	Nickerson	Fred	Sharland
John	Keane	Vic	Gadelvicius	E	Sharples
Mike	Keen	Jamie	Gardiner	?	Sheehan
Jim	Keenan	Patsy	Nolan (Thompson)	Doug	Shaw
John	Kelman	Graham	Nielsen	Jeff	Shuttleworth
D	Kettlety	John	Noble	P	Sims
Joy	King	?	O'Brien	Ray	Skender
M	King	Joan	Oats	George	Small
L	King	W	Oliver	Lyn	Smart (Willis)
Roy	Kjellgren	Denis	Owens	J	Smith
Gloria	Klarie	John	Paddon	Mary	Smith
Peter	Kloppenburg	??? Mrs	Parkinson	Mike	Smith
Henry	Larsen	John	Parkinson	P	Smith
Russ	Leighton	Alan	Paterson	Roger	Smith
G	Linney	G	Paull	Bill	Smythe
F	Lippett	Mike	Pender	Hazel	Snook (Howse)
Alex	Liu	Wendy	Petersen	Dave	Standbury
Evelyn	Lomas (Northover)	Don	Pettitt	John	Stanton
Leslie	Lomas	T	Phillips	Alex	Stevenson
Gloria	Lyon-Roberts	Diane	Pitman (Housley)	Barbara	Stevenson (Vernon)
Ross	MacDonald	John	Platten	John	Swanney
John	Mahaffey	Don	Plumb	Barbara	Teahan
Peter	Maine	Gerry	Plummer	Barbara	Teasdale
Roy	Mallinson	D	Powell	Des	Terrill
Bob	Marr	M.J.K	Power	Alan	Thomas
Keith	Mathieson	Wendy	Puccinelli	Christine	Thomas
Alec	Matthews	A	Rees	Howard	Thomas
K	McCarson	Dave	Rendell	Don	Thompson
Ian	McDonald	Frank	Rice	Jack	Thompson
S	McDonald	Doug	Richards	Patsy	Thompson (Nolan)
Frank	McGregor	D	Richardson	L	Tink
Eileen	McLaughlan	Harry	Richmond	Larry	Tomkins
Don	McLellan	Ralph	Richmond	Frank	Toomey
Nola	Meiklejohn (O'Byrne)	Dave	Rickards	Mike	Travell
Verica	Milanovich	G	Riley	Dave	Troup
R	Miller	Brian	Robinson	Norma	Turner
Bill	Mills	Lynne	Rosser	Ernst	Uhl
Ray	Mills	Ted	Rosser	Tony	Vingerhoets
Peter	Milne	Lindsay	Sage	Dave	Walker
Marilyn	Milner (Gobby)	Stewart	Sands	Mrs B	Ward
Ian	Mitchell	Ron	Sargeant	Tom	Ward
John	Monteith	Russell	Schwarzer	N	Wardle
Sharon	Morgan (Todd)	Bob	Scott	A	Watermeyer
J	Murray	Michael	Scott-Malcolm	Irene	West
Dennis	Naylor	Lorraine	Scott-Malcolm (Erlandsen)	Bernie	Wilbourne
Gloria	Neal	Dorcas	Sefton-Bellion	Bernie	Wilbourne
Terry	Newman	George	Sefton-Bellion	Garnet	Wilmott
Terry	Newman	D	Selby	Brian	Wilson
Shirley	Newman (Temple)	Ron	Shand	Ray	Zatorski
Ellie	Nichols				

"Towing Bill"

How much was the "towing bill" presented to Grumman by North American Rockwell after the Apollo 13 disaster, a humorous jab by the makers of the lifeboat Lunar Excursion Module (LEM) at the builders of the damaged Command Service Module (CSM) that suffered a crippling explosion during the mission?

North American Rockwell "owed" Grumman \$312,421.24 in total, according to calculations by Grumman pilot Sam Greenberg. The itemized invoice broke down as such:

- Four dollars for the first towed mile, one dollar for each additional mile, for a total charge of \$400,004;
- A battery charge road call of \$4.05 (The LEM batteries were used to augment the damaged CSM power supply for capsule reentry.);
- An oxygen fee, at 10 dollars per pound, of \$500;
- A hotel room rate of eight dollars per night, described as "no TV,

air-conditioned with radio, modified American plan with view, additional guest in room," totaling \$32;

- A standard 20 percent United States government discount, and
- An additional two percent discount for paying in cash

Thus, North American Rockwell faced a total liability of \$400,540.05 before the 22 percent cash and federal discount, for a final bill of \$312,421.24.

North American Rockwell, as you might imagine, politely declined to pay the bill on the grounds that for Apollo 10 (which did everything but land on the moon), Apollo 11, and Apollo 12, North American Rockwell CSMs had towed Grumman LEMs all the way to the moon and back for free. As such, North American Rockwell was certain that, were they to present charges for those services, it was Grumman that would come out owing.

Courtesy Project Apollo Forum

Honeybilla Addendum

"I had never heard of "Honeybilla" until a couple of months ago, when that 1969 "West Australian" article was cited on an Internet Apollo group.

I'm quite willing to concede that it might have been coined and used by Pockley or Daley (or Leslie), but I'm 99% confident that it was never used by or to Apollo astronauts.

As you well know, there was no need for the astronauts to be aware of where communications might be being handled at any particular time,

so I suspect that they were only vaguely aware of the names of the MSFN stations, and that "Tidbinbilla" would be quite unfamiliar, and "Honeybilla" even more so.

I personally listened (intently) to just about every up and down word through HSK (or HSKX) on Apollos 7 to 13 in my role as Ops Supervisor, and never heard "Honeybilla". My 1% uncertainty is I might have forgotten!

Googling it produces nothing."

Mike Dinn

Kennedy Space Centre

Kennedy Space Centre Feb 17th 2008.

By Alan Gilham

We were fortunate to be able to pay a visit to the Space Centre for a day during a tour of Florida.

The Centre is an immense complex of buildings spaced out over a large area of Florida swamp area. There is a fleet of buses to take you around the complex and if you catch one of the earlier buses you can spend a good few hours visiting different areas of the Centre and if you are lucky you can catch a glimpse of an occasional alligator and the milky shadow of a manatee.

We were able to catch one of the first buses at 9.45 and were taken to the Observation Gantry where one has an extensive view of the site. The day before the huge 'Crawler' had taken the shuttle Endeavour components to the launch pad to



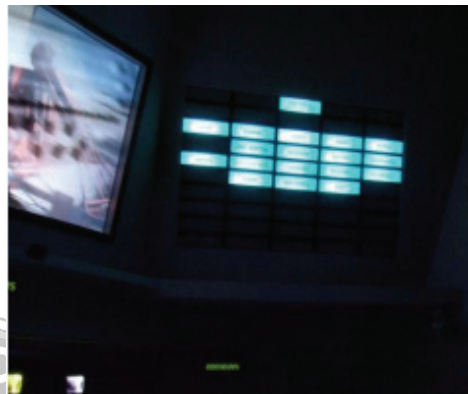
get ready for the next launch and we were able to get a long distance view of the launch assembly.

The Gantry site had a coffee shop and we were able to indulge in this bad habit. There were a few rapacious crows in the area waiting to snatch any proffered food.

The buses came at regular intervals of twenty minutes and we were shortly at the next site which was the Apollo and Saturn five site. There was a simulation of

the Apollo 8 launch, the site was darkened – which left me unprepared for photos as flash was prohibited.

A board with the names of the MSFN sites was shown and I managed to get a picture of the board as this was recognition of the part played by the ground stations.



The board displayed the following sites by column:

Guam, Houston, next was Bermuda, USNS Redstone, USNS Vanguard, Canary, next was Madrid, Ascension, CARNARVON and Honeysuckle Creek. Then Hawaii, Bahamas, Goldstone and Texas and lastly Antigua Grand Bahama and USNS Mercury.

To see Carnarvon up in lights was a great sight. The hall with the Saturn V rocket components was immense and the rockets dwarfed the visitors.

The next site was the International space station site and provided a worthwhile visit although the components were immense it did not really provide a photo shoot as it was difficult to get a size comparison. Back to the main complex and excellent lunch in a very busy food court.

Next was a visit to the so called rocket garden and the early space exploration building where there was a mock up of a Gemini Command centre showing the flight path of a Gemini capsule, one of the stations shown was

Kano Nigeria (defunct at about 1964) and

(Continued on page 7)

Kennedy Space Centre ctd.

then Carnarvon. I sent the picture to Paul Dench who thinks it is a track of Gemini 3.

Our last visit was to the Space Shop which carries – so it says – the largest stock of space memorabilia in the US. I wanted to look at all the stock of DVDs they carried to see if I could find any more footage of CRO.

I had the help of a very pleasant young lady who searched through the records of stock for me. During this time she took note of the several websites about Carnarvon and said she would look them up as she was very interested in space matters.

Unfortunately I could not find what I wanted but I have the web site address of Spacecraft films and will order one of their DVDs later.



This was an excellent visit and I recommend it to anyone who is in Florida for a visit. The site is immense and I could have done with another day there to mooch around the hidden corners of the site.

A Memory of Pete Conrad

Hi all

I remember Pete Conrad the Astronaut. He was a personable sort of guy and during his visit to CRO for GT3 he approached me on site and asked if I could arrange a phone patch so he could talk to his wife back in the States.

In the monopoly days of the PMG this was highly illegal but nevertheless local initiative took precedence and the SCAMA (Signalling Conference and Monitoring Arrangement) link back to Goddard Space Flight Centre was used.

We were in regular contact with the switchboard operators at Goddard from regular circuit assurance checks and the cooperative guy was happy to dial the number and connect the U.S telephone network to the SCAMA so Pete could make his call.

Later we did meet (maybe at Tuckey's Port Hotel) and later ended up back at John and Lyn Nugent's home to continue our socializing.

If I am correct Pete Conrad was one of the few who made two missions to the moon.

I believe later he went on to become a Vice-President of Boeing Corporation in Seattle.

I was shocked one day on listening to the ABC news to hear that he had been tragically killed in a road accident. I think he was riding one of his classic motorcycles.

Regards

John Lambie

Hi Terry

Thanks for correction. It is amazing what tricks the memory plays as you age. So it was two Gemini missions and one Apollo. I was not aware of his command of Skylab.

Mc Donnell Douglas not Boeing. Close but not close enough. At least the motorcycle accident was correct.

Thanks for filling me in with the details of his life after the space program. Larger than life Pete Conrad indeed had an illustrious space career.

R.I.P Pete Conrad

From The Northern Times

More than 200 people attended a close-down function at the Carnarvon Tracking Station on Wednesday of last week.

At the reception, which was hosted by the Department of Manufacturing Industry, the guests were welcomed by the station director, Mr. D. J. Terrell.

The occasion, held to commemorate the station's contribution to NASA's space program, brought together for the last time, visiting Americans and Australians involved with the space program, the staff of the Carnarvon station, and a wide representative section of the people of the people of the Gascoyne district.

The station, officially opened in June 1963, is being rapidly phased out, and will cease to operate after the Helios launch in December. By February only an empty building will be left on Browns Range.

It was with rather mixed feelings, therefore, that guests accepted their invitations. While the generous catering and entertainment of the hosts provided an enjoyable

evening, there remained the all pervading feeling of time running out for Carnarvon and its glamorous association with a space tracking station.

Regret

Mr Tecwyn Roberts, Goddard Space Flight Centre Director of Networks, and Sigurd A. Sjoberg, Deputy Director Manned Space Centre, both regretted that the circumstances of their visits to Carnarvon were not happier ones.

Mr Roberts said he regretted the imminent closing of the station, but the station was one that will not be forgotten.

The Carnarvon station he said, had been a very important member of the tracking station network and was unique in that for no apparent reason, it had uncovered problems relevant to tracking, and had then found the solutions to those problems.

It was sad, he said, that one of the best stations had to

close, and he expressed thanks from NASA to the station staff. Since its beginning, it had been part of a team, and had performed wonderful work always through the very important missions. NASA, said Mr. Roberts, had always had great confidence in the Carnarvon station, and he wished the staff the best of luck in their future chosen work.

Mr. Sjoberg said he was honoured to come to Carnarvon for this occasion. He said there had always been a close association between Carnarvon and Johnson through the Gemini, Apollo and Skvlab Projects, and it was sad to see such a close relationship come to an end. He brought congratulatory messages from Houston to the Carnarvon staff for their good work, and said NASA appreciated the excellent support given to the Johnson Space Centre.

To be continued

From Harry Hermans' collection.

The Hero of GT3—Correction

The caption to the photograph accompanying this article in the last issue referred to "Mrs O'Donohue". It should, of course, have read, "Mrs O'Donahue".

Thank you John Lambie

KEEPING THE MEMORY ALIVE



**Carnarvon Tracking Station
1964 - 1975**



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My sincere thanks to all of those who have contributed to the website so far:
listed at http://crotrak.com/thank_you.htm .

Some new material, including photographs by John Lambie, Hamish Lindsay and John Sharples, links have been added, and there is a lot more to come I am sure. I can arrange copying, scanning, whatever so as to get them up on our website; so you need have no fears regarding their safety.

40th Anniversary of 1st Lunar Landing

REUNION DINNER

Write it down—NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Random Quotes

"In my own view, the important achievement of Apollo was a demonstration that humanity is not forever chained to this planet, and our visions go rather further than that, and our opportunities are unlimited." — Neil Armstrong.

"Whoopie! Man, that might have been a small one for Neil, but that's a long one for me!"
— Pete Conrad's first words from the surface of the Moon.

"Nothing like a little science on the moon." — Dave Scott, Apollo 15

"Well, I'm glad we got that over with!"
— Gordon Cooper, after observing an Atlas launch failure in Nov 1960.

Social Club News

November 1969

Page 2.

Page 23.

TORRENS TITLE - AUGUST '69

By Shortfellow

From the comparative safety of Adelaide, some 900 miles behind the lines, I am able to give you more details of life in the "Big Smoke".

I look on my seven months there in the thick of the fighting as somewhat of an experience really. My house-flag (Scattered Aces over one arm on a green background) flies at the masthead and I wear my decorations ('68/69 Eastern States Star with Royal Easter Show Cluster, Order of the Dented Fender and Hong Kong Flu medal with Crossed Immunisation Needles) proudly.

Sydney held its answer to the Tropical Festival in April. Called it the Royal Easter Show, they did. Forced to go, I spent as much time as permitted observing the passing parade thru the bottom of a glass. I can report that 60% of children attending become separated from their warders and are thus seen bellowing, tiny hand clutched in the paw of some immense walloper, on their way to the Lost Children's Tent. This LCT is quite a soft number, incidentally. Lollies, drinks and ice cream and delightful policewomen flitting about and going all clucky. Giving the situation some thought, I sidled over and enquired of one of the DT's the whereabouts, if any, of the Lost Father's Tent, similarly equipped with birds but dispensing beer, cheese and bickies. Unfortunately, this wasn't received with the right spirit and I eluded capture by one of her male colleagues only by virtue of my size, speed and abject terror.

At this "Show" one drifts with the crowd. Its either drift or be stomped to pulp. I drifted underneath the aerial chairlift at one stage and spent a delightful 10 minutes there, moving on when I saw Fred Mitchell in the crowd (my neck had cramp anyway). Fred is looking very fit and asks to be remembered to you Westerners.

To be continued

Courtesy Wendy Yarnold

Miscellania

John Lambie is submitting regular articles on the Muchea Tracking Station to the *Chittering Times*. First one published September 2008.

The new Columbia Space Center will have it's grand opening on January 31, 2009 in Downey, California.

They will be having a reunion of sorts for the Apollo and Shuttle orbiter teams led by Dale Myers who also went on to help operate NASA.

From Project Apollo Forum

Mike Dinn wrote to say that the reference to Honeysuckle Creek in the newspaper article on page 12 of the September issue is mostly wrong. He believes there was confusion in

understanding the relative roles of Honeysuckle Creek Tracking Station and Deakin Switch.

Geneva-based watchmaker Romain Jerome will make 1969 watches, the dials of which feature tiny craters having dust in them from the moon rock that was taken from man's first visit to the moon.

The watches, start at \$US15,000 and can cost as much as \$US500,000.

Information from SMH

December 21st marks the 40th anniversary of the launch of Apollo 8. The first spacecraft to be launched by a Saturn V rocket and mankind's first escape from Earth's gravitational pull.

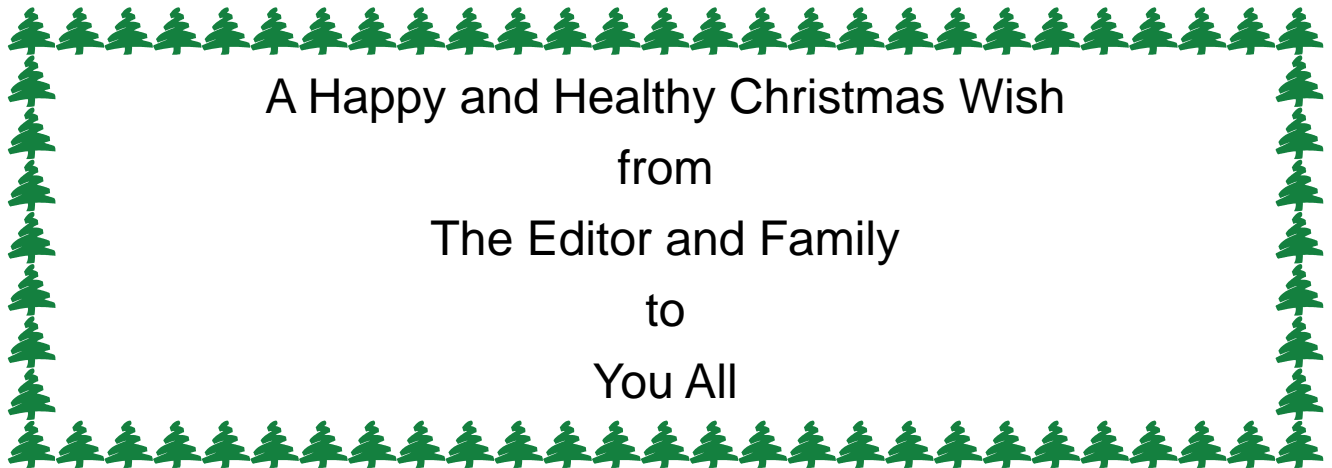


*Apollo 8 Collage
Courtesy John F. Kennedy Space Center*

Keeping the Memory Alive



*"And from the crew of Apollo 8, we close with good night, good luck,
a Merry Christmas, and God bless all of you - all of you on the good Earth."*
— Frank Borman



A Happy and Healthy Christmas Wish
from
The Editor and Family
to
You All

If undelivered, please return to:

CRO Trackers

PO Box 93, Quinns Rocks, WA 6030



Vol 6 March 2009

THE TRACKERS'

C R O N I C L E



Keeping the Memory Alive

Since we've covered all the manned Gemini and Apollo spaceflight, we have moved on to the Skylab Project.

Designed for long duration mission, Skylab program objectives were twofold. To prove that humans could live and work in space for extended periods, and to expand our knowledge of solar astronomy well beyond Earth-based observations

This issue covers Skylab II.

Also included in this issue:

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Skylab II

Launched: May 25, 1973

Landed: June 22, 1973

This mission once again more than doubled the previous endurance record in space, set by the astronauts of Skylab I just a month earlier. After an early bout with motion sickness, the crew settled down for their two-month mission, deploying a second sun shield on a space walk lasting six hours, 30 minutes.

They conducted many experiments, and brought with them live spiders to conduct a student-designed experiment to see what kinds of webs the spiders would spin in weightlessness.

Also on this mission the astronauts finally got to test the Astronaut Maneuvering Unit, or AMU, which had initially been carried into space aboard Gemini IX but could not be tested then because of problems with the old Gemini space suit.

The AMU experiments assisted engineers in designing the Manned Maneuvering Unit, which was first flown aboard the Shuttle flight



STS 41B in February, 1984, and was still in use until quite recently. (November 2008)

After a failed attempt to deploy the stuck solar panel, they set up a "parasol" as a replacement sunshade.

The fix worked, and temperatures inside

dropped low enough that the crew could enter.

Two weeks later Conrad and Kerwin conducted a space-walk, and after a struggle, were able to free the stuck solar panel and begin electricity flowing to their new "home."

For nearly a month they made further repairs to the workshop, conducted medical experiments, gathered solar and Earth science data and returned some 29,000 frames of film with a total of 392 hours of experiments. The mission set the records for the longest duration manned space flight, greatest distance travelled and greatest mass docked in space. Conrad set the record for most time in space for an astronaut.

Material courtesy NASA and Wikipedia



Joseph Kerwin
Science-Pilot



Pete Conrad Jr
Commander



Paul J Weitz
Pilot

Whereabouts

As a result of Paul Dench supplying his "staffing list", augmented courtesy Brian Milne, the "Whereabouts" table of those for whom we have no contact details has expanded to more than one page. Thanks to Chris Todd and Meg Limb for some updates.

TK

C	Abott	Keith	Clifton-James	C	George
Eric	Ainsworth	Barbara	Cobcroft	Joe	George
Gay	Albon	Bill	Comstock	J	Gerschwitz
Bill	Arbery	??	Coombs	Vida	Gibson
George	Armitt	Jim	Crossland	G	Goodlace
Allan	Barber	Noel	Cunningham	L	Gore
John (Allan)	Barber	F	Dawes	Lyn	Grant
Matt	Barber	Peter	Dawson	Claude	Granville
Keith	Barnard	Peter	Del Fante	Bob	Halse
	Barrow	Andrew	Dempster	Geoff	Hammond
Deidre	Beaumont	Jean	DeVis	R	Hanes
Elizabeth	Beckett	Marilyn	Dick	Bea	Hardman
	Beveridge	Olive	Dick	Peter	Hardwicke
Michael	Billings	Phil	Dickinson	Ron	Harmes
Denis	Black	Neville	Dippell	Anne	Harvey (Brookes)
G	Bond	Cheryl?	Dixon	D	Hatch
S	Boyce	L	Donkin	Gail	Heileman
Bill	Boyle	John	Draper	Stan	Hills
B	Bradley	Mike	Dresser	Ernie	Hindley
Phil	Brindley	Bruce	Duff	Dave	Hine
Hans	Britz	I	Dunleavy	Geoff	Hoad
Dave	Brooks	Bob	Dwyer	A	Holgate
Charlie	Brown	Dave	Elliot	Phyllis	Hook (Watson)
T.F.A	Brown	J	Erickson	J	Hopkins
W	Brown	Ross	Eyre	Vivienne	Hopper
J	Burdett	Martin	Fenney	Ted	Hopper (Lawer)
R	Burdett	Ian	Few	Deidre	Howard
Martin	Burgess	Ian	Findlay	B	Hughes
Robert	Burns	Joan	Fitzgerald	B	Hunter
Basil	Byrne	Robyn	Fort	D	Hutchins
Joe	Cabone	G	Francis	Leonie	Jennings
Joy	Cameron	Ben	Franklin	Ian	Jones
Geoff	Cardwell	David	Froom	S ???	Judd
G	Carrick	Don	Frost	Vera	Kastropil
Darryl	Cass	L	Gardner	John	Keane
Brian	Clarke	S	Garner	Mike	Keen
Jim	Cleary	Eddie	Garrett	Jim	Keenan
Brian	Clifford	Kim	Gates	John	Kelman

The quest continues; the list never seems to get any shorter. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. There are also a few who do not wish to be contacted.

TK

Whereabouts ctd.

D	Kettlety	Jamie	Gardiner	E	Sharples
Joy	King	Patsy	Nolan (Thompson)	?	Sheehan
M	King	Graham	Nielsen	Doug	Shaw
L	King	John	Noble	Jeff	Shuttleworth
Roy	Kjellgren	?	O'Brien	P	Sims
Gloria	Klarie	Joan	Oats	Ray	Skender
Peter	Kloppenburger	W	Oliver	George	Small
Henry	Larsen	Denis	Owens	Lyn	Smart (Willis)
Russ	Leighton	John	Paddon	J	Smith
G	Linney	??? Mrs	Parkinson	Mary	Smith
F	Lippett	John	Parkinson	Mike	Smith
Alex	Liu	Alan	Paterson	P	Smith
Evelyn	Lomas (Northover)	G	Paull	Roger	Smith
Leslie	Lomas	Mike	Pender	Bill	Smythe
Gloria	Lyon-Roberts	Wendy	Petersen	Hazel	Snook (Howse)
Ross	MacDonald	Don	Pettitt	Dave	Standbury
John	Mahaffey	T	Phillips	John	Stanton
Peter	Maine	Diane	Pitman (Housley)	Alex	Stevenson
Roy	Mallinson	John	Platten	Barbara	Stevenson (Vernon)
Bob	Marr	Don	Plumb	John	Swanney
Keith	Mathieson	Gerry	Plummer	Barbara	Teahan
Alec	Matthews	D	Powell	Barbara	Teasdale
K	McCarson	M.J.K	Power	Des	Terrill
Ian	McDonald	Wendy	Puccinelli	Alan	Thomas
S	McDonald	A	Rees	Christine	Thomas
Frank	McGregor	Dave	Rendell	Howard	Thomas
Eileen	McLaughlan	Frank	Rice	Don	Thompson
Don	McLellan	Doug	Richards	Jack	Thompson
Nola	Meiklejohn (O'Byrne)	D	Richardson	L	Tink
Verica	Milanovich	Harry	Richmond	Larry	Tomkins
R	Miller	Ralph	Richmond	Frank	Toomey
Bill	Mills	Dave	Rickards	Mike	Travell
Ray	Mills	G	Riley	Dave	Troup
Peter	Milne	Brian	Robinson	Norma	Turner
Marilyn	Milner (Gobby)	Lynne	Rosser	Ernst	Uhl
Ian	Mitchell	Ted	Rosser	Tony	Vingerhoets
John	Monteith	Lindsay	Sage	Dave	Walker
Sharon	Morgan (Todd)	Stewart	Sands	Mrs B	Ward
J	Murray	Ron	Sargeant	Tom	Ward
Dennis	Naylor	Russell	Schwarzer	N	Wardle
Gloria	Neal	Bob	Scott	A	Watermeyer
Terry	Newman	Michael	Scott-Malcolm	Irene	West
Terry	Newman	Lorraine	Scott-Malcolm (Erlandsen)	Bernie	Wilbourne
Shirley	Newman (Temple)	Dorcas	Sefton-Bellion	Garnet	Wilmott
Ellie	Nichols	George	Sefton-Bellion	Brian	Wilson
Elton	Nickerson	D	Selby	Ray	Zatorski
Vic	Gadelvicius	Ron	Shand		
		Fred	Sharland		

40th Anniversary of 1st Lunar Landing

WE'LL BE THERE

I enclose payment of \$..... for ticket(s) @\$45 each, for the CRO Trackers 40th Anniversary Reunion Dinner to be held on Saturday 18th July 2009 at the Bridgeleigh Function Centre, Wanneroo WA 6065.

Signed Date.....

Name (please print)

Please return completed form, with payment, by 31st May 2009, to:

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Order your tickets – NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's closer than you think.

Random Quotes

"....*You saved 1968.*" - Letter read to the crew of Apollo 8 by CapCom

"*If we knew what we were doing, it wouldn't be called research, would it?*" - Albert Einstein

"*Roger. Clear the tower. I got a pitch and a roll program, and this baby's really going.*"

- Pete Conrad as Apollo 12 lifts off

"*With all due respect, sir, I believe this is gonna be our finest hour.*" - Gene Krantz, Apollo 13

"*Man is the best computer we can put aboard a spacecraft... and the only one that can be mass-produced with unskilled labor.*" - Wernher von Braun

"*Landing on the Moon was great. We only knew the area we're landing into 20 meters, that's how bad the photography was. And now they're going to Mars, and they going to have the surface photography to centimeters. They must be a bunch of sissies!*"

- John W. Young

AD ASTRA PER ASPERA (A ROUGH ROAD LEADS TO THE STARS) - Apollo 1 Memorial Plaque

From The Northern Times Pt 2.

More than 200 people attended a close-down function at the Carnarvon Tracking Station on Wednesday of last week.

Awards were made to employees of 10 years service:

Mr. H. Hermans, who was the first local man on the station in 1963, to Mr. Paul Dench, the first person on the payroll, and to Messrs L. Algate, G. Allan, R. Baker, R. Davies, R Burgess, O. Gravdal, P. Linnane, N. Sims, P. Roberts and T. Teraci.

The Silver Snoopy Group Award was made to the employees for their part in the Skylab activity.

Mr. Dench, speaking on behalf of the awardees, said he was happy to speak but sad under the circumstances. He said some of the men will be staying in Carnarvon, others moving on. He expressed appreciation to colleagues, both local and overseas, on behalf of all the trackers.

Mr. Dench told the visiting Americans that the station had made mementoes for them, and asked them to accept the handsome inscribed ashtrays commemorating the Carnarvon Tracking Station's life.

He said all Australians were aware of the great contribution made to the network and tracking of manned space

projects by the competent AWA and employees.

Mr. C.M. Smith, manager AWA Field Projects, accepted on behalf of AWA, a plaque that commemorated the opening of the station.

Mr. Smith, speaking for the Department of Supply, said the occasion marked the end of the company's participation in a fruitful period, and expressed appreciation of the company to the Carnarvon people.

Mr. J.A. Mills, Regional Director, said that it was in September 1963 that the decision was made to establish a tracking station at Carnarvon. When the town council of the day, under the mayoralty of Mr. C. Radley, promised to supply housing for Station employees, He said without the contribution of the local people through their local government body, the establishment of the Tracking Station would not have been possible and he recalled the always harmonious relations that existed between the station and the council.

Plaques

President of the Shire Council, Mr G. Meiklejohn, accepted on behalf of the people of

the Shire, a plaque and picture from NASA commemorating the official opening of the station.

Mr. Meiklejohn said he was honored to receive the plaque, and that it would be suitably placed in the shire office. He congratulated the men who had received long service awards, and noted that most of them were local people.

Deputy Shire President, Mr. Wilson Tuckey, who was mayor at the time the station was established, said he was sorry to see so many families leaving Carnarvon as a result of the Station's phase-out. He said the station during the past 11 years had been part of Carnarvon. He had vivid memories of the early days of the station, and the happy important occasion of the official opening and regretted that the present occasion was not so happy.

Mr Tuckey said the station had had a strong influence on the town, both economically and in the introduction of new ideas, and hoped that people from overseas would stay.

To be continued

From Harry Hermans' collection.

Astronaut Biographies

Charles (Pete) Conrad was born June 2, 1930, in Philadelphia, Pennsylvania. He died July 8, 1999, from injuries sustained in a motorcycle accident in Ojai, California. According to some reports his death was due to medical negligence.

Following graduation from Princeton University in 1953, Pete Conrad entered the Navy and became a naval aviator. In September of 1962, Pete Conrad was selected as an astronaut by NASA. His first flight was Gemini V, which established the space endurance record and placed the United States in the lead for man-hours in space.

As commander of Gemini XI, he helped to set a world's altitude record. He then served as commander of Apollo XII, the second lunar landing.

On Pete Conrad's final mission, he served as commander of Skylab II, the first United States Space Station.

Pete Conrad will also be long remembered by early trackers as being CapCom at Carnarvon for Gemini III.

He was much loved by his fellow astronauts. This is what Alan Bean had to say, *"Pete Conrad was the best man I ever knew. He treated me like a brother and I loved him like a brother. As the centuries unfold, the Pete Conrads of the future will return to the Moon, will walk on Mars, and explore all the other worldly places where we*

humans dream and dare to go. The world was a better place because Charles 'Pete' Conrad walked among us".

Captain Kerwin was selected as a scientist-astronaut by NASA in June 1965.

Kerwin served as science-pilot for the Skylab 2 (SL-2) mission which launched on May 25 and terminated on June 22, 1973.

Kerwin was subsequently in charge of the on-orbit branch of the Astronaut Office, where he coordinated astronaut activity involving rendezvous, satellite deployment and retrieval, and other Shuttle payload operations.

From 1982-1983, Kerwin served as the National Aeronautics and Space Administration's senior science representative in Australia. In this capacity, he served as liaison between NASA's Office of Space Tracking and Data Systems and Australia's Department of Science and Technology.

From 1984-1987, he served as Director, Space and Life Sciences, Johnson Space Center. Kerwin was responsible for direction and coordination of medical support to operational manned spacecraft programs, including health care and maintenance of the astronauts and their families; for direction of life services, supporting research and light experiment project; and for managing JSC earth sciences and scientific efforts in lunar and

(Continued on p8)

Astronaut Biographies ctd.

(Continued from p7)

planetary research.

He retired from the Navy, left NASA and joined Lockheed in 1987.

At Lockheed he managed the Extravehicular Systems Project, providing hardware for Space Station Freedom, from 1988 to 1990; with two other Lockheed employees he invented the Simplified Aid for EVA Rescue (SAFER), recently tested for use by space walking astronauts on the International Space Station (ISS). He then served on the Assured Crew Return Vehicle team, and served as Study Manager on the Human Transportation Study, a NASA review of future space transportation architectures. In 1994-95 he led the Houston liaison group for Lockheed Martin's FGB contract, the procurement of the Russian "space tug" which has become the first element of the ISS. He served on the NASA Advisory Council from 1990 to 1993.

Mr. Weitz is one of the 19 astronauts selected by NASA in April 1966. He served as pilot on the crew of Skylab-2 (SL-2), which launched on May 25 and ended on

June 22, 1973. Mr. Weitz also logged 2 hours and 11 minutes in extravehicular activities.

Mr. Weitz was spacecraft commander on the crew of STS-6, which launched from Kennedy Space Center, Florida, on April 4, 1983. This was the maiden voyage of the Orbiter Challenger.

During the mission, the crew conducted numerous experiments in materials processing, recorded lightning activities, deployed IUS/TDRS-A, conducted spectacular extravehicular activity while testing a variety of support systems and equipment in preparation for future space walks, and also carried three "Getaway Specials."

Mission duration was 120 hours before landing Challenger on a concrete runway at Edwards Air Force Base, California, on April 9, 1983. With the completion of this flight, Paul Weitz logged a total of 793 hours in space.

Mr. Weitz was Deputy Director of the Johnson Space Center when he retired from NASA service in May 1994.

Courtesy N.A.S.A.

Chris Kraft Does Have a Heart

From a "Project Apollo" forum message

"... I always admired Slayton. When he was grounded before his Mercury flight, it must have been the most shattering disappointment of his life. A lesser man might have stormed out of the programme in a rage, but Slayton stayed on, and watched everyone else do what he wanted so badly to do.

When his heart came right and he put himself back on the flight roster, no one

seriously objected, except for one flight surgeon who dug his toes in, to his cost.

I quote Chris Kraft.

"We knew more about Deke Slayton's heart than any person we ever flew, and that goddam doctor stood up at the meeting and said, 'Well, we know we've said that before, but if he fibrillates on the pad, we're going to stop the count,' — and I fired that son of a bitch!"

More on "The Saga"

Mid February I received an email message from Paul Dench regarding an item on the ScienceNetwork WA website, *"...a single-sentence short quote from Prof Lister Stavelly-Smith, Deputy Director of the new Radio Astronomy Centre, speaking about the forthcoming 40th anniversary which started correctly and followed with two grossly wrong phrases..."*

The quote in question read, "...Professor Staveley-Smith also highlights another anniversary in 2009, the 40th anniversary of the first manned moon landing.

"WA's role was important through the provision of backup TV signals from the now-decommissioned NASA antenna at Carnarvon," he says..."

Paul's message continued, *"...So I rang his office and left a message introducing myself briefly explaining the grossness of his errors and suggested that if further statements were imminent he should contact local authorities. Apparently, he contacted the relevant CSIRO authority to see if I was right and then phoned me to apologise - he intends to correct the page (see attached) and said he'd consult before any more such announcements, and asked for relevant chapters from our book to get WA's role in focus. I gave him the web addresses of both our web sites..."*

The corrected version reads, "...*"WA's role was important through communication with Apollo and its lunar surface experiments using the now-decommissioned 30-foot NASA antenna at Carnarvon," he says..."*

Well done Paul.

... And Some More

Some good news has arrived from Carnarvon where Sabrina Dowling Giudici and Kerry Dougherty are working hard, with assistance from some ex-trackers when required, to identify the material that has been stored for some 20 years in the base of the OTC 32m dish — the original Space Museum that was opened by Wilson Tuckey in July 1989.

Apparently it was agreed some time last year that a display panel would be erected inside the Carnarvon Tourist Bureau. The new manager of the Bureau is awaiting confirmation that funds will be made available.

We owe a debt of gratitude to Sabrina for all her hard work 'behind the scenes'.

As I understand it, the display will consist of two panels one for the OTC Earth Satellite Station and the other for CRO, clearly showing the differences between the two stations and at last providing recognition for CRO.

The probability is that the panels will be similar to those at Muchea.



Social Club News November 1969

Page 2.

Page 23.

TORRENS TITLE - AUGUST '69

By Shortfellow*Continued from December 2008.*

Now that I have taken up my appointment in Adelaide, I am mellowing from the rip-tear-bust attitude of Sydney. I still scorch rubber at the green light and arrive panting

Page 24.

at the next red while most locals are still engaging first gear. I'm mellowing though. I don't even miss the poker machines. I always carry this many 20 cents pieces!

Adelaide has its surprises however. They assume here that everybody knows where he is and therefore it is not necessary to erect any signs. It's virtually back to the cockpit as I travel around with a map on my knee and that glazed look reserved for lost dogs.

They have peculiar names for their dairy produce, Amscol icecream etc. Sooner or later I will pull a "Snaffu" and wind up with 14 gallons of icecream in the tank of my car.

My most horrific experience with local terminology came last week while dining out. I asked for some wine with my dinner and the waitress said, "a carafe sir", I hate to show my ignorance and so spent ten agonising minutes imagining the impending arrival of two thumping big nubians toting a great dripping goat skin full of plonk which I would be expected, as protocol demands, to fling soggily over my shoulder and consume from the stub of the left hind leg.

The dreaded carafe, when it arrived, was nothing but a dumpy glass decanter.

Courtesy Wendy Yarnold

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



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My sincere thanks to all of those who have contributed to the website so far, listed at: http://crotrak.com/thank_you.htm .

Some new material, including photographs by Hamish Lindsay and contributions from Tony Sala; links have been added, and there is a lot more to come I am sure. I can arrange copying, scanning, whatever so as to get them up on our website; so you need have no fears regarding their safety.

LOS

Geoff Ruck, one of the first trackers at Range and Range Rate, the STADAN station collocated with CRO, died in Canberra on 30 June 2008 aged 84.

Geoff Ruck joined the Australian Army for WW2 where he led a group involved in signals interception.

After the war, Geoff joined the PMG department as a technician and worked in northern NSW before joining Qantas where he was involved in communications projects and spent a lot of time in Singapore.

He then moved to AWA where he wrote a book on the Distance Measuring Equipment (DME), a major aircraft navigation aid. Geoff spent some time with Marconi in the UK working on a SIGINT project. Whilst supervising

installation of AWA systems for Qantas, Geoff met Margaret.

They married and had two daughters, Elizabeth, and Amanda who was born in Carnarvon. Geoff trained at Motorola in the USA and helped install and then operate and maintain the R&RR systems. His lengthy space tracking career included service at Cooby Creek and Honeysuckle Creek.

Geoff retired when Honeysuckle closed down and involved himself in his main hobby, fine cabinet work.

Geoff was a keen cyclist and enjoyed canoeing and camping. Geoff was a gentle man, always polite and good for an in depth discussion. He was a good friend and colleague and will be greatly missed.

Ed Goldsmith

Keeping the Memory Alive

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Vol 6 June 2009

THE TRACKERS'

C R O N I C L E



Keeping the Memory Alive

Since we've covered all the manned Gemini and Apollo spaceflight, we have moved on to the Skylab Project.

Designed for long duration mission, Skylab program objectives were twofold. To prove that humans could live and work in space for extended periods, and to expand our knowledge of solar astronomy well beyond Earth-based observations

This issue covers Skylab III.

Also included in this issue:

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Skylab Mission II (SL-3)

Skylab 3 was the second manned mission to Skylab.

The Skylab 3 mission started July 28, 1973, with the launch of three astronauts on the Saturn IB rocket, and lasted 59 days, 11 hours and 9 minutes.

A total of 1,084.7 astronaut-utilization hours were tallied by Skylab 3 astronauts performing scientific experiments in the areas of medical activities, solar observations, Earth resources and other experiments.

During the approach phase, problems developed in the Apollo CSM's reaction control system, and a leak formed. The crew was able to safely dock with Skylab, but troubleshooting would continue with the problem.

For the first time, an Apollo spacecraft would be rolled out to Launch Complex 39 for a rescue mission, made possible by the ability for the station to have two Apollo CSMs docked at the same time. They eventually fixed the problem, and the rescue mission was never launched.

The Apollo Command Module used on Skylab 3 is currently on display at the

visitor's center of the NASA Glenn Research Center in Cleveland, Ohio.

This dummy was left behind by the Skylab 3 crew to be found by the Skylab 4 crew. The dummy is dressed in a flight suit and placed in the

Lower Body Negative Pressure Device. The name tag indicates that it represents Gerald P. Carr, Skylab 4 commander. In the background is a partial view of



the dummy for William R. Pogue, Skylab 4 pilot, propped upon the bicycle ergometer. The name tag indicates that it represents William R. Pogue, Skylab 4 pilot

Material courtesy NASA and Wikipedia



Dr. Owen K. Garriott
Scientist



Alan Bean
Commander



Jack R. Lousma
Pilot

Whereabouts

As a result of Paul Dench supplying his "staffing list", augmented courtesy Brian Milne, the "Whereabouts" table of those for whom we have no contact details has expanded to more than one page. Thanks to Chris Todd and Meg Limb for some updates.

TK

C	Abott	Brian	Clifford	C	George
Eric	Ainsworth	Keith	Clifton-James	Joe	George
Gay	Albon	Barbara	Cobcroft	J	Gerschwitz
Bill	Arbery	Bill	Comstock	Vida	Gibson
George	Armitt	??	Coombs	G	Goodlace
Allan	Barber	Jim	Crossland	L	Gore
John (Allan)	Barber	Noel	Cunningham	Lyn	Grant
Matt	Barber	F	Dawes	Claude	Granville
Keith	Barnard	Peter	Dawson	Bob	Halse
	Barrow	Peter	Del Fante	Geoff	Hammond
Deidre	Beaumont	Andrew	Dempster	R	Hanes
Elizabeth	Beckett	Jean	DeVis	Bea	Hardman
	Beveridge	Marilyn	Dick	Peter	Hardwicke
Michael	Billings	Olive	Dick	Ron	Harmes
Denis	Black	Phil	Dickinson	Anne	Harvey (Brookes)
G	Bond	Neville	Dippell	D	Hatch
S	Boyce	Cheryl?	Dixon	Gail	Heileman
Bill	Boyle	L	Donkin	Stan	Hills
B	Bradley	John	Draper	Ernie	Hindley
Phil	Brindley	Mike	Dresser	Dave	Hine
Hans	Britz	Bruce	Duff	Geoff	Hoad
Dave	Brooks	I	Dunleavy	A	Holgate
Charlie	Brown	Bob	Dwyer	Phyllis	Hook (Watson)
T.F.A	Brown	Dave	Elliot	J Hopkins	
W	Brown	J	Erickson	Vivienne	Hopper
J	Burdett	Ross	Eyre	Ted	Hopper (Lawer)
R	Burdett	Martin	Fenney	Deidre	Howard
Martin	Burgess	Ian	Few	B	Hughes
Robert	Burns	Ian	Findlay	B	Hunter
Basil	Byrne	Joan	Fitzgerald	D	Hutchins
Joe	Cabone	G	Francis	Leonie	Jennings
Joy	Cameron	Ben	Franklin	Ian	Jones
Geoff	Cardwell	David	Froom	S ???	Judd
G	Carrick	Don	Frost	Vera	Kastropil
Darryl	Cass	L	Gardner	John	Keane
Brian	Clarke	S	Garner	Mike	Keen
Jim	Cleary	Kim	Gates	Jim	Keenan
				John	Kelman

The quest continues; the list never seems to get any shorter. I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. There are also a few who do not wish to be contacted.

TK

Whereabouts ctd.

D	Kettlety	Joan	Oats	Jeff	Shuttleworth
Joy	King	W	Oliver	P	Sims
M	King	Denis	Owens	Ray	Skender
L	King	John	Paddon	George	Small
Roy	Kjellgren	??? Mrs	Parkinson	Lyn	Smart (Willis)
Gloria	Klarie	John	Parkinson	J	Smith
Peter	Kloppenburger	Alan	Paterson	Mary	Smith
Henry	Larsen	G	Paull	Mike	Smith
Russ	Leighton	Mike	Pender	P	Smith
G	Linney	Wendy	Petersen	Roger	Smith
F	Lippett	Don	Pettitt	Bill	Smythe
Alex	Liu	T	Phillips	Hazel	Snook (Howse)
Evelyn	Lomas (Northover)	Diane	Pitman (Housley)	Dave	Standbury
Leslie	Lomas	John	Platten	John	Stanton
Gloria	Lyon-Roberts	Don	Plumb	Alex	Stevenson
Ross	MacDonald	Gerry	Plummer	Barbara	Stevenson (Vernon)
John	Mahaffey	D	Powell	John	Swanney
Peter	Maine	M.J.K	Power	Barbara	Teahan
Roy	Mallinson	Wendy	Puccinelli	Barbara	Teasdale
Bob	Marr	A	Rees	Des	Terrill
Keith	Mathieson	Dave	Rendell	Alan	Thomas
Alec	Matthews	Frank	Rice	Christine	Thomas
K	McCarson	Doug	Richards	Howard	Thomas
Ian	McDonald	D	Richardson	Don	Thompson
S	McDonald	Harry	Richmond	Jack	Thompson
Frank	McGregor	Ralph	Richmond	L	Tink
Eileen	McLaughlan	Dave	Rickards	Larry	Tomkins
Don	McLellan	G	Riley	Frank	Toomey
Nola	Meiklejohn (O'Byrne)	Brian	Robinson	Mike	Travell
R	Miller	Lynne	Rosser	Dave	Troup
Bill	Mills	Ted	Rosser	Norma	Turner
Ray	Mills	Lindsay	Sage	Ernst	Uhl
Peter	Milne	Stewart	Sands	Tony	Vingerhoets
Marilyn	Milner (Gobby)	Ron	Sargeant	Dave	Walker
Ian	Mitchell	Russell	Schwarzer	Mrs B	Ward
Sharon	Morgan (Todd)	Bob	Scott	Tom	Ward
J	Murray	Michael	Scott-Malcolm	N	Wardle
Dennis	Naylor	Lorraine	Scott-Malcolm (Erlandsen)	A	Watermeyer
Gloria	Neal	Dorcas	Sefton-Bellion	Irene	West
Ellie	Nichols	George	Sefton-Bellion	Bernie	Wilbourne
Elton	Nickerson	D	Selby	Garnet	Wilmott
Vic	Gadelvicius	Ron	Shand	Brian	Wilson
Jamie	Gardiner	Fred	Sharland	Ray	Zatorski
Patsy	Nolan (Thompson)	E	Sharples		
Graham	Nielsen	?	Sheehan		
John	Noble	Doug	Shaw		
?	O'Brien				

40th Anniversary of 1st Lunar Landing

WE'LL BE THERE

I enclose payment of \$..... for ticket(s) @\$45 each, for the CRO Trackers 40th Anniversary Reunion Dinner to be held on Saturday 18th July 2009 at the Bridgeleigh Function Centre, Wanneroo WA 6065.

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REUNION DINNER

Order your tickets — NOW!

Bridgeleigh Reception Centre, Wanneroo, WA

Saturday, 18th July 2009 — It's your last chance!

Random Quotes

"The dinosaurs became extinct because they didn't have a space program. And if we become extinct because we don't have a space program, it'll serve us right!" — Larry Niven

"I think we need to do a little more all-weather testing." — Pete Conrad

"I believe that the Good Lord gave us a finite number of heartbeats and I'm damned if I'm going to use up mine running up and down a street." — Neil Armstrong

"...the United States was not built by those who waited and rested and wished to look behind them. This country was conquered by those who moved forward, and so will space."
— John F. Kennedy, 1962

"The greatest gain from space travel consists in the extension of our knowledge. In a hundred years this newly won knowledge will pay huge and unexpected dividends." — Wernher Von Braun

"We are really not far - the human race - from going to the stars." — John Young

"Beautiful, beautiful. Magnificent desolation!" — Buzz Aldrin to Houston upon setting foot on the moon.

"Alright I am cooler than you are. Why don't you fix your problem and let's light this candle!"
— Alan Shepard MR-3

From The Northern Times Pt 3.

More than 200 people attended a close-down function at the Carnarvon Tracking Station on Wednesday of last week.

He said the Shire Council had considered the future use of the station, and would like to see it retained as a museum to provide a permanent record of the last 12 years of association between NASA, Department of Supply and Carnarvon.

He stressed the importance of making something of the building when the phase out was completed. He said history is not realised until it is gone, and the station's existence was real history, and that he was reluctant to accept its closure.

As a final presentation, Mr Terrell said the annual fishing contest conducted by the members of the network had been won by the Carnarvon Station in 1971, 1973 and 1974 and asked Mr Roberts of NASA to accept the perpetual trophy for the continuation of the contest.

Happy Association

Mr G Berry, MLC, recalled happy association with the project and its people, and while the general community knew the station would operate for a limited period, its closure was hard to accept.

He hoped too that the building could remain as a museum and a memory. He wished all departing members the very best for the future.

With music and generous hospitality, guests remained to dance away the remaining hours of the memorable occasion in Carnarvon's history.

As inscribed on the presentation photo to the Shire Council, "Carnarvon has a place in space"

From Harry Hermans' collection.

Littering Fine Paid

From Esperance Express News 17.4.09

ALMOST 30 years after fining NASA for littering the local area with debris from abandoned space station Skylab, the Shire of Esperance has received a \$US400 cheque.

American radio station Highway Radio paid the fine on NASA's behalf, raising the funds on variety breakfast program Barker and Barley in the Morning. Show host Scott Barker said he was inspired to challenge

listeners to raise the funds after reading about the debt on the Internet.

"I thought this fact of the unpaid bill was rather funny," he said.

"I thought it would be great if I challenged my listeners to contribute to the \$400 fee to pay off this long, outstanding debt.

"I wanted listeners to start off 2009 with a generous offering of goodwill to our Australian friends south of the equator."

Shire of Esperance executive manager of corporate services Darren Kennedy said the shire sometimes received emails asking if the story of the unpaid fine was true.

"I think people look at Skylab on Wikipedia and see that the shire charged NASA for littering and the fine was never paid," he said.

"I always write back with a standard email saying that the fine was written off

Continued on p9

Astronaut Biographies

Alan Bean was born in Wheeler, Texas, on March 15, 1932. He was a Navy ROTC Student at Texas, and was commissioned upon graduation in 1955. After completing flight training, he was assigned to a jet attack squadron in Jacksonville, Florida. After a four-year tour of duty, he attended the Navy Test Pilot School, then flew as a test pilot on several types of naval aircraft.

Alan Bean was one of the third group of astronauts named by NASA in October 1963. He served as backup astronaut for the Gemini 10 and Apollo 9 missions. He went on to become the lunar module pilot on Apollo XII, man's second lunar landing.

He was spacecraft commander of Skylab Mission II (SL-3), July 29 to September 25, 1973. With him on the 59-day, 24,400,000 mile world record setting flight were scientist-astronaut Dr. Owen K. Garriott and Marine Corps Lieutenant Colonel Jack R. Lousma. Mission II accomplished 150% of its pre-mission forecast goals.

On his next assignment, Alan Bean was backup spacecraft commander of the United States flight crew for the joint American-Russian Apollo-Soyuz Test Project.

He has logged 1,671 hours and 45 minutes in space—of which 10 hours and 26 minutes were spent in EVAs on the moon and in earth orbit. He helped establish 11 world records in space and astronautics and was awarded two NASA distinguished Service Medals.

He resigned from NASA in June 1981 to devote his full time to painting. He said his decision was based on the fact that, in his 18 years as an astronaut, he was fortunate enough to visit worlds and see sights no artist's eye, past or present, has ever viewed firsthand and he hopes to express these experiences through the medium of art. He is pursuing this dream at his home and studio in Houston.

For a different perspective visit <http://www.alanbeangallery.com/>.

Lousma is one of the 19 astronauts selected by NASA in April 1966. He served as a member of the astronaut support crews for the Apollo 9, 10, and 13 missions.

He was the pilot for Skylab-3 (July 28 to September 25, 1973) and was spacecraft commander on STS-3 (March 22-30, 1982), logging a total of over 1,619 hours in space.

Lousma also spent 11 hours on two spacewalks outside the Skylab space station.

He also served as backup docking module pilot of the United States flight crew for the Apollo-Soyuz Test Project (ASTP) mission which was completed successfully in July 1975.

Jack Lousma left NASA in 1983.

In 1965 Dr Garriott was one of the first six Scientist-Astronauts selected by NASA. His first space flight aboard Skylab in 1973 set a new world record for duration of approximately 60 days, more than double the previous record. Extensive experimental studies of our sun, of earth resources and in various life sciences relating to human adaptation to weightlessness were made.

His second space flight was aboard Spacelab-1 in 1983, a multidisciplinary and international mission of 10 days. Over 70 separate experiments in six different disciplines were conducted, primarily to demonstrate the suitability of Spacelab for research in all these areas. He operated the world's first Amateur Radio Station from space, W5LFL, which has since expanded into an important activity on dozens of Shuttle flights, Space Station MIR and now the International Space Station, with scores of astronauts and cosmonauts participating.

Between these missions, he received a NASA fellowship for one year's study at Stanford (1975-76) and held the posts of Deputy, Acting and Director of Science and

Continued on p8

Astronaut Biographies ctd.

Applications at Johnson Space Center, (1974-75, 76-78). In the latter post he was responsible for all research in the physical sciences at the Johnson Space Center. From 1984 to 1986, he held the position of Project Scientist in the Space Station Project Office. In this position he worked closely with the external scientific communities and advised

the Project Manager concerning the scientific suitability of the Space Station design.

After leaving NASA in June, 1986, he consulted for various aerospace companies and served as a member of several NASA and National Research Council Committees.

Courtesy NASA

Memories of Carnarvon Tracking Station

By Brian Davies

After half a bottle of scotch I thought it was time to add to the memories of Carnarvon Tracking Station. This will be in several episodes, as I am working on the second half of the scotch!

I arrived in Carnarvon (from the UK with others poms!) in 1967, and was sent to FPQ-6 radar under Trevor Housley.

After a few weeks of no launches and intensive OJT (on job training), the FPQ-6 were ready for action. The "look points" came in by teletype, and with the whole crew mobilised ready for AOS, Trevor would call out the first look point. If we didn't see anything it was "slave to someone!". We always caught up as we looked a bit higher than the lower frequency gizmos which bent below line-of-sight.

After the mission we had to take all our paper data to that bastard Terry Kierans who would rip us off if it wasn't 100% packaged and annotated properly. Us FPQ-6ers have long memories Terry !!!!

FPQ-6 MEMORIES

These are not in chronological order.

The Day Ron Burgess Changed The Oil

About 1969 RCA sent a depot maintenance team to FPQ-6 to fix a few problems; notably the stainless steel piping for the hydraulic drive system which had a bad habit of blowing off one minute before AOS. After a major re-piping job the RCA crew were happy as Larry.

Now if you remember Luigi who drove one of the Ford transit buses (erratically) and delivered stores on his truck; he threw full

size nitrogen bottles onto his truck like coke bottles. Luigi was about 5-foot tall, 5-foot round and 5-foot square; the proverbial block of Italian granite.

Now Luigi had spent all day cleaning the FPQ-6 building with white spirit and a high pressure hose so it was pristine white — Luigi was a happy Italian!

The DLM team were debating as to how they would change the oil in the hydrostatic reservoir of the antenna; (it floated on 100 gallons of oil).

Ron Burgess didn't understand the problem (an FPQ-6 member for years), "I will show you how to do it".

The DLM team sat back and said, "Go for it Ron".

Ron got a couple of empty 50 gallon drums, a length of hose and a funnel. He turned the antenna to just above the rungs of the climbing ladder and strapped himself on with safety harness.

With the hose and funnel at the ready, Ron unscrewed the drain plug — out came the oil, consistency of honey. Would it go down the hose? Not likely. Ron was securely anchored to the cat walk covered in oil and immobilised.

A 100 kmp gale was blowing from the ocean with spinifex dust goannas in its path; it all stuck to the pristine FPQ-6 building like shit to a blanket!

Around came Luigi to kill someone, but when he saw Ron clinging to the catwalk cover head to toe in oil and goannas he just burst out into a smile. "Me Luigi, no always get all the shit"

What Are They Doing Now?

Ed Garrett

A past member of the Tracking Station staff (Hydraulics and Antenna Technician), I left the Tracking Station in 1974 and managed Poon's Liquor Store for 6 months while waiting to take up my position at OTC in October 1974.

I have never got around to leaving Carnarvon, having moved up the road to become Plant Supervisor at the OTC earth Station until 1980 when I joined the Public Works Department as a District Electrical Technician and eventually Gascoyne District Manager for the Water Corporation.

In 2000 I took a severance package and took on the task of creating an irrigation cooperative to manage the delivery of irrigation water services to the plantation industry in Carnarvon.

I left the Gascoyne Water Cooperative in June 2008, and started my own consultancy and a company with a friend called Coral Coast Digital Print Pty Ltd.

I guess I will probably be buried here after all this time and that will finally qualify me to claim that I am a local.

Littering Fine Paid ctd.

Continued from p6

in 1979 and usually I wouldn't hear anymore. "Only [Scott Barley] responded. "He contacted [Esperance shire president] Ian Mickel in December, 2008 and we sent him the standard reply but he came back saying his listeners wouldn't say no."

Senior vice president of the Esperance Bay Historical Society and Esperance shire president at the time of the Skylab crash, Merv Andre, said the crash and fine gave the town worldwide publicity. "The littering fine was given by the ranger as a bit of a lark," he said. "NASA declined to pay it and after

three months, the infringement was written off, but it hasn't been forgotten!"

Mr Barley said while many donations were small, some were very generous. "One area business even offered to match every \$50 donation with \$50 and a free three month gym membership," he said. "Eventually, to my utter surprise, we reached our \$400 goal!"

"I really have to credit the listeners of Barstow, California and Las Vegas, Nevada for coming through with their donations. They really went out of their way by stopping by the station and even mailing in their

money to be a part of this grand adventure."

Mr Barley said he hoped to travel to Esperance in July for the 30th anniversary of the Skylab crash.

"My goal is to have Barstow, California and Esperance become 'sister cities' and if all goes well, to present a large, game show sized cheque to the citizens of Esperance from the people of Barstow.

"Hey, Ian Mickel, am I invited?"

The cheque is yet to be cashed. Museum volunteers said they hoped the donation would go toward Skylab's 30th anniversary celebrations.

Social Club News November 1969

Page 19.

THE USB R&E COURSE

or

"How to get 3 weeks, all expenses paid, holiday
without really trying."

During the months of October/November, our senior engineers at the Station conducted a short course in Unified S-Band Receivers and Exciters. Our Stadir invited the other NASA tracking stations in Australia to send some of their technicians to participate and this line-up resulted:

<u>Carnarvon</u>	<u>Honeysuckle Creek</u>	<u>Island Lagoon</u>
J. Paddon	P. Mullen	G. Aberline
P. Dickinson	T. Knight	M. Mezio
M. Garth	J. Hart	
P. Kloppenburg	G. Frazer	

The course began on October 19th with 10 students and 2 tutors and ended with much the same. Some of the students had never been very close to the USB equipment while others had 6 years experience with it. All the students greatly benefited from **the** lectures and discussions which followed. Many interesting details came to light which one would not normally discover during self-training or operating the equipment. The style of lectures was informal and of course, this greatly helped the exchange of information and ideas between all those present. A good personal relationship was established and this helped everyone understand the technical peculiarities and working methods of each tracking station.

The MSFN certificates presented at the end by the Stadir mean we can now legally and officially make big fools of ourselves operating USB receivers!

All non-CRO students expressed their appreciation of CRO hospitality, weather, parties, expense accounts, etc. etc. which were especially laid on for them, whilst we at CRO enjoyed having them here. It is hoped there might be more such combined courses in the future.

Peter Kloppenburg USB

-o-o-o-o-0-0-00000-0-0-0-0-0

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



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My sincere thanks to all of those who have contributed to the website so far, listed at: http://crotrak.com/thank_you.htm .

Some new material, including photographs by John Fletcher and Ed Garrett have been added, and there is a lot more to come I am sure. I can arrange copying, scanning, whatever so as to get them up on our website; so you need have no fears regarding their safety.

The Fisherman Who Rode a Horse

Here is the start of an extract from the autobiography of Ken Watters.

CH 15 — Carnarvon

At the end of the first week of 1967 I packed my Landrover with clothes and as much of my gear as I could fit in and headed off to Carnarvon . It was a sad day even if I was excited about starting my new job on the following Monday. Dad had not yet told me what he was hoping to do when Planet fisheries pulled out altogether and I had no idea when we would all be together again as a family.

I arrived at the Nor West Whaling office late in the afternoon and introduced myself to Harold Martin the manager of Nor West Whaling at the time. I went onto the crew quarters and unloaded all of my gear into a single room and then across to the dining and social rooms to meet up with the other residents. As it was out of season not many people were staying out at Babbage Island. Most of the work-force were local Carnarvon people living in town, at this time of the year. I had tea in the main dining room and found that the meals provided were excellent.

Don and Shelley Coyle were running the Crew Quarters, Don did the carpentry work both and maintenance at the quarters and down at the factory while Shelley looked after the cooking and cleaning. After tea I went into town to see if there was anybody around that I knew and ended up having a few beers at the Port Hotel. I went back to the camp early in the night for a good sleep. The next morning I went around to visit Uncle Max and Auntie Merle and caught up on all the happenings in Carnarvon.

Uncle Max told me that I was to front up at the Tracking Station at 8.30am on Monday and ask for a Mr. Richard Simons the engineer in charge of the Range and Range Rate tracking site.

To be continued

Keeping the Memory Alive

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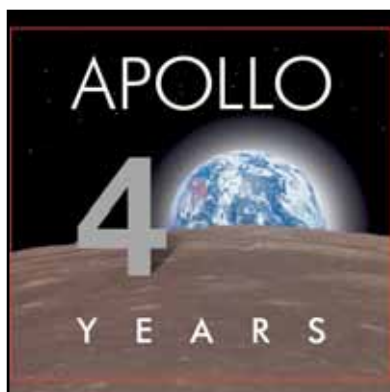
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Vol 7 September 2009



Keeping the Memory Alive

THE TRACKERS'

C R O N I C L E

Since we've covered all the manned Gemini and Apollo spaceflight, we have moved on to the Skylab Project.

Designed for long duration mission, Skylab program objectives were twofold. To prove that humans could live and work in space for extended periods, and to expand our knowledge of solar astronomy well beyond Earth-based observations.

This issue covers Skylab IV, our last manned mission coverage.

Also included in this issue:

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Skylab Mission IV (SL-4)

Skylab 4 was the third and final manned mission to Skylab.

The SL-4 mission started November 16, 1973, with the launch of three astronauts on the Saturn IB rocket, and lasted 64 days, 1 hour, 15 minutes and 30 seconds. It completed 1214 Earth orbits.

The crew arrived on Skylab to find that they had company up there - three figures dressed in flight suits. Upon closer inspection, they found their companions were three dummies, complete with Skylab 4 mission patches and name tags which had been left there by Al Bean, Jack Lousma, and Owen Garriott at the end of Skylab 3.

The all-rookie astronaut crew had problems adjusting to the same workload level as their predecessors when activating the workshop. Things got off to a bad start after the crew attempted to hide one astronaut's early motion sickness from flight surgeons, a fact discovered by mission controllers after downloading onboard voice recordings.



Following the final manned phase of the Skylab mission, ground controllers performed some engineering tests of certain Skylab systems--tests that ground personnel were reluctant to do while men were aboard. Results from these tests helped to determine causes of failures during the mission and to obtain data on long term degradation of space systems.

Upon completion of the engineering tests, Skylab was positioned into a stable attitude and systems were shut down. It was expected that Skylab would remain in orbit eight to ten years. However, in the fall of 1977, it was determined that Skylab was no longer in a stable attitude as a result of greater than predicted solar activity.

On July 11, 1979, Skylab impacted the Earth surface. The debris dispersion area stretched from the Southeastern Indian Ocean across a sparsely populated section of Western Australia.

Courtesy NASA



Edward Gibson
Science Pilot



Gerald Carr
Commander



William Pogue
Pilot

Whereabouts

As a result of Paul Dench supplying his "staffing list", augmented courtesy Brian Milne, the "Whereabouts" table of those for whom we have no contact details has expanded to more than one page. Thanks to those who have sent updates.

C	Abott	Brian	Clifford	C	George
Eric	Ainsworth	Keith	Clifton-James	Joe	George
Gay	Albon	Barbara	Cobcroft	J	Gerschwitz
Bill	Arbery	Bill	Comstock	Vida	Gibson
George	Armitt	??	Coombs	G	Goodlace
Allan	Barber	Jim	Crossland	L	Gore
John (Allan)	Barber	Noel	Cunningham	Lyn	Grant
Matt	Barber	F	Dawes	Claude	Granville
Keith	Barnard	Peter	Dawson	Bob	Halse
	Barrow	Peter	Del Fante	Geoff	Hammond
Deidre	Beaumont	Andrew	Dempster	R	Hanes
Elizabeth	Beckett	Jean	DeVis	Bea	Hardman
	Beveridge	Marilyn	Dick	Peter	Hardwicke
Michael	Billings	Olive	Dick	Ron	Harmes
Denis	Black	Phil	Dickinson	Anne	Harvey (Brookes)
G	Bond	Neville	Dippell	D	Hatch
S	Boyce	Cheryl?	Dixon	Gail	Heileman
Bill	Boyle	L	Donkin	Stan	Hills
B	Bradley	John	Draper	Ernie	Hindley
Phil	Brindley	Mike	Dresser	Dave	Hine
Hans	Britz	Bruce	Duff	Geoff	Hoad
Dave	Brooks	I	Dunleavy	A	Holgate
Charlie	Brown	Bob	Dwyer	Phyllis	Hook (Watson)
T.F.A	Brown	Dave	Elliot	J Hopkins	
W	Brown	J	Erickson	Vivienne	Hopper
J	Burdett	Ross	Eyre	Ted	Hopper (Lawer)
R	Burdett	Martin	Fenney	Deidre	Howard
Martin	Burgess	Ian	Few	B	Hughes
Robert	Burns	Ian	Findlay	B	Hunter
Basil	Byrne	G	Francis	D	Hutchins
Joe	Cabone	Ben	Franklin	Leonie	Jennings
Joy	Cameron	David	Froom	Ian	Jones
Geoff	Cardwell	Don	Frost	S ???	Judd
G	Carrick	L	Gardner	Vera	Kastropil
Darryl	Cass	S	Garner	John	Keane
Brian	Clarke			Mike	Keen
Jim	Cleary			Jim	Keenan
				John	Kelman

The quest continues; the list never seems to get very much shorter.

I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. The Reunion Dinner brought out some missing persons, but there are also a few who do not wish to be contacted.

Whereabouts ctd.

D	Kettlety	Joan	Oats	Jeff	Shuttleworth
Joy	King	W	Oliver	P	Sims
M	King	Denis	Owens	Ray	Skender
L	King	John	Paddon	George	Small
Roy	Kjellgren	??? Mrs	Parkinson	Lyn	Smart (Willis)
Gloria	Klarie	John	Parkinson	J	Smith
Peter	Kloppenburg	Alan	Paterson	Mary	Smith
Henry	Larsen	G	Paull	Mike	Smith
Russ	Leighton	Mike	Pender	P	Smith
G	Linney	Wendy	Petersen	Roger	Smith
F	Lippett	Don	Pettitt	Bill	Smythe
Alex	Liu	T	Phillips	Hazel	Snook (Howse)
		Diane	Pitman (Housley)	Dave	Standbury
		John	Platten	John	Stanton
Gloria	Lyon-Roberts	Don	Plumb	Alex	Stevenson
Ross	MacDonald	Gerry	Plummer	Barbara	Stevenson (Vernon)
John	Mahaffey	D	Powell		
Peter	Maine	M.J.K	Power	Barbara	Teahan
Roy	Mallinson	Wendy	Puccinelli	Barbara	Teasdale
Bob	Marr	A	Rees	Des	Terrill
Keith	Mathieson	Dave	Rendell	Alan	Thomas
Alec	Matthews	Frank	Rice	Christine	Thomas
K	McCarson	Doug	Richards	Howard	Thomas
Ian	McDonald	D	Richardson	Don	Thompson
S	McDonald	Harry	Richmond	Jack	Thompson
Frank	McGregor	Ralph	Richmond	L	Tink
Eileen	McLaughlan	Dave	Rickards	Larry	Tomkins
Don	McLellan	G	Riley	Frank	Toomey
Nola	Meiklejohn (O'Byrne)	Brian	Robinson	Mike	Travell
R	Miller	Lynne	Rosser	Dave	Troup
Bill	Mills	Ted	Rosser	Norma	Turner
Ray	Mills	Lindsay	Sage	Ernst	Uhl
Peter	Milne	Stewart	Sands	Tony	Vingerhoets
Marilyn	Milner (Gobby)	Ron	Sargeant	Dave	Walker
Ian	Mitchell	Russell	Schwarzer	Mrs B	Ward
Sharon	Morgan (Todd)	Bob	Scott	Tom	Ward
J	Murray	Michael	Scott-Malcolm	N	Wardle
Dennis	Naylor	Lorraine	Scott-Malcolm (Erlandsen)	A	Watermeyer
		Dorcas	Sefton-Bellion	Irene	West
Gloria	Neal	George	Sefton-Bellion	Bernie	Wilbourne
Ellie	Nichols	D	Selby	Garnet	Wilmott
Elton	Nickerson	Ron	Shand	Brian	Wilson
Vic	Gadelvicius	Fred	Sharland	Ray	Zatorski
Jamie	Gardiner	E	Sharples		
Patsy	Nolan (Thompson)	?	Sheehan		
Graham	Nielsen	Doug	Shaw		
John	Noble				
?	O'Brien				

They Never Flew Again — Why Not?

Courtesy Project Apollo Digest

Why did Frank Borman walk away after Apollo 8? He must have been inline for a Moonwalk.

Bill Anders? One flight only...why?

Why did James McDivitt never fly after Apollo 9?

Why did Rusty Schweickart never fly again also? i know other astronauts had space sickness, so this can't be the only reason he was grounded.

Borman didn't fly again because he saw what the strain was doing to his family and to himself. He didn't want to go through the grind again.

Anders, who knows? Probably saw greater opportunity elsewhere, or weighed the odds of getting another flight and didn't like the results.

McDivitt was totally mission oriented.

He didn't care that much what or where he flew; he did what he felt was his duty. After Apollo 9 he was offered the LMP seat on what became Apollo 14, but he didn't want to be second banana to Al Shepard. He was also offered the Apollo Program Manager's position after Apollo 11 when George Low was promoted, and he saw that as a greater opportunity.

Schweickart was so sick on Apollo 9 that no one really wanted to take a chance of flying him again, and according to some, he wasn't all that eager to "revisit the scene of his misery," as Walt Cunningham put it. Schweickart was backup commander of one or two of the Apollo crews, so he wasn't entirely out of the running.

The Fisherman Who Rode a Horse

Continuation of an extract from the autobiography of Ken Watters.

I learnt later that the prime function of this section of the Tracking Station was to determine the position (range) and speed (range rate) of the scientific satellites and to send command signals to turn on and off various functions or to reposition the satellite. This section was part of the STADAN Network (Scientific and Data Acquisition Network) that was separate from the MSN (Manned Spaceflight Network) but it did have some responsibilities with the early manned spaceflights.

I was bright and early on the Monday morning and was amazed at the security when I arrived. Just up and around the corner from the main entrance I came to a sentry post with a boom gate.

"Good morning Sir, how can we help you?", a rather portly guard asked as he leaned into the window of my Landrover.

"I have come to start work."

"Righto and what is your name?"

"Ken Watters."

"My name is Neil", he said as he checked off my name on a clipboard that he had tucked under his arm.

"OK just wait here in the car and I'll be right back."

While the guard made several phone calls I sat there wondering what would happen if I was to crash through the barrier. As I waited several bronze coloured Ford Falcon cars had pulled up behind me and another guard came out to let them through the boom gate.

Neil came out after a couple of minutes to let me know somebody was coming to show me the way.

"Hi I'm John Ford, you must be Ken Watters."

"Pleased to meet you John."

"Just follow me and we'll soon be there", John said as he climbed back into another bronze coloured Falcon.

40th Anniversary



"Fitzgerald" Girls



Charlene & John Monteith



Kerry (Eyre) Larsen & Russ Larsen



Ian Giles & Brian Walker



Tony & Dina Sala



Barb King & Margaret Hall

y Reunion Dinner



Bill & Pat Davis



David & Catherine Pettinger



Jenny Tuckey & Joan Teraci



Judy & Ken Watters



Tito Teraci & Lydia Sala



Bill (Jeff) Chandler, Lesley (Morling) Boulton, John Fletcher

40th Anniversary Reunion

Look Who Came to Dinner

Colleen Allen	Alison Gregg	Catherine Pettinger
Marlene Cosolota	Catriona Gregg	David Pettinger
Kaye Barr	Jim Gregg	Denise Plumb
Lesley Boulton	Michael Gregg	Don Plumb
(Morling)	Margaret Hall	Ross Powell
Heather Broad	Margaret Henderson	John Preece
Russell Broad	Mike Henderson	Bev Robertson
Robert Brown	Betty Hocking	Dina Sala
Jan Campbell	Bob Hocking	Lydia Sala
Ruth Cates	Colin Holmes-Clark	Tony Sala
Bill (Jeff) Chandler	Maree Holmes-Clark	Lorraine Sartori
Lee Cockram	Jocelyn Housley	Ian Shardlow
Ted Cockram	Trevor Housley	Kerry Shardlow
Careena Cro	Eddie Jennings	Mike Smith
Tony Cro	Leonie Jennings	Ian Squire
Bill Davis	Terry Kierans	Marieka Squire
Pat Davis	Valerie Kierans	Joan Teraci
Hilda Deimel	Barb King	Tito Teraci
Keith Deimel	John Lambie	Jenny Tuckey
Joan Dench	Karin Lambie	Wilson Tuckey MP
Paul Dench	Russ Larsen	Phil Vigilante
Gayle Easterbrook	Kerrie Larsen (Eyre)	Sally Vigilante
John Easterbrook	Pam Lavercombe	Brian Walker
John Findlay	Frank Legge	Jack Watson
Joan Fitzgerald	Shirley Lester	Nadia Watson
Hope Fletcher	Joan Lysaght	Judy Watters
John Fletcher	Kerry-Ann Lysaght	Ken Watters
Mark Fort	Tom Lysaght	Stuart Wattison
Robyn Fort	Derek Major	Terry Wattison
Michele Galazowski	Leonie Marsh	Geoff Williams
David Gardiner	Mike Marsh	Rosemary Williams
Eileen Garth	Peter Milne	(Moran)
Max Garth	Barbara Mitchell	Gordon Yarnold
Kim Gates	Charlene Monteith	Wendy Yarnold
Ian Giles	John Monteith	(Wilkinson)
Linda Giles	Ian Munro	
Geoff Goddard	Brian Murty	
Rhoda Goddard	Colleen Oldman	
	Geoff Oldman	

What Are They Doing Now?

Peter Milne

I left Carnarvon in June 1974. The wife and four daughters had flown down to Perth to stay with my mother but I had been called up for jury duty and had to stay long enough to seek exemption. It was granted and I drove my Hi Ace van (sold by John Easterbrook) filled with cockatoos x 2 and cat x 1 and miscellaneous furniture to Perth.

I had completed a correspondence course on Fruit Growing prior to resigning and intended to buy an orchard in the South West and spent an extended holiday looking for properties (of which there were many) but no off farm jobs required to stay solvent and so back to Perth and a job as a technician with Phillips Scientific and Industrial Equipment.

They trained me (on the job) on Industrial X Ray Spectrometers. The work consisted of travelling to mine sites, mainly in the Pilbara but some in the South West, servicing the X Ray machines. It was usually pressure work because the companies, Mount Newman Mining, Goldsworthy Mining, Hammersley Iron and others were paid for the ore (a percentage of about ninety percent) on the X Ray analysis of that ore. Let me diverge a minute here and explain an incident that happened.

One Saturday morning I was working in my garden and received a phone call from Hammersley Mining at Tom Price saying that I was needed urgently at the mine site and how long would it take me to get to the airport. I told them about an hour to clean up and pack. They told me that the plane was due to leave in half an hour and that I should just get there as fast as I could.

It took me three quarters of an hour to get to the airport and I expected the MMA flight to have gone. It was still sitting on the tarmac and I was rushed out to the plane and seated in the hostess' seat.

My sweaty and grimy appearance was reflected in the sweaty faces of the other passengers who had to wait an extra half an hour in the plane in the middle of summer.

I completed the repair and the alignment and verification about two hours after arriving at the mine site and then could not get a booking back

to Perth until the following Tuesday. The company refused to help me get on an earlier flight.

Soon after joining Phillips I was joined by Nim Thomas and Bill Graham who must have stayed to the bitter end at the tracking station.

Apart from X Ray analysis I was also trained on weigh bridges. The work kept me away from home, either up North or down South, for over six months of each year and with a growing family it became a problem. I applied for and got employment with WAIT (now Curtin University) as a computer tech.

The work there was mainly on DEC mini computers and their peripherals scattered around the campus. The main computers in the Computing Centre were maintained by DEC Computer techs.

I remained there and became the Supervising tech with a couple of helpers until such time as the academics drove me to despair and I decided to go back to Phillips. I was welcomed with open arms but the same amount of travelling and little job satisfaction sent me off again.

This time I studied English and Politics at Tech school (after hours) and gained entry to the University of WA to study for a Bachelor of Arts degree. I completed the degree and then did an extra year to gain a Diploma of Education with a major in English Literature and a minor in Theatre Arts.

During my time at University I had part time work as a courier with Deering Automotive Electricians. The manager at that time happened to be my eldest daughter's father in law.

By the time I finished in 1988 I was 54 years old and worried about getting a job at a school. I had done well with my degree and diploma and I was offered full time employment with the WA Education Department as an English teacher at Bullsbrook District High School.

After eight years there I decided I needed a change and was transferred to Eastern Hills Senior High School in Mount Helena.

I remained there for seven years and eventually retired at the end of 2003; and have done very little since.

Social Club News November 1968

Page 4.

"APOLLO 7"

In the eleven weary days that separated the lighting of the touch paper and a subsequent even time sprint for the block-house and the point down splash of Apollo 7 there were a few other separations:

The booster separated as planned as did the SIVB. We were separated from (a) our families and (b) sleep; Paul Dench was separated from the alcoholic stakes in a bet with me at some time or another; all of us were separated from our tempers; our illustrious M&O, Brian Milne, was separated from his cool following his classic gaffe of "Skin Band valid C Track" and our respective bank managers were separated from their anxiety over our overdrafts.

The last pass saw a strange crew in U.S.B. The original team were all at their old Stations for what was probably my last track, and even then we managed to get through the pass without incident, and our nerves had returned to normal in time to attend the traditional splashdown party.

Roll on Apollo 8 - and talking of rolling on, may I take this opportunity of wishing you all a sailors farewell.

Ben Ryan
Shortfellow

As Ben leaves us on 22nd November, we all wish him the best and thank him for his contributions in the past. ED.

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



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My sincere thanks to all of those who have contributed to the website so far, listed at: http://crotrak.com/thank_you.htm .

Some new material, including photographs by John Fletcher and Ed Garrett have been added. There is a lot more to come including photographs from the 40th Anniversary Reunion Dinner, courtesy Trevor Housley, Tito & Joan Teraci, Margaret Hall and Max Garth.

I can arrange copying, scanning, whatever, so as to get them up on our website; so you need have no fears regarding their safety.

Random Quotes

"We can continue to try and clean up the gutters all over the world and spend all of our resources looking at just the dirty spots and trying to make them clean. Or we can lift our eyes up and look into the skies and move forward in an evolutionary way."

— Buzz Aldrin

"We don't need to be fancy and cutting edge to go back to space; we just need it to work."

— Jim Banke

"Cayley PLAINS?!? There ain't nothin' 'plains' about this place!"

— John Young, while bouncing across the lunar surface aboard a Lunar Rover Vehicle

"The legacy of Apollo has spoiled the people at NASA. They believe that we are entitled to this kind of thing forever, which I gravely doubt. I believe that there may be too many people in NASA who at the moment are waiting for a miracle, just waiting for another man on a white horse to come and offer us another planet, like President Kennedy."

— Wernher von Braun

"What the hell was that?"

— Pete Conrad, seeing lightning flash around his vehicle as Apollo 12 rose into a thunderstorm

Keeping the Memory Alive

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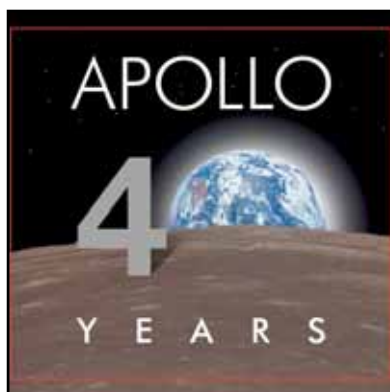
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Vol 7 December 2009



Keeping the Memory Alive

THE TRACKERS'

C R O N I C L E

We've now run out of manned space flight missions of the sixties and seventies, but I am winding up with an explanation of the Skylab patch/mission numbering anomalies, kindly contributed by William (Bill) Pogue, Skylab 4 pilot.

For collectors of space flight literature, Bill Pogue's autobiography, entitled "*But For The Grace Of God*" will be out early in 2010.

See page 6 too; an announcement for which we have all been waiting.

Also included in this issue:

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Terence (Terry) Kierans
Editor
CRO Trackers
PO Box 93
QUINNS ROCKS WA 6030
AUSTRALIA

Skylab Mission Numbering Fiasco



Skylab 2



Skylab3



Skylab 4

Courtesy William (Bill) Pogue

When the Skylab crews were announced in 1971, the prime crews set about designing their mission insignia or "patch" as it was usually called. The missions were officially designated as: Skylab 1: for the unmanned launch of the Skylab space station on a giant Saturn V, and Skylab 2, 3 and 4 for the manned visits, which were lofted to space by Saturn 1B rockets.

That seemed simple enough but mischief was not long in coming. We began receiving flight procedures documents (check lists and other training materials) labeled SLM-1, SLM-2 and SLM-3 (Skylab Manned Mission 1, 2 and 3). Other documents were labeled SL-2, SL-3 and SL-4 (conforming to the official mission designations). It became a confusing mess because we began receiving mail and other documents clearly meant for one of the other crews and the people in the Astronaut Office mailroom became as bewildered, confused and uncertain as the rest of us.

In the meantime we had designed our mission patches incorporating the official numeric designations (Skylab



**William Pogue
Pilot**

2, 3, and 4). During a visit by the NASA Headquarters Director of the Skylab Program, Pete Conrad asked him, "Are we 1, 2 and 3 or are we 2, 3 and 4"? He said, "you are 1, 2 and 3". All of us went back to work and designed new patches to incorporate the numerals 1, 2 and 3. Skylab 1 and 2 used Roman numerals and Jerry, Ed and I used the Arabic

numeral 3. The designs were rendered by artists and sent to NASA Headquarters for approval. The whole process took several months, and the artwork didn't arrive at NASA Headquarters until about six months before the scheduled launch of the Skylab.

The Associate Administrator for Manned Space Flight took one look at the artwork and disapproved the design because he said the official flight designations, "2, 3 and 4" were to be used. Thus informed, we dug out our original designs (for 2, 3 and 4) and were in the process of getting the artwork done when informed by Headquarters "not to bother". We could use the designs for 1, 2 and 3. Then we found out why.

The people who had manufactured the Skylab flight clothing (to be worn

(continued on p5)

Whereabouts

As a result of Paul Dench supplying his "staffing list", augmented courtesy Brian Milne, the "Whereabouts" table of those for whom we have no contact details has expanded to more than one page. Thanks to those who have sent updates.

C Abott	Jim Crossland	Claude Granville
Eric Ainsworth	Noel Cunningham	Bob Halse
Gay Albon	F Dawes	Geoff Hammond
Bill Arbery	Peter Dawson	R Hanes
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John (Allan) Barber	Andrew Dempster	Peter Hardwicke
Matt Barber	Jean DeVis	Ron Harmes
Keith Barnard	Marilyn Dick	Anne Harvey (Brookes)
Barrow	Olive Dick	D Hatch
Deidre Beaumont	Phil Dickinson	Gail Heileman
Elizabeth Beckett	Neville Dippell	Stan Hills
Beveridge	Cheryl? Dixon	Ernie Hindley
Michael Billings	L Donkin	Dave Hine
Denis Black	John Draper	Geoff Hoad
G Bond	Mike Dresser	A Holgate
S Boyce	Bruce Duff	Phyllis Hook (Watson)
Bill Boyle	I Dunleavy	J Hopkins
B Bradley	Bob Dwyer	Vivienne Hopper
Phil Brindley	Dave Elliot	Ted Hopper (Lawer)
Hans Britz	J Erickson	Deidre Howard
Dave Brooks	Ross Eyre	B Hughes
Charlie Brown	Martin Fenney	B Hunter
T.F.A Brown	Ian Few	D Hutchins
W Brown	Ian Findlay	Ian Jones
J Burdett	G Francis	S ??? Judd
R Burdett	Ben Franklin	Vera Kastropil
Martin Burgess	David Froom	John Keane
Robert Burns	Don Frost	Mike Keen
Joe Cabone	Jamie Gardiner	Jim Keenan
Joy Cameron	L Gardner	John Kelman
Geoff Cardwell	S Garner	Joy King
G Carrick	C George	M King
Brian Clarke	Joe George	L King
Brian Clifford	J Gerschwitz	Roy Kjellgren
Keith Clifton-James	G Goodlace	Gloria Klarie
Barbara Cobcroft	L Gore	Peter Kloppenburg
Bill Comstock	Lyn Grant	Henry Larsen
?? Coombs		Russ Leighton

The quest continues; the list never seems to get very much shorter.

I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. The Reunion Dinner brought out some missing persons, but there are also a few who do not wish to be contacted.

Whereabouts ctd.

G Linney	G Paull	P Sims
F Lippett	Mike Pender	Ray Skender
Alex Liu	Wendy Petersen	George Small
Gloria Lyon-Roberts	Don Pettitt	Lyn Smart (Willis)
Ross MacDonald	T Phillips	J Smith
John Mahaffey	Diane Pitman (Housley)	Mary Smith
Peter Maine	John Platten	P Smith
Roy Mallinson	Don Plumb	Roger Smith
Bob Marr	Gerry Plummer	Bill Smythe
Keith Mathieson	D Powell	Hazel Snook (Howse)
Alec Matthews	M.J.K. Power	Dave Standbury
K McCarson	Wendy Puccinelli	John Stanton
Ian McDonald	A Rees	Alex Stevenson
S McDonald	Dave Rendell	Barbara Stevenson (Vernon)
Frank McGregor	Frank Rice	Barbara Teahan
Eileen McLaughlan	Doug Richards	Barbara Teasdale
Don McLellan	D Richardson	Des Terrill
Nola Meiklejohn (O'Byrne)	Harry Richmond	Alan Thomas
R Miller	Ralp Richmond	Christine Thomas
Bill Mills	Dave Rickards	Howard Thomas
Ray Mills	G Riley	Don Thompson
Marilyn Milner (Gobby)	Brian Robinson	Jack Thompson
	Lynne Rosser	Patsy Thompson (Nolan)
John Mogg	Ted Rosser	L Tink
Sharon Morgan (Todd)	Lindsay Sage	Larry Tomkins
J Murray	Stewart Sands	Frank Toomey
Dennis Naylor	Ron Sargeant	Mike Travell
Gloria Neal	Russell Schwarzer	Dave Troup
Ellie Nichols	Bob Scott	Norma Turner
K Elton Nickerson	Michael Scott-Malcolm	Ernst Uhl
	Lorraine Scott-Malcolm (Erlandsen)	Tony Vingerhoets
Graham Nielsen	Dorcas Sefton-Bellion	Dave Walker
John Noble	George Sefton-Bellion	Mrs B Ward
? O'Brien	D Selby	Tom Ward
Joan Oats	Ron Shand	N Wardle
W Oliver	Fred Sharland	A Watermeyer
Denis Owens	E Sharples	Irene West
John Paddon	? Sheehan	Bernie Wilbourne
??? Mrs Parkinson	Jeff Shuttleworth	Garnet Wilmott
John Parkinson		Brian Wilson
Alan Paterson		Ray Zatorski

Skylab Mission Numbering Fiasco ctd.

(continued from p2)

onboard) had already completed their work several weeks earlier in order to get the clothes packaged and shipped to the Cape to meet their deadline (for stowage onboard Skylab which was already in pre-launch processing).

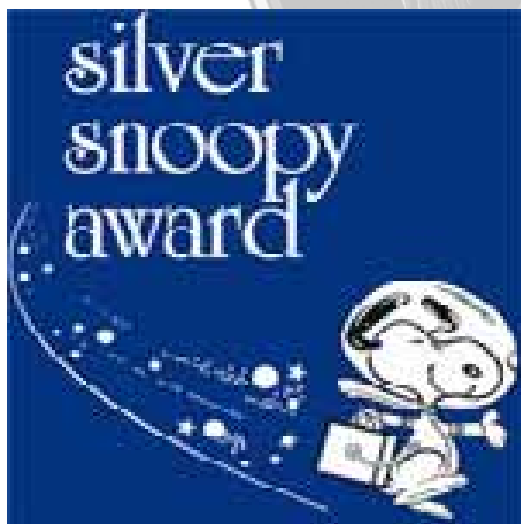
Furthermore, they had already used the designs submitted earlier for the mission patches. They didn't have time to wait for official approval. The designs using the numeric designation 1, 2 and 3 became approved by default because items with these patches were already stowed in the Skylab lockers at the Cape. Removing them for patch change-out was considered to be much too expensive and disruptive of launch preparations.

So, although officially designated as Skylab 2, 3 and 4, the mission insignias

bear the numeric designations as follows: Skylab 2 (Roman numeral I), Skylab 3 (Roman numeral II) and Skylab 4 (Arabic numeral 3). When traveling in Afghanistan in 1975, I presented some Afghan VIPs with our Skylab 4 mission patch. One lady looked thoroughly confused and asked about the numeral 3 on the Skylab 4 patch. I gave her this long-winded explanation and, by the time I finished, the Afghans were roaring with laughter.

This has to be the most exasperating bit of space trivia ever, and it's especially confusing to autograph collectors who still scratch their heads trying to sort out their trophies. On the bright side, the Skylab missions set successive space endurance records of 28, 59 and 84 days.

Silver Snoopy Awards



Silver Snoopy Award

Awarded for outstanding achievements related to human flight safety or mission success.

For Ten Years' Service At CRO

Len Algate
George Allan
Dick Baker
Ron Burgess
Bob Davies
Paul Dench
Olaf Gravdal
Harry Hermans
Paul Linnane
Peter Roberts
Neil Sims
Tito Teraci

Courtesy Joan Teraci

The Story of the Trackers Time in Carnarvon

The story of the Trackers time in Carnarvon, provisionally titled '*One giant step for a town: Carnarvon and Apollo*', is at last back on track.

Our major sponsor, the WA Lotteries Commission, has agreed that the balance of our grant can be spent entirely on publishing, and thanks to the energetic support from former Trackers and local Space enthusiasts, the Shire of Carnarvon has agreed to sponsor the balance of the publication costs.

After such a long wait, we hope our book (and yours) meets your expectations.

The contract will be finalised by the submission of our text and illustrations to the publisher, Rosenberg Publishing Pty Ltd, on 7 December 2009.

The book is expected to be launched in May 2010.

Paul Dench & Alison Gregg

Buzz Aldrin Appointed Diplomat

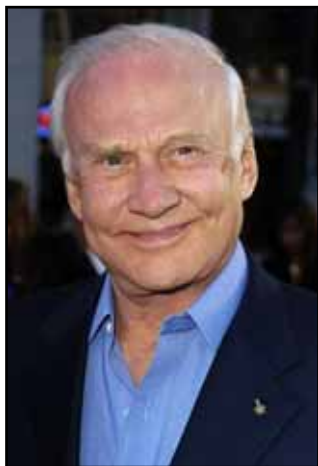


Image courtesy
WireImage.com

According to a report in the *Los Angeles Times* the Los Angeles County Board of Supervisors has appointed Buzz Aldrin as its "Honorary Consul General to the Moon from Los Angeles County".

On presenting an elaborate scroll to Buzz, who accepted it on behalf of all of the 24 astronauts who reached the environs of the moon, the Board stated that these astronauts represent the, "*highest ideals of a seasoned American military officer, American military aviator, American veteran, and American space explorer*".

A Quotation For the Editor

"For all those whose cares have been our concern, the work goes on, the cause endures, the hope still lives and the dream shall never die."

— Edward Kennedy

Fisher AG-7 Space Pen

So you need a pen that will write underwater, on wet objects, upside down, when it's freezing and even in space? Then look no further - the Original Astronauts Fisher Space pen is the pen for you. The original Spacepen was chosen by NASA to be used on the Apollo missions and is still used to this day on all American and Russian manned space flights.



This is the authentic Fisher AG-7 Space Pen that accompanied NASA astronauts on Apollo 11, the first manned space flight to the moon in 1969. The pen's thixotropic ink is sealed in a pressurized cartridge that enables it to write in temperatures from -30° F to 250° F, underwater, at any angle--even upside down--and, most importantly to astronauts, in zero gravity.

The pen has a chrome-plated brass barrel and a metal pocket clip. To commemorate the 40th anniversary of this historic space mission, the barrel is laser engraved with iconic images as well as the names of the Apollo 11 astronauts: Commander Neil Armstrong, Lunar Module Pilot Edwin "Buzz" Aldrin, and Command Module Pilot Michael Collins.

The retractable pen has an ultra-hard tungsten carbide ball that writes a medium line in black ink and lasts up to three times longer than ordinary ballpoints.

<http://www.urbanjunkie.co.uk/product.php/19/0/space-pen-fisher---ag7>

Didn't the Russians originally use pencils?

The Unforgettable Christmas Message

"For all the people on Earth," said Anders, "the crew of Apollo 8 has a message we would like to send you." He paused a moment and then began reading:

In the beginning God created the Heaven and the Earth.

After four verses of Genesis, Lovell took up the reading: *And God called the light Day and the darkness he called Night.*

At the end of the eighth verse Borman picked up the familiar words: *And God said, Let the waters under the Heavens be gathered together unto one place, and let the dry land appear; and it was so. And God called the dry land Earth; and the gathering together of the waters He called seas; and God saw that it was good.*

The commander added: *"And from the crew of Apollo 8, we close with good night, good luck, a Merry Christmas, and God bless all of you--all of you on the good Earth."*

The Fisherman Who Rode a Horse

Continuation of an extract from the autobiography of Ken Watters.

I followed John up and around a long winding hill past what looked like a power house on one side of the road and an antenna array on the other. I could see buildings dotted all over the place and there were about six locations with antennas staring into space.

We pulled up in front of a rather ordinary looking building with no windows and only the one door and I climbed down from the Landrover to join John. There were two very flash looking Aluminium truck trailers parked parallel to each other and about 50 yards apart.

"That trailer houses the receivers and the other one houses the transmitters." said John pointing to each trailer in turn. "Right lets have a cup of coffee and you can meet some of the crew while we wait for Dick to get here."

As we approached the door of what I came to know as the crew room a loud siren started to wail and red lights started flashing on top of the two trailers and the two very large antennas.

I turned a full 360 degrees looking around for the cause of the alarm and John took me by the arm and ushered me into the crew room.

"What on earth are the sirens for?" I asked.

"The boys are about to turn the transmitters on to track a satellite."

"Why the alarm?" I asked.

"The transmitters push out a lot of horsepower and it's best to be inside to avoid being cooked." replied John.

It was a change of shift and some of the people that passed as I was waiting at the boom gate were already sitting down over a cup of coffee being briefed by the outgoing night shift. John introduced me around the table and I did my best to remember names. It has always been a bad weakness of mine. Names fly straight through my head and minutes after being introduced I had already forgotten everybody's name. I sat at the table listening to all the technical jargon going backwards and forwards as the off-going shift bought the new team up to date. They may as well have been talking another language as I'm sure I had a better understanding of Italian, Yugo Slav or Portuguese. I started to wonder how I was ever going to fit in here.

A rather tall gentleman wearing a suit and tie came into the crew room and all the chatter stopped. He spotted me and came across.

"You must be Ken." he stated as we shook hands. "I'm Dick Simons."

(To be continued)

5th Picnic Day

Five years is still a long time
between drinks.

So...

The Perth Chapter of the CRO
Trackers will be holding their
annual picnic/barbeque at:

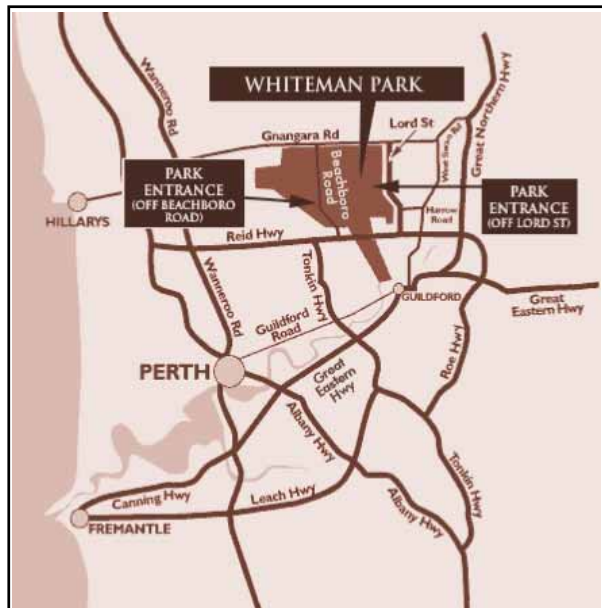
Whitemans Park, Mussel Pool,
some 20 kms and 25 minutes
from the Perth CBD.

Date: Sunday April 11th 2008

Time: Kick off 11 am

BYO: Everything

Look out for the banner



LOS

Sad news; passed to me recently by his son Anthony; of the passing of a Carnarvon original; John Albert Stewart on 26th Sept of complications following the stroke he suffered about 4 years ago. Will be mourned by all his many friends.

In Sorrow
Col Smith

I enjoyed many a moment with Jack. He was one hell of a good bloke. Liked a drink, was a real romantic, loved his zephyr & knew his stuff. Am pretty sure Wilson Tuckey as they were pretty close & I think shared in their good horse Black Prince & rented one of his "cabins" at one time.

Jack enjoyed life to the hilt & it is a very sad occasion.

Jack was a top bloke & behind his sort of tough mask was a sort of romantic with a very big heart.

God Bless Him.

Clive Cross
An original CRO team member

Social Club News December 1970

Page 23.

AMATEUR PHOTOGRAPHY

Although no need has so far been expressed for a Camera Club on the Station, it may be worthwhile considering some sort of loosely organised (hate that word!) activity which might include such things as (a) bulk buying of photographic materials, (b) temporary studio facilities for portraiture, (c) movie making, (d) print or slide exhibitions, (e) movie shows - you name it.

The people listed below have already expressed some interest in such a venture and any others also interested are invited to contact Peter Kloppenburg in USB.

Actively Engaged in Photography

J. Cummings	Co. Manager
A. Irvine	STADAN
C. Winrow	FPQ-6
G. Allen	USB
H. Eritz	SPAN
J. Gregg	Tr. Co-ord.
G. Fagan	TLM
M. Garth	USB
P. Kloppenburg	USB

Interested

P. Vigilante	TLM
J. Harmsen	TLM
M. Fort	TLM
D. Gardiner	FPQ-6
G. Armitt	Fac.
S. Yan	USB
R. Williams	USB
J. Parkinson	STAD.

----o-o----o-o----o-o----

NOT EVERY DAY!!

An advert. appeared in the classified ads. reading as follows--

"Air-conditioned, fully equipped Rolls-Royce in perfect condition for sale at Fifty Dollars."

Thinking the air conditioner may be worth looking at, a Refrigeration Fitter rushed round to the address and demanded of the lady who opened the door, "You the one offering the Rolls-Royce?"

"I am" she said and led him to the car - a beautiful thing in every respect.

"Here's the fifty" he stammered, "Now, what's the catch?"

"No catch at all," explained the lady, "I'm simply carrying out the terms of my late husband's will. He provided that his car be sold at once and the proceeds be turned over to his secretary."

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KEEPING THE MEMORY ALIVE



**Carnarvon Tracking Station
1964 - 1975**



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I can arrange copying, scanning, whatever, so as to get them up on our website; so you need have no fears regarding their safety.

Random Quotes

"Don't tell me that man doesn't belong out there. Man belongs wherever he wants to go--and he'll do plenty well when he gets there."

— Wernher von Braun

"Pete Conrad....Funny, noisy, colorful, cool, competent; snazzy dresser, race-car driver. One of the few who lives up to the image. Should play Pete Conrad in a Pete Conrad movie."

— Michael Collins, from "Carrying the Fire

"Anyone who sits on top of the largest hydrogen-oxygen fueled system in the world; knowing they're going to light the bottom- and doesn't get a little worried- does not fully understand the situation."

— John Young, when asked if he was worried about taking a new ship on its first flight prior to STS-1

"Technology is dominated by two types of people: those who understand what they do not manage, and those who manage what they do not understand. "

— Putt's Law

"America's challenge of today has forged Man's destiny of tomorrow."

— Gene Cernan, Apollo 17

Keeping the Memory Alive



NASA FOUNTAIN
CARNARVON TRACKING STATION
W. A.

*A very merry Christmas
and
a healthy and prosperous New Year
to you and your families
from the editor.*

If undelivered, please return to:
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PO Box 93, Quinns Rocks, WA 6030



Vol 7 March 2010



Keeping the Memory Alive

THE TRACKERS'

C R O N I C L E

We've now run out of manned space flight missions of the sixties and seventies, so until we can come up with a new suitable and lasting theme (suggestions welcome) the newsletter will be somewhat patchwork in content.

Also included in this issue:

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email: info@crotrak.com
<http://crotrak.com>

Patches That Never Flew

By kind permission of Eugene Dorr.

Apollo 5

On 22 January 1968, the first flight-worthy Lunar Module, designated LM-1, was launched into earth orbit aboard a Saturn IB as Apollo 5. There was no crew aboard, and this was the only Lunar Module to fly without one.

The engineers at Grumman Aircraft, who had built LM-1, felt that the mission deserved a patch; so they designed one.

One of the objectives of the flight was to test "fire in the hole" operation of the ascent stage engine



Embroidered patch, designed by Grumman, to commemorate the first flight of the Lunar Module.

while the Lunar Module's two stages were still mated. This is the inspiration for the design on the patch. Since there was no need for — nor way to test — the landing gear, it was omitted on LM-1. The moon, the Lunar Module's ultimate destination, appears on the right of the patch.

So, this patch was not designed by a crew in the conventional sense, but by a surrogate "crew" in the form of the concerned "parents" of this baby.

Presented here in memory of Tom Kelly, "*father of the Lunar Module*", who died on 23 March 2002, at the age of 72.

...and the Saga Continues

From: Terry - Keeping the Memory Alive [info@crotrak.com]

To: info@carnarvon.org.au

Subject: Attention: Jeremy Forbes - President Carnarvon Visitor Centre.
Ref: Centre Holiday Planner 2009/10 etc.

I note with much regret, that errors and omissions relating to the OTC dish have crept back into your publicity material.

1. Ref http://www.carnarvon.org.au/accom_result1/otc-dish/ - this dish did not become operational until 1969. The first live satellite television broadcast used the cassegrain horn antenna - the "sugar scoop". For more information please see http://en.wikipedia.org/wiki/OTC_Earth_Station_Carnarvon and/or http://en.wikipedia.org/wiki/Carnarvon_Tracking_Station

2. Holiday Planner 2009/10. "Catch the Facts". Carnarvon's OTC dish was built by NASA. The dish was not commissioned until 1969 and the OTC Earth Station was a communications satellite tracking station.

3. Holiday Planner 2009/10. "Attractions" - "OTC Dish". The "...huge communication satellite dish.." was used for communications satellite tracking and data relay for the NASA Tracking Station further south. It was not operational until 1969.

I trust that these errors will be rectified in future iterations of the Planner, and your otherwise excellent website.

From: Leah Ivey [info@carnarvon.org.au]

To: Terry - Keeping the Memory Alive

Hi Terry

The new publication is being put together now for a May release. I will pass this on to our new manager to ensure these errors are rectified. At this stage the Carnarvon Visitor Centre committee has not elected a new president as Jeremy Forbes stepped down last year.

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Hans Britz	J Erickson	B Hunter
Dave Brooks	Ross Eyre	D Hutchins
Charlie Brown	Martin Fenney	Ian Jones
T.F.A Brown	Ian Few	S ??? Judd
W Brown	Ian Findlay	Vera Kastropil
J Burdett	G Francis	John Keane
R Burdett	Ben Franklin	Mike Keen
Martin Burgess	David Froom	Jim Keenan
Robert Burns	Don Frost	John Kelman
Joe Cabone	Jamie Gardiner	Joy King
Joy Cameron	L Gardner	M King
Geoff Cardwell	S Garner	L King
G Carrick	C George	Roy Kjellgren
Brian Clarke	Joe George	Gloria Klarie
Brian Clifford	J Gerschwitz	Peter Kloppenburg
Keith Clifton-James	G Goodlace	Henry Larsen
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Peter Maine	John Platten	P Smith
Roy Mallinson	Gerry Plummer	Roger Smith
Bob Marr	D Powell	Bill Smythe
Keith Mathieson	M.J.K Power	Hazel Snook (Howse)
Alec Matthews	Wendy Puccinelli	Dave Standbury
K McCarson	A Rees	John Stanton
Ian McDonald	Dave Rendell	Alex Stevenson
S McDonald	Frank Rice	Barbara Stevenson (Vernon)
Frank McGregor	Doug Richards	Barbara Teahan
Eileen McLaughlan	D Richardson	Barbara Teasdale
Don McLellan	Harry Richmond	Des Terrill
Nola Meiklejohn (O'Byrne)	Ralp Richmond	Alan Thomas
R Miller	Dave Rickards	Christine Thomas
Bill Mills	G Riley	Howard Thomas
Ray Mills	Brian Robinson	Don Thompson
Marilyn Milner (Gobby)	Lynne Rosser	Jack Thompson
John Mogg	Ted Rosser	Patsy Thompson (Nolan)
Sharon Morgan (Todd)	Lindsay Sage	L Tink
J Murray	Stewart Sands	Larry Tomkins
Dennis Naylor	Ron Sargeant	Frank Toomey
Gloria Neal	Russell Schwarzer	Mike Travell
Ellie Nichols	Bob Scott	Dave Troup
K Elton Nickerson	Michael Scott-Malcolm	Norma Turner
Graham Nielsen	Lorraine Scott-Malcolm (Erlandsen)	Ernst Uhl
John Noble	Dorcas Sefton-Bellion	Tony Vingerhoets
? O'Brien	George Sefton-Bellion	Dave Walker
Joan Oats	D Selby	Mrs B Ward
W Oliver	Ron Shand	Tom Ward
Denis Owens	Fred Sharland	N Wardle
John Paddon	E Sharples	A Watermeyer
??? Mrs Parkinson	? Sheehan	Irene West

The Story of the Trackers Time in Carnarvon

The story of the Trackers time in Carnarvon, provisionally titled '*One giant step for a town: Carnarvon and Apollo*', is at the printers. It is scheduled to be shipped to distributors in late March

The book is currently expected to be launched in May 2010.

Paul Dench & Alison Gregg

Steel Towers.

Thanks to Trevor Mosel we have the original of a specification used in a Request for Tender by the "*Department of Works, Commonwealth of Australia*".

The specification is for the "*Supply and Fabrication of Steel Towers*", dated July 1963. It stated, among other things, that, "*Plans and Specifications may not be sent out of the State of Western Australia without the approval of the Director of Works*".

An extract is reproduced below. Information leading to the identification of the final disposition of these towers will be appreciated.

6.

2. GENERAL CLAUSES

2.1 EXTENT OF WORK

The Contractor shall supply, fabricate, prime, carry out trial assembly, match mark and deliver into Department of Works Store, Frobes Street, Perth, all materials as required by this specification and the following -

WC.63/532B WC.63/533B	4 No. 25 ft. high steel towers complete with H.D. bolts hand winches, cables, cages, ladders, safety net supports, ropes, turnbuckles and shackles and reinforcement and the like.
	Two towers shall have mounting plates and holes as shown MK.I and the other two shall have mounting plates and holes as shown MK.II. In other respects the 4 towers shall be identical.
WC.63/534B	One 70 ft. tubular tower, 2 No. 20 ft. end poles (M1 and M2), 4 No. feeder poles together with all guys, turnbuckles, shackles, clips, thimbles, straps, H.D. bolts, reinforcement (bent and bundled) and counterweight assembly (excluding concrete weights) i.e. all work shown or indicated except concrete materials and sundry items noted to be supplied by W.R.E.
WC.63/535B	One 102'6" tubular tower together with all guys, adjuster blocks, shackles, clips, thimbles, straps, H.D. bolts, reinforcement (bent and bundled) and the like i.e. all work shown or indicated except concrete materials.

Apollo Astronaut Slams Obama Space Shift

From "*Project Apollo Digest*"

The day after the White House leaked plans to cancel NASA's return mission to the moon, the last man to step foot on the moon called the decision "a colossal mistake." Harrison Schmitt, who was the lunar module pilot for the Apollo 17 mission, said

the moon holds the keys to understanding Earth's origins, and it is the logical place to prepare for any future manned mission to Mars. "I think it is extremely important, for geopolitical reasons, that the U.S. be the leader in manned space exploration," Schmitt said at the Institute for Human and Machine Cognition in Ocala.

Some Thoughts of Frank Borman

From the "*Arizona Star*"

Gemini and Apollo Missions

"My goal back then was to get to the moon ahead of the Russians," Borman said. "It felt like winning 10 Super Bowls."

While their husbands were in outer space, the wives experienced difficult times. Susan

Borman recalled their son Edwin, who was 16 years old at the time, helping her realize her husband's choice. She recalled Edwin's words: "Mother, we don't have to worry. This is the way Dad has chosen to die, and we don't have that privilege."

"NASA changed our lives," Frank Borman said. "We wouldn't be here today if we hadn't gone to the moon."

... And a Letter From Walter Cunningham

Courtesy Ed Fendell

Good afternoon.

I know you do not like these kinds of requests anymore than I do, but you may share my concern about this administration's decision to leave NASA without a human space mission for the first time since its inception. My OpEd from last week expresses my concern.

Congress' 2010 budget authorization restricted NASA from canceling the Constellation program without Congressional approval. Rep. Frank Wolf (R-VA) is leading the effort to keep NASA in the human space business. He would like to hear from those of you willing to speak out against cancellation of our only manned space program going forward. I told him, I would ask.

Supporting NASA's retention is not necessarily supporting Constellation over other alternative architectures; it is not arguing for a return to the Moon as opposed to Mars; it is keeping NASA in the human space business, so that such debates can take place. I know it is a long shot, but it is the only chance we have.

If you would like to support Congressman Wolf's efforts, please contact his assistant, Tom Culligan at:

202-225-5136, or Thomas.Culligan@mail.house.gov . If you want to list some of your bona fides, feel free.

NASA Game Fishing Competition



From *"One giant step for a town: Carnarvon and Apollo"*.

A high spot for Carnarvon sport fishing in 1971 was a real team effort - an international triumph by a team of Trackers fishing in big launches skippered and owned by Locals.

"It all began when the ...Tracking Station at Ascension Island challenged the Bermuda Tracking Station to a game fishing contest. Bermuda, sitting on one of the best fishing grounds in the world,

passed the challenge along ... Soon the teletypes began to run hot as one station after another accepted the challenge."

Goldstone asked for a handicap as the water in their river ran *"several feet under the surface"* rather like the Gascoyne River in Carnarvon. Honeysuckle Creek declined because the trout they could catch would *"be too small even for the bait bucket."* Hawaii reported its status as "GO for PSADM" (Piscatorial Search and Destroy Mission).

Nine stations finally accepted: Ascension Island; Bermuda; Carnarvon (CRO); the "Network Test & Training Facility" at Goddard; Grand Bahamas; Guam; Hawaii; Merritt Island; and the tracking ship Vanguard. There had been a previous contest between Bermuda and Guam in 1966 but this was the first truly international competition.

The contest operated under international rules. Points were awarded for the size of fish caught inversely proportional to the breaking strain of the fishing line on which they were caught: 12 points per pound for 12 lb line, 10 points per pound for 20 lb line, and so on down to 2 points per pound for 130 lb line. CRO's fishing captain, Max Garth, decided that their best tactic was to use 12 and 20 lb fishing line to maximise the points per pound' of fish caught.

The Locals feared Shark Bay would not match some of the world's most famous game fishing areas; however, the Tracker team was confident that its waters would do them proud.

Just before dawn, the intrepid anglers set out for Koks Island, due west of Carnarvon, in three boats: two skippered by their owners 'Mac' Walker and 'Bluey' Woodman, and a third (Tom Fitzgerald's boat) skippered by Leo Della Bella. As they approached the island, they saw the commercial fishing fleet spread out across the horizon with great schools of tuna and mackerel jumping out of the water. The Trackers spread their burley - *"three large plastic garbage cans [full of] ... chopped whiting, fowl feed pellets, bran and whale oil"* - and started fishing.

To be continued

The Fisherman Who Rode a Horse

Continuation of an extract from the autobiography of Ken Watters.

Dick had a desk jammed into the corner of the crew room and apologised for the lack of privacy telling me that he had a new office being attached to the existing building in a week or two. Dick just asked general questions of where I had been living and what I had been doing since leaving school until the off-going shift had left and the new crew had gone off to work in the two trailers.

"OK now down to business. You have already filled in the security application forms and they have been cleared so you can start work straight away. Is that OK with you?" asked Dick.

"Sure is. I am keen to start?"

"Excellent. You are starting as a technical assistant and I have put you on with Max Garth's crew. He is a mad keen fisherman so you should get on well with him."

"OK."

"Right, well his crew is on days off at the moment and they start again at 4.30pm tomorrow. In the meantime you can spend today with Viv Batty and his crew and see if you can learn any thing. Just stay close to Joy and she will show you the ropes."

"Right."

"Off you go then," said Dick.

I went out and found that the red lights were still flashing. I raced across to the receiver van and climbed the steps up to the door. I entered a strange new world. It was like walking into what I imagined the control room of a spaceship would look like. There were racks and racks of electronic equipment with hundreds of little flashing lights, some green some red and some orange.

There were dozens of switches and knobs and dials, it was awesome. It was also like walking into a refrigerator, I learnt that the temperature was maintained at a constant 60°F. to protect the equipment. Coming in from an outside temperature well over a hundred was like jumping off a jetty into freezing water. I stood back against the door watching the three technicians and the equipment operator spinning dials, pushing buttons and one fellow playing with what could only be described as a small joystick.

"All locked up", said Viv; the supervising technician working on what I later learnt was the receiver.

"Sending command", replied John as he turned a key and pushed a button in a piece of equipment.

"Started recording", came back Joy King the equipment operator.

(To be continued)

5th Picnic Day

Five years is still a long time between drinks.

So...

The Perth Chapter of the CRO Trackers will be holding their annual picnic / barbeque at:

Whitemans Park, Mussel Pool,

some 20 kms and 25 minutes from the Perth CBD.

Date: Sunday April 11th 2010

Time: Kick off 11 am WST

BYO: Everything

Look out for the banner



Social Club News December 1970

Page 6.

HAVE YOU EVER WONDERED???

Have you even wondered what goes on inside that large concrete blockhouse stuck on the hill - up the road apiece, past the new Logistics/Power House/Facilities shopping centre. You know the one - it's got a large white 29 foot diameter sundial alongside it. It occurred to us that there may still be people here who have no idea what does go on and were worrying themselves silly about it. Here follow a few words in an attempt to remove some of this ignorance, at least from the minds of those who don't work there. Of course for those who do, there will always remain a few mysteries within those dark, forbidding, windowless walls.

Ah ha! Your first enlightenment? Yes! People actually work inside there. It would be quite understandable if you had originally thought it was a memorial or shrine or some such thing. Coach loads of tourists often come to gaze in wonder, snap madly with cameras, carve their initials on the walls and wonder "What could it be for?"

To a keen observer, this impression would be further enhanced by the fact that certain faithful ones perform a daily ritual marching round and round the base of the building wearing sad expressions but with passion in their eyes and wild gesticulations in their hands. Sad to say - this is no ancient custom handed down from father to son, but a comparatively recent innovation brought on by a sign on the main entrance door which reads "Please use Side door". Now, there are four sides and two floors with a total of six doors - hence the passion and wild gesticulations and marching from those who merely wish to enter!

Actually, entering is only the start of the fun. You should see what happens when the unwary get inside amongst the jungle of stores and equipment (used and unused) and try to locate the staircase to ascend to sanity. Many is the time the phone has rung and the trembling female voice of a marooned courier has pleaded "Help! I'm locked in / locked out/ lost! "

Never fear - once you have fought your way to that second floor - all is revealed. You are now in the finest, most precise C-Band tracking radar in the world (or FPQ6 for short). It is no secret - you ask Ron Burgess (if you have three hours to spare).

To be continued

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



Click on picture to enter

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My sincere thanks to all of those who have contributed to the website so far, listed at: http://crotrak.com/thank_you.htm.

There is a lot more to come including photographs from the 40th Anniversary Reunion Dinner, courtesy Trevor Housley, Tito & Joan Teraci, Margaret Hall and Max Garth. Just wish I had more than two hands.

I can arrange copying, scanning, whatever, so as to get them up on our website; so you need have no fears regarding their safety.

Random Quotes

"If everything were going along and we were going to do what we did the last three decades for the next three decades, I wouldn't want this job."

— Mike Griffin (looking forward to the future), NASA Administrator

"I don't think I'm going to get the chance. But I don't want to say I'm not available..."

— Neil Armstrong on the prospect of going back to the Moon and beyond

"Roger. Clear the tower. I got a pitch and a roll program, and this baby's really going."

— Pete Conrad as Apollo 12 lifts off

"I think this is gonna be the last Moon mission for a long time."

— Jim Lovell

"I don't know what you could say about a day in which you have seen four beautiful sunsets."

— John Glenn

"With all due respect, sir, I believe this is gonna be our finest hour."

— Gene Krantz, Apollo 13

"There's no such thing as a free launch."

— Unknown

Keeping the Memory Alive

The Glitch & the Gemini

From *Time.com*

Space: The Glitch & the Gemini

By Friday, Nov. 05, 1965

Read more: <http://www.time.com/time/magazine/article/0,9171,901786-1,00.html#ixzzOg46Lfzo0>

Then, 143 miles high and 541.9 miles downrange over the Atlantic, the Agena suddenly went silent. At the Houston control center, flight directors hunted desperately for their missing spacecraft, still hoping that there might be something in orbit for a Gemini rendezvous. But after a futile radar hunt, a technician at the Carnavon (sic) tracking station in Australia announced the end by moaning, "No joy, no joy."

Space Available (Newsletter that is)

Now that we have covered all the US manned space flights we are somewhat short of suitable material relating to our Tracking Station.

If I am going to be able to keep this newsletter going to the standard we expect, I need all the material I can get. So please look through all that stuff you have stored away and send it to me. I can scan anything up to A4 and would treat anything sent to me with the care it deserves.

Thank you.

The Editor

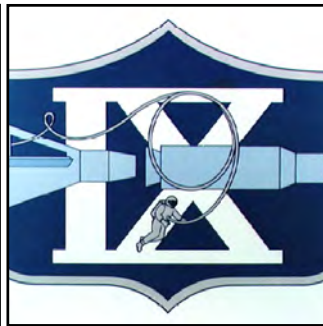
If undelivered, please return to:

CRO Trackers

PO Box 93, Quinns Rocks, WA 6030



June 1965



June 1966



Keeping the Memory Alive

Vol 7 June 2010

THE TRACKERS'

CRO NICLE

We've now run out of manned space flight missions of the sixties and seventies, so until we can come up with a new, suitable and lasting, theme (suggestions welcomed) the newsletter will be somewhat patchwork in content.

Also included in this issue:

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More Patches That Never Flew

By kind permission of Eugene Dorr.

2TV-1

About mid-1968 (16-24 June), before the very first manned Apollo mission, astronauts Joe Engle, Vance Brand, and Joe Kerwin spent seven days on a simulated mission using the Block II thermal vacuum test article known as 2TV-1.

This test article was identical, except for some flight-qualified equipment, to Apollo 7's CSM-101.

The crew decided to design a patch for this exercise; it turned out to be a take-off of the well known NASA "vector" emblem.

For this patch the red "vector" was replaced by a flightless bird, the roadrunner (remember the old cartoon series on TV?), and the characters "2TV-1" replaced the name "NASA".

The motto which appeared around the border of the patch was "*Arrogans Avis Cauda Gravis*" — The Proud Bird with the Heavy Tail. It was coined by Joe Kerwin.

Only 40 to 50 copies of this very rare patch were actually manufactured; but Beta cloth versions were created as well."



The original artwork for the 2TV-1 patch.



Beta cloth version of the 2TV-1 patch.

Note:

For those wishing to follow up and read more, there is an excellent book which provides a wealth of data on the manufacture of space mission patches: "*Relics of the Space Race. Third edition, 2001*" by Russell Still.

According to Still, the primary sources for embroidered patches were AB Emblems and Lion Brothers; but it's a much more involved story than that, and Still follows the trail.

Information on obtaining this book can be found at the collectSPACE web site:

<http://www.collectspace.com/resources/relics/relics.html> .

Whereabouts

As a result of Paul Dench supplying his "staffing list", augmented courtesy Brian Milne, the "Whereabouts" table of those for whom we have no contact details has expanded to more than one page. Thanks to those who have sent updates.

C Abott	Jim Crossland	Geoff Hammond
Eric Ainsworth	Noel Cunningham	R Hanes
Gay Albon	F Dawes	Bea Hardman
Bill Arbery	Peter Dawson	Peter Hardwicke
Allan Barber	Peter Del Fante	Ron Harmes
John (Allan) Barber	Andrew Dempster	Anne Harvey (Brookes)
Matt Barber	Jean DeVis	D Hatch
Keith Barnard	Marilyn Dick	Gail Heileman
Barrow	Olive Dick	Stan Hills
Deidre Beaumont	Phil Dickinson	Ernie Hindley
Elizabeth Beckett	Neville Dippell	Dave Hine
Beveridge	Cheryl? Dixon	Geoff Hoad
Michael Billings	L Donkin	A Holgate
Denis Black	John Draper	Phyllis Hook (Watson)
G Bond	Mike Dresser	J Hopkins
S Boyce	Bruce Duff	Vivienne Hopper
Bill Boyle	I Dunleavy	Ted Hopper (Lawer)
B Bradley	Bob Dwyer	Deidre Howard
Phil Brindley	Dave Elliot	B Hughes
Hans Britz	J Erickson	B Hunter
Dave Brooks	Ross Eyre	D Hutchins
Charlie Brown	Martin Fenney	Ian Jones
T.F.A Brown	Ian Few	S ??? Judd
W Brown	Ian Findlay	Vera Kastropil
J Burdett	G Francis	John Keane
R Burdett	Ben Franklin	Mike Keen
Martin Burgess	David Froom	Jim Keenan
Robert Burns	Don Frost	John Kelman
Joe Cabone	Jamie Gardiner	Joy King
Joy Cameron	L Gardner	M King
Geoff Cardwell	S Garner	L King
G Carrick	C George	Roy Kjellgren
Brian Clarke	Joe George	Gloria Klarie
Brian Clifford	J Gerschwitz	Peter Kloppenburg
Keith Clifton-James	G Goodlace	Henry Larsen
Barbara Cobcroft	L Gore	Russ Leighton
Bill Comstock	Lyn Grant	G Linney
?? Coombs	Claude Granville	F Lippett
Ron Cottis	Bob Halse	Alex Liu

The quest continues; the list never seems to get very much shorter.

I have been given information concerning the possible whereabouts of a few of these, but so far have not been successful in obtaining, or confirming, details. The Reunion Dinner brought out some missing persons, but there are also a few who do not wish to be contacted.

Whereabouts ctd.

Gloria Lyon-Roberts	Don Pettitt	Lyn Smart (Willis)
Ross MacDonald	T Phillips	J Smith
John Mahaffey	Diane Pitman (Housley)	Mary Smith
Peter Maine	John Platten	P Smith
Roy Mallinson	Gerry Plummer	Roger Smith
Bob Marr	D Powell	Bill Smythe
Keith Mathieson	M.J.K Power	Hazel Snook (Howse)
Alec Matthews	Wendy Puccinelli	Dave Standbury
K McCarson	A Rees	John Stanton
Ian McDonald	Dave Rendell	Alex Stevenson
S McDonald	Frank Rice	Barbara Stevenson (Vernon)
Frank McGregor	Doug Richards	Barbara Teahan
Eileen McLaughlan	D Richardson	Barbara Teasdale
Don McLellan	Harry Richmond	Des Terrill
Nola Meiklejohn (O'Byrne)	Ralp Richmond	Alan Thomas
R Miller	Dave Rickards	Christine Thomas
Bill Mills	G Riley	Howard Thomas
Ray Mills	Brian Robinson	Don Thompson
Marilyn Milner (Gobby)	Lynne Rosser	Jack Thompson
John Mogg	Ted Rosser	Patsy Thompson (Nolan)
Sharon Morgan (Todd)	Lindsay Sage	L Tink
J Murray	Stewart Sands	Larry Tomkins
Dennis Naylor	Ron Sargeant	Frank Toomey
Gloria Neal	Russell Schwarzer	Mike Travell
Ellie Nichols	Bob Scott	Norma Turner
K Elton Nickerson	Michael Scott-Malcolm	Ernst Uhl
Graham Nielsen	Lorraine Scott-Malcolm (Erlandsen)	Tony Vingerhoets
John Noble	Dorcas Sefton-Bellion	Dave Walker
? O'Brien	George Sefton-Bellion	Mrs B Ward
Joan Oats	D Selby	Tom Ward
W Oliver	Ron Shand	N Wardle
Denis Owens	Fred Sharland	A Watermeyer
John Paddon	E Sharples	Irene West
??? Mrs Parkinson	? Sheehan	

2010-2011 Subscriptions

Just a reminder for you to go to page 12 of this issue if you wish to continue your subscription.

Despite rising costs; because of the number of e-mail subscribers, I have been able to keep the annual subscription to a miserly \$11.00 for Australian subscribers.

Anything left over after costs go toward the cost of running the web site.

Chris Kraft in Carnarvon

Courtesy Ted Cockram

On the 21st of March 1967 Carnarvon Rotary Club International Service Committee held a barbecue and fund raising evening at the race course on Monday evening and the guest speaker was Mr. Christopher Kraft, Flight Operations

Director of the Manned Space Flight Centre at Houston Texas. Mr. Kraft was accompanied by Mr. Tecwyn Roberts, Chief of Manned Flight Operations Division at the Goddard Space Flight Centre at Greenbelt Maryland and Mr. John South, Goddard Space Flight representative in Australia.

Mr Kraft who is also a lay reader in the Church of England said that he had been trying to get to Australia ever since the manned Space flight Programme had started, first at Muchea and then at Carnarvon. He said that the five billion dollars by the U.S. this year on space exploration was not great when compared with the gross national product of 800 billion dollars. Reasons for the space flight project were political, religious and economic and much work was necessary to keep the western world ahead in the field of technology. This had been proven in recent years by the improved political situation brought about by the fact that we are able to bargain from a position of strength when dealing with the communist countries.

Mr Kraft said that if we were to read one day that the Russians had landed a man on the moon and that it would be another 20 years before we were able to do so, we would want to know why our politicians had allowed this to happen. It has happened once before

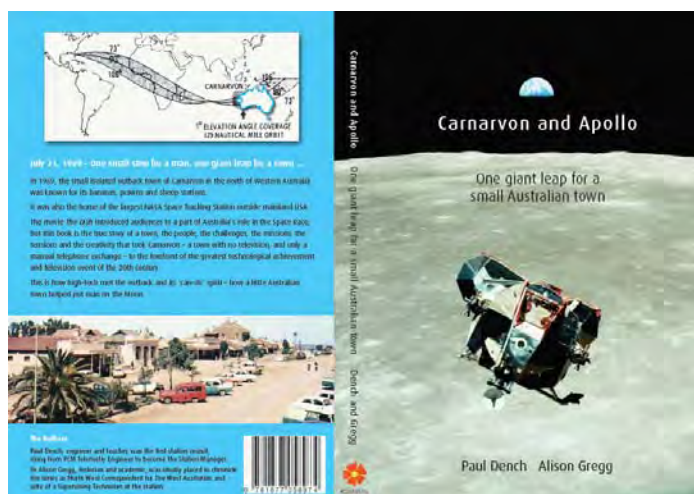
and it took such a situation to wake up the world to the importance of the scientist, the engineer and the school teacher, and the important part they play in the important field of technology.

In the past it has taken things like world wars one and two to jibe enough impetus and money in the progress of technology to push back the frontiers of science. Whether these scientists not involved in space flight admit it or not, the space flight programme is furnishing the basis of technology upon which all engineering and science is being founded today.

In stressing the importance of Carnarvon in the space flight programme Mr Kraft said that its position of 180 degrees around the world made it a key tracking station in any manned flight, and he anticipated that Carnarvon would grow in structure and size in the foreseeable future. An indication of this was the recent completion of the O.T.C. Satellite Communications Centre at Carnarvon which was already beaming messages to and from the U.S.

Another important aspect of the space programme was the launching of meteorological satellites capable of seeing the weather and parts of the world we have never been able to see before and so provide weather forecasts that would otherwise be impossible. In conclusion Mr Kraft said he anticipated that Carnarvon would be included in the space programme for at least the next five years and thanked the people of Carnarvon for their support of the Tracking Station and the Space Programme.

Carnarvon and Apollo: One giant leap for a small Australian town



Carnarvon and Apollo: One giant leap for a small Australian town

— by Paul Dench and
Alison Gregg

This long awaited book is now available in all good Australian bookshops at \$35.00 per copy.

It can also be purchased in Australia through www.carnarvonspace.com - proceeds to a future Carnarvon Tracking Station Memorial fund.

Overseas buyers can order copies of the book from various on-line book stores including:

<http://www.amazon.com> ; <http://www.barnesandnoble.com> , and sales@gazellebooks.co.uk .

LOS

Stanley Thomas Parkes
1931 – 2010

Stan's career in finance and accounting commenced with Amalgamated Wireless (Aust) Ltd at their Ashfield, Radio Electric Works and at Head Office, 47 York Street, Sydney.

During the establishment of NASA tracking stations in Australia, AWA started the Field Projects Division, for people to work in this area.

Stan's first appointment was as Admin Officer at The Applications Technology Satellite Station at Cooby Creek near to Toowoomba in Queensland.

Following the premature close of this station, the opportunity arose for Stan to fill the position of Station Accountant at the NASA Tracking Station at Carnarvon, Western Australia. During this time there Stan purchased a boat, a cabin cruiser, so that he was able to pursue his favourite occupation of deep sea fishing.

When CRO 52 closed in 1975 he moved to Perth to take up a position with Roneo Vickers until he was lured away to the Satellite Laser Ranging Facility (Moblas 5) near to Dongara, also in Western Australia.

Stan remained there in that job for 13 years until returning to Perth to retire.

NASA Game Fishing Competition-Concluded



From "*Carnarvon and Apollo: One giant step for a town*".

Five hours and 737½ lb (335 Kg) of fish later, the weary anglers decided to stop for the day.

The team - Max Garth 1358 pts, Alan Irvine 1635 pts, Mal Cameron 470 pts, Tito Teraci 1750 pts, Don Cheney 1375 pts, and Dick Baker 950 pts - had caught 24 narrow-banded Spanish mackerel, 10 mackerel, a striped tuna and an amberjack.

Max's striped tuna and Tito's amberjack were WA State sport-fishing records. CRO was a clear winner, accumulating 68 points more than all the other teams combined.

The competition occurred three more times during CRO's lifetime: they were runners-up to Goldstone in 1972 but won again in 1973 and 1974. Max Garth still argues that in 1972, CRO lost on a technicality. Perhaps Carnarvon should have claimed to be the World's game fishing capital.

40 Years On



2010 marks the 40th anniversary of Apollo 13.

"Houston, we've had a problem ...". This now iconic phrase, sent from the Apollo-13 spacecraft over 320,000 kms away from the earth, enthralled, and appalled, the world. It was also to have repercussions for Carnarvon, and its NASA Tracking Station up on Browns Range.

The launch of Apollo-13 was sub-sequently to prove the Carnarvon Tracking Station's most significant and critical manned lunar mission.

38 hours into the flight, when the prime station, Honeysuckle Creek in Canberra, developed problems. Carnarvon then assumed prime station status for two hours.

About two hours after the damaged service module was jettisoned, prior to re-entry, the station was used to transmit the power-up procedures to the powered down command module, something that had never been tried before, even in simulation.

Post mission analysis showed that the Carnarvon Tracking Station, with its 9m dish had provided more command support, in total, than any other Australian stations, and was only third in the tracking network behind the 26m dishes of Goldstone (USA) and Madrid (Spain).

The Fisherman Who Rode a Horse

Continuation of an extract from the autobiography of Ken Watters.

A telex machine burst into life as the information needed from the satellite started to be punched out on ticker tape.

"Signal strength minus 160db", Viv said to Joy.

"Auto tracking now." came Hugh McColgan the technician playing with the joystick that I later learnt controlled the antenna movement.

All went silent except for the rattle of the telex machine and the background hum of the air-conditioning. The crew seemed to be just spectators now as the image of the antenna outside could be seen, in a large convex mirror at one end of the Van, tracking across the sky.

"Time's up, counting 5,4,3,2,1 shutdown." said Viv looking at the large 24-hour clock on the van's end wall.

"Done." said John as he pushed another button on the face of what I was to learn was the command pulse generator. He turned the key then removed it and passed it on to Viv.

"All done. Peter you can shut down now." Viv said into the mouth piece of a headset he was wearing. Peter Castlehow was working in the Transmitter Van.

Viv stepped back and suggested that I go down and watch Joy get the necessary data tapes and prepare them to go up to another building known as the T&C, Telemetry and Command, building. From there they would be transmitted back to Houston in America. We all left the van to go back to the crew room for a coffee and Joy and I went off to deliver the tapes.

I really felt as though I was going to enjoy this job even if it was just until the prawning season was to get under way. The technicians that I worked with were mostly pommy technicians many of who had been working on the recently mothballed Blue Streak Rocket Project in England. Several others were ex navy or air force technicians or engineers with experience in the latest radar technology. There were a few Australian born technicians and we even had a senior Greek technician Kon Tsiaprakas working with us. The only Americans were visitors or those sent across for short periods to help with the commissioning of new equipment.

The crew at Range and Range Rate were more of a family separated from the other two hundred technicians working on other sites at the Tracking Station. R&RR and the telex section at the T&C building were the only people working three permanent shifts covering twenty four hours seven days per week. The rest of the Station only worked twenty four hours if there was a manned space flight happening or some other special mission.

(To be continued)

WA Trackers' 5th Picnic

The WA chapter of the CROTrackers held their fifth picnic / barbeque in Whitemans Park on 11th April.

Attendance was down on previous years, but it was great to welcome some new faces after some 40 years.

The event gave Paul Dench and Alison Gregg a chance to spruik their book, and to show us advance copies.

Invitees were Phil Youd and his wife Deborah. Phil operates the "Hot Hits" 99.7 FM radio station in Carnarvon and also publishes the new community newspaper "Gascoyne Classies", copies of which can be read at, or downloaded from, www.gascoyneclassies.com.au.

Phil is planning to open the "Carnarvon Space and Technology Museum" for which the Shire of Carnarvon has "in principle" given the go ahead for establishment at the old OTC site. He spent several hours talking with ex CRO trackers and listening to their reminiscences.

Other attendees were:

Ted Cockram	Peter Milne
Paul and Joan Dench	Barb Mitchell
Victor and Vilija Gadelvicius	Trevor Mosel
Tony and Maureen Green	John Preece
Jim and Alison Gregg	Brian and Sybil Renshaw
Bob and Betty Hocking	Tito and Joan Teraci
Terry and Valerie Kierans	Pauline Vinton
Barb King	Jack Watson

Random Quotes

"Don't tell me that man doesn't belong out there. Man belongs wherever he wants to go--and he'll do plenty well when he gets there."

- Wernher von Braun

"To think that twelve guys went there and we've figured it out-that's crazy."

- Apollo 16 Commander John Young

"Pete Conrad....Funny, noisy, colorful, cool, competent; snazzy dresser, race-car driver. One of the few who lives up to the image. Should play Pete Conrad in a Pete Conrad movie."

- Michael Collins, from "Carrying the Fire"

"I think this is gonna be the last Moon mission for a long time."

- Jim Lovell

Social Club News

December 1970 - conclusion

Page 7.

HAVE YOU EVER WONDERED???

Now, to be serious for a moment, for those who are new here, a few facts about this - the world's finest radar (or FPQ-6 for short) - would not be out of place. First, it is a true radar in that it can track any old tin can in space with or without a beacon onboard and will give very precise readouts of range, azimuth and elevation. Given a large enough target or powerful enough beacon, it will track truthfully to over 32,000 nautical miles in steps of two yards and an overall accuracy of some five yards. Beyond this range, it will still track, as proved with SIVB on route to the moon. A minor correction must be made however, in that 32,000 miles must be added to the ranging data!

There are many more fascinating things you may be interested in - its transmitter which pumps out pulses with a peak power of about 3 million watts; its highly mobile antenna, designed to track missiles requiring slow rates up to 20 degrees per second (whenever steam cleaning is not in progress, of course) that well known 4101C computer which suffered from amnesia (loss of memory) recently, but which otherwise serves many useful functions including:-

- (a) Processing tracking data before output, to correct for known biases in the system,
- (b) Accurately pointing the antenna to the correct predicted point for orbiting targets,
- (c) Production of pointing data and predicts for anywhere in the world,
- (d) Warnings that "tea-time" has arrived.

Oh! One could go on and on but perhaps you should visit this shrine - sorry, radar, and see for yourself. The crew will be glad to tell you all we know (including "how to rescue fair couriers in distress) for they seldom see a new face - that is if you discount the 20,000 annual visitors and Americans.

To those who may still be reading and who are still a little puzzled as to what we actually DO with the world's finest radar (FPQ-6 for short), please read "Jimnastics at Q-6" in this same magazine and realise that this is merely a drop in the ocean of the routine daily activity there - as anyone can see by reading the "MSFN Operations Schedule" each week.

KEEPING THE MEMORY ALIVE



Carnarvon Tracking Station 1964 - 1975



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My sincere thanks to all of those who have contributed to the website so far, listed at: http://crotrak.com/thank_you.htm.

There is a lot more to come including photographs from the 40th Anniversary Reunion Dinner, courtesy Trevor Housley, Tito & Joan Teraci, Margaret Hall and Max Garth. Just wish I had more than two hands.

I can arrange copying, scanning, whatever, so as to get them up on our website; so you need have no fears regarding their safety.

More History Razed to the Ground



At Cape Canaveral Air Force Station in Florida, the control room of the Mercury Mission Control Center is exposed to the elements during the deconstruction of the dilapidated facility. The original building, constructed between 1956 and 1958, was last modified in 1963. The center succumbed to the two worst enemies of structures along the space coast - time and salt air - necessitating that it be demolished as a safety measure. The facility served as mission control during all the Project Mercury missions, as well as the first three flights of the Gemini Program.

PHOTO CREDIT: NASA

Keeping the Memory Alive

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