

"Fore-Sight"



"Fore-Sight"- Quarterly Newsletter of the Association of Surveyors of P.N.G.

PNG's 30 Year Independence Celebrations Accompany Economic Opportunities

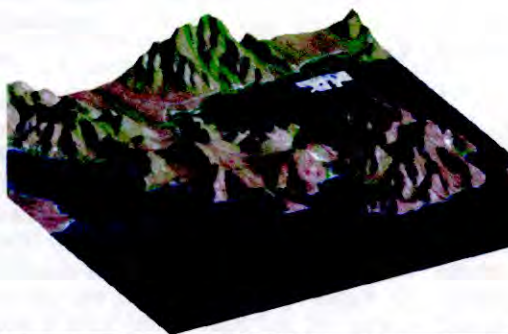
Papua New Guinea celebrated its 30th Anniversary of Independence on the 16th of September 2005 and accompanying those celebrations are the positive outlook and current economic opportunities for surveyors.

Major projects are underway for the oil and gas sector and a resurgence of mineral exploration activity was highlighted in the 2005 Annual Report from the PNG Chamber of Mining & Petroleum.

Survey teams from various firms are, or have recently been engaged on a number of interesting and widespread projects that include :-

- Control and DTM survey / route location and terrain evaluation for the Exxon / Mobil PNG Gas Pipeline
- Seismic survey including picking up geophone stations and drill holes for a petroleum prospect operated by InterOil near Wabo
- Further seismic work for the gold prospect at Woodlark Island in Milne Bay Province for Woodlark Mining
- Set out of well heads and a suspension bridge site in the Hegigio oilfields for Oil Search
- Set out for a 30 megawatt geothermal power station for Lihir Gold at Londolovit
- Prospective cadastral survey work at Sikut #3 for the Gazelle Restoration Authority
- Mapping control work for the Konebada Petroleum Park Project west of Port Moresby
- Engineering surveys for road works in the Autonomous Region of Bougainville (ARB)
- GPS / GIS surveys for proposed Marine Protected Areas (MPA's) in Milne Bay Province

Mapping and GIS work has also picked up in recent months and is providing adjunct/support opportunities for surveying companies. A number of EU and World Bank funded projects that have been won by overseas groups has also led to PNG firms being involved as the local partner.



Above : 3D perspective view from SPOT5 satellite imagery captured 10 Dec 2004 over the Napnapa Peninsula west of Port Moresby (Motukea in the background) Image courtesy of GEO-GRAPHICS Limited

Government surveyors have also been active with a number of infrastructure projects being carried out. DTM surveys have been completed by the Department of Works for a major upgrading of the road between Baruni and the Lealea - Porebada turnoff. Construction costs for this work are reported to be 12 million kina in the current year with a further 6 million to be spent in 2006. Upgrading of the Papa / Lealea road is currently underway.

The Department of Lands and the National Mapping Bureau have been engaged in survey work in conjunction with the revision of Electoral Boundaries. It is hoped these will be more acceptable to political aspirants than those offered in 1977.

ASPNG Council for 2005 / 2006

President : Jones Taugaloidi (continuing)
Vice President : Terrance Kuniaka (continuing)
Sec / Treasurer : Masang Bangindo (re-elected)
Councilor : Francis Posenau (relected)

ASPNG Nominees to PNG Surveyors Board include :-

Michael Siribis (DoW)
Terrence Kuniaka (Nambawan Surveys, Lae)
Skerry Palanga (Palanga Surveys, Rabaul)
Choulai Polume (Polume Surveys, POM)

Volume 6, Issue 3
September 2005



COMING EVENTS :

21-23 October : NSW Country Surveyors Conference (Leura)
Enquiries : gcstaree@telstra.com

23 -26 : Trimble's Dimensions 2005 (Las Vegas) Enquiries : rob.coorey@baesystems.com

2-3 November : OZRI 2005 (Esri Australia) Enquiries : ozri@esriaustralia.com.au

INSIDE THIS ISSUE :

39th PNG Surveyors Congress & 42nd AGM - General Report on Proceedings	2
'Starting A Resolution' : Satellite Imagery vs Aerial Survey Photography	3
FIG News Column	3
Surveyors CPD Quiz	3
Members & Other News	4
"Light Refreshments ... "	4
Editorial Comment : Time to Pay the Piper ... ???	4

39th PNG Surveyors Congress & 42nd ASPNG AGM

General Report on Proceedings

The ASPNG hosted the 39th PNG Surveyors Congress at the Holiday Inn in Port Moresby from the 7th to 9th July 2005. The theme of the Congress was "Sustainable Land Utilization in PNG for Economic and Social Development and the Role of Surveyors and Allied Professions".

Organized by Congress Manager (and PNG's Surveyor-General) Sam Kodawara, delegates looked forward to a lively and entertaining congress, and they weren't disappointed. Some rescheduling was required to accommodate a few last minute changes, and still the congress flowed smoothly.

The **Official Opening** was dutifully handled by **Mr. Pepi Kimas**, Secretary for the Department of Lands & Physical Planning. His remarks were refreshing and it was good to hear that the formulation of the corporate plan for his department was not an overnight thing at Loloata, but a careful strategy planned over some 18 months. His emphasis on team building with the right key people was duly noted as was the need for public servants to think (and occasionally act) outside of what may be considered the usual terms of reference.

Mr. Michael Larmer gave the **Keynote Address** due to the unavailability of Mr. Peter Loko, NCD City Manager. Mr. Larmer's comments were forthright and heartfelt, and clearly spelled out many of the reasons for things not progressing as well as they may have during the last 30 or so years. All in attendance agreed with Mr. Larmer's astute observations.

The **Technical Sessions** saw a good spread of papers, the first away being *The Proposed Voluntary Registration of Customary Land in Papua New Guinea* presented by Loani Henao from Henao Lawyers. This was a similar paper to that delivered two years ago with some relevant new viewpoints and illustrations. His summation was that more education and awareness needs to be conducted in conjunction with the proposed legislation and that funding for this cannot be government's responsibility alone. Mr. Henao gave freely of his time at the Congress and provided follow-up discussion time on Friday afternoon and Saturday morning. He is willing to provide regular updates on the progress of the legislation to the ASPNG and welcomes surveyors' input. He is prepared to provide additional advice on the subject when invited.

The afternoon session of the first day saw two further papers presented - *Review of the Survey Act, Survey Coordination Act and Survey Regulation* by Ian Kundin, a lawyer with the Department of Lands and Physical Planning; and a lively paper by Edwin Nidkombu (from the Lands Dept) entitled *Effects of Globalization on Indigenous Papua New Guineans who are Custodians of Their Land and Natural Resources*.

The events of Day 1 were washed down with a few quite ales at the **President's Cocktail Party**.

Day 2 of the Technical Sessions started with some confusion (possibly due to the effects of the previous evening) when Jacob Sinne couldn't make it across from UniTech in Lae to give his paper *Land-owner Education: A Strategy for Real Estate Development Project Sustainability in Papua New Guinea*. This was quickly sorted out, and Alan Dunley gave a short PowerPoint presentation (only 85 slides thank God) to his marathon 112 page written paper - *GPS Surveying and Mapping Proposed MPA's for Management of Sustainable Marine Resources and Determining Livelihood Options*. This was followed by an entertaining paper - *Developing Land for Tourism* presented by ASPNG's Hon. Sec./ Treasurer, Masang T. Bangindo.

The afternoon of Day 2 was given over to the ASPNG's **42nd Annual General Meeting**.

- Apologies were received (a number of surveyors having current work commitments in the bush)
- Minutes of the 41st AGM (in Lae) were read, amended as necessary and passed
- President Jones Taugaldidi presented his Annual Report
- Hon Sec / Treasurer Masang Bangindo gave his annual report and provided a Financial Statement that was duly passed
- Nominations / Elections of Councilors were held (results front page)
- Appointees to the PNG Surveyors' Board were discussed

• AGM General Business

- * Report by Francis Posenau on newspaper articles re employment of PNG Surveyors
- * Vote of thanks to Alan Dunley re production of "Fore-Sight"
- * Skerry Palanga 'voted in' as the 2006 Congress Manager - venue Rabaul
- * Forum topics discussed
- * Address by Loani Henao

The evening of Day 2 saw the **Annual ASPNG Surveyors Dinner** where the usual toasts and good natured frivolity continued well into the night.

Day 3 - The first session was dedicated to presentations by local and overseas survey equipment suppliers, and ASPNG thanks ...

- **Shaun Pini & Theodist** for their Congress Support

And especially our overseas supporters who travel at sizeable expense to attend our Survey Congress ...

- **Peter Ludlow of MeasureTech in Cairns**
- **Ian Truscott of C.R. Kennedy in Mackay**

The **Forum Session** was devoted to discussions on the proposed legislation for voluntary registration of customary land. Hopefully some things positive will ensue.

The **Farewell Bar.B.Que** ended the Congress on a happy note.

Thanks and congratulations on a job well done go to the Congress Manager Sam Kodawara and his team of helpers - many of whom (Michael Gideon at the NMB for one) worked into the early hours of the morning to get the papers produced on time and to later produce electronic copies on CD.

We look forward to Skerry's promise of X-TREME hospitality in Rabaul in 2006. Sorry no photos of this year's Congress—who forgot the camera ??? - Ed.

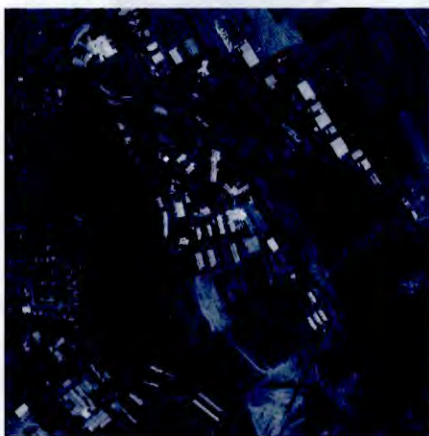
'Starting A Resolution' : Satellite Imagery vs Aerial Survey Photography

Everything's going digital - travel overseas to Asia and try and find a 'FotoFast' agency to develop your films, you'll have to look long and hard. Likewise, the digital revolution is already with us in the surveying profession and extends over to associated mapping imagery as well.

And it's all about resolution. How clear is the picture, and what can you do with it at certain scales? There are limits of course, but we're only dealing with what's commercially available. What's available to the military is another story !!! Only a few years ago Kodak released an aerial film "2444" - 2443 and 2445 had been around for over 40 years. With the latter you could get a maximum of x7 times enlargement; when 2444 was released by the military for commercial use (and you can bet they've got something a whole lot better now) we were able to get up to x55 times enlargement without loss of clarity.

With digital aerial survey cameras selling for around US\$ 5 million, they don't sell a lot - a conventional film aerial survey camera sells for around US\$ 500,000. As a 'cheap alternative' people look to satellite imagery - but how good is it (?)

Let's look at a couple of examples - you be the judge.



The panchromatic (B&W) Ikonos satellite image above is down-sized to fit this column. At full size, it's 1 metre resolution is enough to nearly read "Airways Hotel" on the roof, clearly shows aircraft on the ground (DC3 & Twin Otter size aircraft can be identified) and you can discern individual baggage containers.

At true scale the image starts to break-up ("Pixelate") at around scale 1: 1500



Same general area in colour.. This time it's SPOT5 2.5 metre resolution and even though the image is not quite to the same scale as the B&W image, we can see that things aren't quite as sharp - i.e., the resolution isn't as good. Here the image starts to break-up (pixelate) at around 1: 9,000 scale. Big difference between 1m resolution and 2.5m resolution.

Now compare the scanned aerial survey photography image below.



Shot with 2445 film, and flown at 5,000ft to produce 1:10,000 photo scale, the original negative was scanned at 12 microns (≥ 2200 dpi) to produce 0.125 metre resolution. The aerial survey photo scan only starts to break up around 1: 250 scale

Cost Comparisons :

Ikonos (full scene 100km ²)	AUD \$ 4,800
SPOT 5 (1/2 scene 1764km ²)	AUD \$14,000
Aerial Survey Photography	variable (*)

(*) - new aerial photography will cost you AUD \$30,000 just to get an aircraft here

- uncontrolled archival prints K 275 ea
- controlled orthophoto tiles K2750 ea
- area at 1:10,000 scale = 5.29km²

All options require cloud free capture conditions - but if you can wait until 2006, then "all-weather" radar imagery will be available at around 0.5 metre resolution. But expect the cost to be high !!! - GEO-GRAHICS Limited



FIG NEWS COLUMN

Almost on time arrived the FIG Commission 3 (Spatial Information Management) electronic newsletter on CD. The next major FIG Congress will be held 15 to 20th October 2006 in Munich, Germany.

This will be the XXIII (23rd) FIG Congress, and some might say 'so what, we've had 39 survey congresses in PNG'. But FIG, a bit like the Olympic Games, only has a major gathering every 4 years - so their 23 congresses span a substantial time period since their inception in 1878 (that is eighteen seventy eight) !!!

ASPNG has 12 months to decide if we can afford to send a delegate from PNG to the FIG 2006 Congress. As the PNG FIG Coordinator, I'd like to see us try. I'd also suggest our President be the person to represent us. A possible alternative, would be one of our Fellows, who might be able to make the journey in lieu (and possibly at their own cost).

FIG congresses attract several thousand participants from all over the world and are the most important events in the FIG calendar. The associated Technical Program, which marks the culmination of the 10 Commissions' four-year program of work, is complemented by a major international exhibition. Who knows, PNG could possibly participate in the exhibition as a 'road show' of our surveying activities - in many cases unique and certainly challenging.

Other years, FIG hosts "working weeks" for the various Commissions. 1st to 6th July 2007 will be in Hong Kong, China while the 2008 event will be in Stockholm, Sweden (14-19th June).

Let's take it as a combined and personal challenge to participate in at least one of these FIG events. *Alan Dunley*

SURVEYOR'S CPD QUIZ

"Lehmann's Method" provides a solution to a three-point problem for establishing the position of which piece of surveying apparatus

- A. Non differential GPS Unit
- B. Fly Camp
- C. Old Boundary Mark
- D. Plane Table

Answer "D" was the correct response to the last question.

"Fore-Sight",
P.O. Box 1271,
Port Moresby, N.C.D.
Papua New Guinea



Phone: (675) 320 - 0231,
Fax: (675) 320 - 1539

Newsletter contributions
can be sent to the Editor
at P.O. Box 1234, Wai-
gani, NCD or via fax to
325 8813 or by e-mail ...
alsurvey@daltron.com.pg

Members & Other News ...

PNG's own SP Brewery got into the Independence Celebrations act by producing a special *Independence Brew* - not the best recipe for purest beer drinkers I can assure you. One club in Port Moresby started giving it away free during 'happy hour' to get rid of stock. SP's not saying what happened to the production line, but the normal brew was not available for two weeks after the Independence weekend. During that time 'black market' stocks of the real stuff were going for over K150 a carton.

We've had some shockers over the years - who remembers *Territory United* affectionately known as "TU" (tropical ulcer) ??? Then there was *Negra* ("bikpela blak bia") - some sort of Guinness copy that was flavored with molasses. And then there was *Feiva*, and *Anchor*, and the ubiquitous "*San Mig*". Didn't mind a drop of *San Mig* occasionally (first San Mig I had in PNG was actually imported from Mexico).

Of course the normal SP can be a bit of a killer as well - **Surveyor Kelly Aiyok** was spotted having a nap in a lounge chair after the Congress Farwell Bar.B.Que in the top foyer of the Holiday Inn.

Surveyor Mary Iatau is back in PNG after a stint of consulting work with SKM in Australia. Welcome back !!

Surveyor Ian Truscott seems to have developed a sporting interest in PNG Village Netball.



"Light Refreshments ..."

"One windy day in Baghdad" ...



'we saw 'Jake the Peg' diddle, diddle dum ...'



Editorial Comment : Time to Pay the Piper ... ???

There are times when I wonder just where the ASPNG is going. I hear comments about increasing the membership fees, starting fund raising ventures, looking at broadening our profile, getting more involved with land administration issues and impending legislation. Worthy aspirations, but are these really necessary (???)

When I look at the 'Financial Statement' for 2004/2005, I see the association only received membership fees of K2065.77 (odd amount !!!). If we have 150 members, and we each pay K125.00 per year, that would mean an annual income of K18,750.00 - now that's a shortfall of K16,684.23. If this was also the case in 2003/2004 then the ASPNG is out of pocket by K33,368.46 - do we really need to start increasing membership fees or start fund raising ventures (God knows we pay enough to attend the Congress), or is it simply a matter of 'paying our dues' (?). The other implication here is that we may have non-financial members voting at our AGM's - and perhaps standing for election to Council.

Surely this is not in accordance with our Constitution and By-Laws.

'Broadening our Profile' : A website was proposed 3 years ago. This would have been a big step towards 'broadening our profile' (it would also have helped in reducing costs in newsletter production / distribution). It still hasn't happened. How 'bout ASPNG just 'hook on' to somebody else's as a "LINK" - the Lands Department has a website. 'Broadening our profile' would also include being active with FIG Commissions (we do maintain an annual membership with FIG). Our track record here isn't too good either.

It appears we're bending over backwards supporting proposed 'new legislation' re voluntary customary land registration that does not seem to be popular with government. It's a contentious issue with the people as well. I suggest the answer is to make existing legislation (the lease / lease back arrangement) more effective. That is, do the genealogy study, the land survey, and issue an appropriate title.

Of course, such thoughts may be construed as 'denigrating surveyors' and indeed the profession - oh well, it's just another 'fine' at the Annual Dinner. - *Blame the Editor for these comments, not the ASPNG.*