

"Fore-Sight"



Quarterly Newsletter of the Association of Surveyors of P.N.G.

2001 SURVEY CONGRESS SHAPING UP TO BE A SUCCESS

Mr. Michael Larmer, Manager for this year's Survey Congress, assures "Fore-Sight" that all is in readiness for the 12th—14th of July.

The Preliminary Programme follows :-

Thursday July 12th :

8:00am Registration of Delegates

9:00am Formal Opening

10:00am Morning Tea

12:30am Technical Sessions

12:00pm Lunch

1:30pm Technical Sessions

6:30pm President's Welcome Party—Featuring

Launch of "Mastamak—The Land Surveyors of Papua New Guinea" (an event not to be missed)

Friday 13th July :

8:30am Technical Sessions

10:15am Morning Tea

10:45am Technical Sessions

12:00pm Lunch

1:30pm **ASPNG Annual General Meeting**

7:00pm Annual Dinner

Saturday July 14th :

9:00am Forum

12:00pm Lunch

6:30pm Farewell Barbecue

The venue for this year's Congress is the "Holiday Inn" (formerly Islander Travelodge) in Port Moresby.

Special accommodation arrangements have been made with the Holiday Inn and Lamana Motel (within walking distance of the Holiday Inn). Mention that you are a delegate to the Survey Congress to obtain concession room rates.

A 20% discount is available for those traveling to Port Moresby via Air Niugini from other PNG centres. Contact Ms Patty Kane 325 9000 for details.

We also look forward to meeting friends from overseas and seeing some of the state of the art technical developments at the Congress Trade Display.

The highlight of this year's Survey Congress will be the launching of James Sinclair's book - **Mastamak—The Land Surveyors of Papua New Guinea**.

ASPNG M'ship Fees Overdue

While the response from members has been generally good, Council wishes to remind members of the ASPNG that membership fees for year 2001 were due on the 31st of March. Only financial members of the Association are entitled to vote at the Annual General Meeting.

Please ensure any outstanding fees are paid promptly. The Association needs your assistance and support in this matter.

And you can pay by almost any means ... the office also received a personal cheque in New Zealand dollars from one of our overseas friends, which caused a bit of confusion among the ladies at our local bank.

ASPNG - New E-mail Address

The Association of Surveyors is now online. You can get in touch with Councilors or if you have any queries or may want to contribute anything to the Newsletter (news, gossips, jokes, ideas, etc ...).

You can send it to the **ASPNG inc.**, new e-mail address :-

aspng@daltron.com.pg

(thanks to Waila Bale for this information)

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COMING EVENTS :

June 22 to 24 : Mining Conference

July 12 to 14 : ASPNG Survey Congress



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Other Council News...

Surveyors Board Nominations

The response from members was not very good as usual. Council received only four nominees at the last minute, after a few desperate telephone calls around by the President. The names of the four nominees have been submitted to the Minister and Secretary for Lands.

Feature Story : "Charlie Oscar Charlie" Courtesy of MapMakers



Not to be confused with the 'PNG distress signal' - "*Sali Oska Sali*" (*SOS*), "**Charlie Oscar Charlie**" (**COC**) is the call sign of PNG's longest serving aerial survey aircraft. There's a certain amount of similarity between "*The Green Beast*", featured in the last issue of "*Fore-Sight*" and this veritable 'beast of the skies'.

Charlie Oscar Charlie is a turbocharged Piper Aztec, a PA23-250C to be precise.

'Ordered in 1963', 'COC' was flown out from the United States in 1964 by PNG bush pilot Ron Firms. With less than a 100 hours 'on the clock', 'COC' was virtually new off the production line. The few hours logged on the airframe before Ron collected the aircraft were put there by American 'sitcom' star of the 60's Robert Cummings. (It was a bit too quick for his liking).

The aircraft was modified for aerial survey at Archerfield in Brisbane by *Air Express*—the modification comprising a 30 inch hole being cut through the floor of the aircraft. Sounds simple enough, but the control cables to the tail-plane have to be lengthened and re-routed via a pulley system. The airframe needs to be strengthened and the whole set-up balanced to emulate the normal handling characteristics. The aircraft was then fitted with a Wild RC8 aerial survey camera and NF1 Navigation Sight.

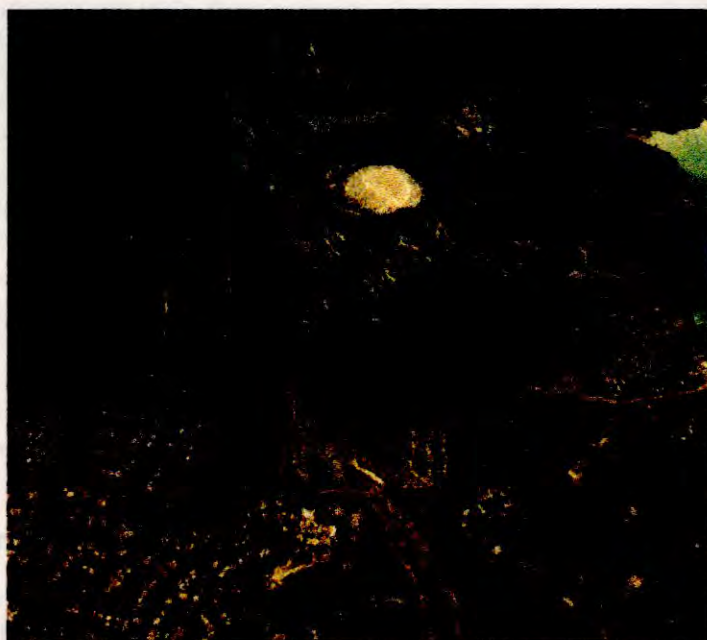
'COC' was purchased to upgrade the existing aerial survey capability in PNG and to comply with the specifications required by the "*CAJ*" aerial photography contract. This meant a high altitude capability of 25,000 feet plus, a calibrated survey camera with automated overlap control, and a navigation system that would permit accurate survey flight lines to be flown. The aircraft also had to be fitted with an approved on-board oxygen system. Some time later the aircraft was also fitted with long range fuel tanks to permit sustained high altitude operations and to alleviate some of the refuelling problems associated with remote bush bases.

In some 7000 hours of operation, 'COC' has flown over 1.6 million kilometres. Even though less than a quarter of this would have been actual survey time—the remainder being spent in transits, positioning and the odd charter or two, that's still a lot of 'land to 'traverse'. Venturing high above the terrain where '*The Green Beast*' ruled, 'COC' cruises at 130 knots IAS consuming 12 gallons of Avgas a side per hour.

The aircraft has been involved in aerial survey operations throughout PNG, north-west Australia, and the Solomon Islands. The early days were spent on government contract work, but more lately numerous private enterprise projects have been undertaken.

'COC' has been involved in the aerial survey of virtually every major resource development project in the country. The aircraft has also been there when a rapid response was needed in times of national emergency—the Lae Floods in 1983, the Rabaul Eruption in 1994 and the Aitape Tidal Wave in 1998.

There were many memorable moments for the various survey crews that have operated in 'Charlie Oscar Charlie' over the years. The surveys carried out around Panguna in November 1989 were fairly exciting. This was followed-up by three charters to Kieta in 1990—all carried out with special approvals and waived insurance cover on those trips. The work for the Gazelle Restoration Authority in 1995 / 96, while Tavurvur was still erupting saw 'COC' operating in extreme conditions. The perspex windscreens and all side windows had to be replaced after that sortie—together with both fuel control units that were choked with volcanic ash.



And like most survey operations, it was not all work and no play. The words "**survey party**" assumed new meaning to aerial survey crews. With an aircraft at your disposal there are certain advantages not to be missed—eg. Why base at Wapulu when "*The Trobes*" are only 10 minutes away (?). Instead of spending your day off in Goroka its nice to whip down to Madang or Finschhafen for a bit of a dive—'cause you have to be careful on the way back after a deep dive to avoid 'the bends' when basing at an airfield at 5000 feet elevation. 'COC' never seemed to mind these little excursions even with a couple of extra "crew members" on board occasionally.

In fair weather or foul, 'COC' has provided a rock steady camera platform for aerial survey operations in its 37 years of service thus far. While there have been a few close encounters with terrain and weather (try zero feet through the Tari Gap with your tail in the cloud base) there has only been one real mishap - a wheels-up landing a Jacksons a few years ago. Even that wasn't too bad except the Airbus was on finals and had to divert back to Cairns until 'COC' was ignominiously towed off the main runway.

'Charlie Oscar Charlie' is a survey legend in its own right and despite some of the crudities its call-sign engenders amid the aviation fraternity, remains on active service today.

So When Was PNG First Named and Put On A Map?

One of the first recorded European landings in New Guinea was by a Portuguese, Dom Jorge de Meneses, who touched at the Vogelkop Peninsula in West Irian in 1526. He named the place *Ilhas dos Papuas*, from the Malay term '*orang papuwah*', meaning fuzzy-haired man.



New Guinea was seen and given its European name by Ynigo Ortiz de Retes (he called it *Neuva Guinea* after the African colony of Guinea). He journeyed direct from the Moluccas to Mexico in 1537 but did not get here until 1545.

PNG was shown as an island in Mercator's 1569 World Map. It was thereafter featured as such in maps by Ortelius (1570 & 1587); Francois de Belle Forest (1575); Voisin (1582); Munster (1588), de Jode (c 1593); Hondius (1592 & 1602) and others. The Strait between New Guinea and the "Southland" was placed near 20 degrees south instead of 10 degrees south.

Around the same time, other voyages of discovery were taking place in New Guinea waters. In 1606, L.V. de Torres approached near Samarai, and charted the southern coast around to Daru. In 1616, W. Schouten and J. Le Maire sighted land near Namatanai and plotted the north eastern coast of New Ireland, New Hanover, Manus Island, KarKar Island and the north coast of New Guinea from Wewak to

Vanimo. In 1700, William Dampier sailed down the eastern coast of New Ireland, along the south coast of New Britain and up the north coast of New Guinea. In 1767, P. Cateret sailed in from the east and up the west coast of New Ireland, then south of Manus and away to the north west. In 1768, L.A. de Bougainville journeyed via Bougainville and up the east coast of New Ireland. A. D'Entrecasteaux journeyed here in 1792 and 1793 charting firstly the west coast of New Ireland and on his second trip the islands of Milne Bay, the Huon Gulf, and the north coast of New Britain. D.D'Urville in 1827 found land on the south coast of West New Britain and went on to sail up the northern coast of New Guinea. All this was before L.M. D'Albertis did his survey of the Fly River and Papuan Coast in 1872. The last of the sea going venturers was Capt. J. Moresby who intensively explored the Papuan Coast, many islands in Milne Bay and the coast from Milne Bay to Morobe in 1873.

While this was a remarkable time in history, not all got it right. Abel Tasman's (pre-Cook) map of the area in 1753 showed *Nouvelle Guinee* (PNG), *Nouvelle Hollande* (Australia) and *Terre De Van Diemen* (Tasmania) joined as one continental landmass.

New Guinea was also known to the Indian State of Shrivaja in the 8th Century and Chinese voyagers to Indonesia in the 13th Century.

"The Cartographer"

C.P.D. Courses Available at UNITECH

Courtesy Bob Curley, Dept of Surveying & Land Studies

The Department of Surveying and Land Studies at the University of Technology in Lae is running a number of excellent quality short courses offering post graduate and skills enhancing subjects for surveyors, cartographers and land administration managers. Courses being run this year include :-

- Surveying by GPS
- Automated Mapping with CivilCAD / SDRMap
- Advanced Use of MapInfo Professional Desktop GIS
- Introduction to ArcView Desktop GIS
- Advanced Use of ArcView Desktop GIS
- Introduction to Satellite Remote Sensing
- Spatial and 3D Analysis with Desktop GIS Systems

Further to the above, the following courses are in preparation :-

- Heighting for Surveyors and Engineers
- GPS / GIS Applications in PNG
- Modular Course for Registration of Surveyors (proposed)

The average course will cost you K1000 for fees, then there's travel, and accommodation on top. However, the courses are being well attended and are supported by Chevron, the European Union, Dept of Works, technicians from the Wewak Stormwater Project, and other major industry representatives. Further details of what's on offer may be obtained from - **Unitech Development & Consultancy Limited**,

Tel.(675) 475 7593 or Fax (675) 475 7467

PNGIC forms New Committee

Report from Special AGM held 21 March 2001

The PNG Institute of Cartographers held a Special Annual General Meeting in March this year to mark the rejuvenation of the organisation after a break of nearly three years. With a recent surge in membership, the special AGM was well attended.

The following people were elected to the Executive ...

President : Raymond Bure
Vice President : Elias Bonit
Secretary : Kilomi Dimaia
Treasurer : Potuan Pakop

Councilors were also elected to represent various sections of the cartographic community— namely, Clement Tabul (Education), Wilfred Peko (Civil Engineering), Michael Gideon (Government), Bruce Dimain (Mining Sector), Christine Lavoso (Women's Viewpoint) and Alan Dunley (Private Practitioners).

Surveyors CPD Quiz

Aside from the fact that a recent combined U.S. / Soviet space shot went astray because they were using different systems of measurement ... and America being America

What system of measurement is used in modern day American cadastral surveys ?

- A. Metric
- B. Chains and links
- C. Imperial feet and inches
- D. U.S. Miles and decimal miles

Answer (B) was the correct response to the last question

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Members & Other News ...

Some traditions die hard, others just fade away.

Whatever happened to that marvelous tradition unique to the ASPNG when a surveyor was invited to "earn his wings" by joining that exclusive club signified by the award of a maroon and grey tie upon successful completion of the initiation ceremony (?) - a sort of test of endurance by his peers.

Perhaps the last **surveyor** to achieve legendary status by going beyond the normal bounds of the initiation was **Geoff Tierney**. Apart from raising an enormous amount of funds for charity—helped by the fact that he ate as many oysters as was raffled to go in the schooner glass, he also swigged another bottle of claret during the auction phase of the initiation. Further to this, to double the ante, after scoffing the schooner glass full of oysters and claret, he did a hand stand while smoking a cigar and proceeded to walk around the ballroom of the Islander Hotel on his hands much to the amazement of all at the Annual General Dinner.

Geoff has been back after 'going finish' —I was given a welcome to another survey congress by him football tackling me in the foyer of the "Pap Hotel". So what happened to our special club—did we simply run out of ties to award or was it the fact that a certain Surveyor-General of the day thought the whole thing was somewhat barbaric (it was going to be his turn next).

- Anon

GIS Users Group Suggests Amalgamation of Associations / Duties

At a recent meeting, the GIS Users first Working Group suggested that a number of professional associations amalgamate in order to provide a unified and cohesive approach to promote GIS in PNG.

It was thought that combining the efforts and resources of the Association of Surveyors of PNG, the PNG Institute of Cartographers, and the GIS Users would be a good idea and may benefit all involved.

It was considered that if the ASPNG is looking to expand its membership and under the present Constitution can include any professional involved in the survey / mapping / GIS arena as a member—then the ASPNG Council and Cartographers etc must get together to devise a strategy to accomplish this.

In terms of the GIS community becoming self funding the following ideas were put forward :

- Formation of a "GIS Association" - charging membership fees for organisations and individuals
- Access to the "One Stop Shop" resources being made very cheap for GIS Association members

- Access for non-members being set to encourage membership
- Data supplied by the "One Stop Shop" will be charged at a determined fee (to cover admin costs etc)
- "One Stop Shop" to be non-profit (and based at the NMB)
- Incorporate other duties : eg Surveyors Board, GIS Association, ASPNG, PNGIC, etc. Each would contribute funds to the "One Stop Shop"

This news report was extracted from the Minutes of the PNG GIS User Group Sub Committee #1 Meeting 6th October 2000, and a report by that Sub-Committee subsequently presented to a meeting of the GIS Users Group.

The PNGIC has since commented that while some form of amalgamation was a good idea in principle—they did not want to lose their identity as cartographers.

Members of the ASPNG may like to share their thoughts with fellow members on this subject - possibly as a forum topic at the AGM.

Editorial Comment : Let's Support "Masta Mak"

James Sinclair's book, **"MastaMak—The Land Surveyors of Papua New Guinea"** will be officially launched at the ASPNG 2001 Survey Congress. The book was adopted by the ASPNG as their Centenary Project—a worthy undertaking and one which officially records the efforts, aspirations and endeavours of PNG's land surveyors up until Independence in 1975.

Support for **MastaMak** can be given by members of the Association by attending this years Survey Congress, by ordering the book, or by recommending the book to friends and fellow professionals.

The original print run will produce 1000 copies, 500 of which will be available as **Deluxe Editions**—leather bound, gold-embossed, gilt-edged, individually numbered and signed by the author James Sinclair. This is a marvellous opportunity to obtain not only a book that

is a definitive history on surveying in PNG, but a book that will definitely become a collectors item in years to come.

The standard edition as a stand alone reference manual on past surveying in PNG is unequalled. With 336 pages and 300 photographs it is surely a book that every surveyor will want to read and keep as an historical record in his library.

The book will be marketed in Australia and elsewhere overseas so we suggest that you get your PNG order in early.

Perhaps the greatest show of support that **MastaMak** could get would be a sell out first edition guaranteeing a second print run. A solid show of support by the members of ASPNG will also give Fred Pratt, the sponsor of this book, a demonstrable vote of thanks.

- Ed.