



**AIR**

**SURVEYOR**

FAIREY AIR SURVEYS LTD.

AUTUMN 1959

NO. 10



AT NICE AIRPORT



THE NEW SALISBURY



KIMBERLEY - "THE BIG HOLE".



OVERSEAS NEWS.

RHODESIA & NYASALAND.

After completing approximately 41,000 sq. miles of the 1959 Federal Surveys contract, Dakota 'Charlie Tango' returned from Salisbury on 4th October, and we welcome home Tom Kirkwood, Hugh Watt, 'Red' O'Dell, 'Tug' Wilson, Brian Corbin and Adrian Workman. Having flown on the bulk of this job - with co-pilots Tom Kirkwood, Paul Heimes and Hugh Watt (in turn, not in 707 !) Geoff Milsom returned home in August, via 'Cole Charlie Able', with other members of the South African party, and after just settling in to our new climate - "U.K./Mediterraneo" - is now on his way East for another trip across the Chindwin.

E. AFRICA.

Rapide twins 'G-AKJS' and 'G-AMJK' have been kraal-hopping here - on geophysical survey - a joint operation with Jim Farrell and Nils Axedal of Lundberg Exploration (principal contractors), and Johnny Edin as consultant on the ABEM in the initial stages. F.A.S. personnel consisted of Mike Young and Paul Heimes, with engineer Bob Potter (nursing the twins) - to be joined later by Martin Lynch, who was recovered in haste from his remote fastness in old Erin, to take over 'Juliet Kilo' from Mike - laid low in Kampala Hospital. Both aircraft had 'homed' by 1st September, and a few details on this project may be of interest to those not already directly concerned - certain figures showing additions to the original contract:-

Kenya - Macalder area - 762 line miles - electro-magnetic/magnetometer.  
Tanganyika - Geita area - 3,044 line miles - " " "  
Uganda - Tororo area - 669 line miles - radio-metric/magnetometer.

(See "Battle of the Green Ink" by Hans Andersen - our new contributor).

BRITISH GUIANA.

On 2nd September - one month to the day after returning from the Union - 'Charlie Able' got airborne from Blackbushe, with a transatlantic trip in the offing, en route for Georgetown, B.G. At the helm - Pat Cole with Jimmie Hazard, Jack Davison, Harold Greenhill, John Cane and Ron Walker - the objective being D.O.S. Contract 43, consisting of 27,500 sq.miles of British Guiana hinterland. Three members of the party are serving a consecutive season here, and are only too familiar with the difficulties of achieving satisfactory cover in this region - so solidly green, but always elusive from the camera angle, with eight-eighths being the order of the day, apart from the occasional early morning break preceding the inevitable build-up of cu. With the help of additional radio aids, Pat hopes to net a higher coverage than last season, but the weather appears to be somewhat sub-standard (hitting a new low ?), and in September they had only been able to "snatch" the odd 1,000 sq.miles. Up to the time of writing this had been increased to 2,670, and with such a short time to go to the really close season, we can only wish them all at Atkinson Field bigger and better breaks for the near future. (Since writing the above a substantial sortie has been achieved, bringing the score up to 6,600 sq.miles.)

MOROCCO.

Jim Storrie (flying Dove 'Kilo Sierra'), Glen Albertson of Fairchilds, and Ron Neale, are now heavily engaged on some 26,000 line miles of magnetometer and radio-metric survey in this area. We are undertaking this work in conjunction with our associates, Fairchild Aerial Surveys, and on the flight south the opportunity was taken of carrying out a small geophysical job in Sicily. It is possible that Jim may have something of an 'Atlas' outlook by now, but one feels there must be a 'desert story' there.

UGANDA. Another D.O.S. Contract.

Here we have been awarded a new contract with the Directorate of Overseas Surveys - for two areas totalling 17,100 sq. miles at 1/40,000, and small areas aggregating 86 sq. miles at 1/10,000. Operations are due to commence on 1st December, so more on this in our next issue.

S.AFRICA.

On the 27th May Dakota 'Charlie Able' left Blackbushe - destination 6,300 miles south to Kimberley, Cape Province - away on the Union contract, to break fresh ground in the Company's operational field. The crew consisted of Pat Cole, Paul Heimes, John Cane, Harold Greenhill, Bill Gardner and Adrian Workman, also Lawrence Scott, who was booked for ground survey in the Federation.

Nice provided its customary hoodoo for those in a hurry - this one being in the form of an oil cooler change. Here it was that Adrian suffered from a strange phenomenon; going west, along the Promenade des Anglais, his neck developed a decided list to starboard, and one must admit that the beach views were most pictorial. One other transit delay occurred - at Mersa Matruh, where the lock of the airport safe finally gave up the ghost on the very night the Dak. docs. had been deposited by the zealous Egyptian Control. In the first place we had beaten the key official to the sandy tarmac by quite a margin, but after his arrival we cooled our heels whilst the safe had the full crow-bar treatment - all to no avail, and our visions of an early take-off gradually dispersed with the first heat-waves shimmering from the desert. However, the break-through was achieved in the airport garage, and off we flew with a two-hour revision on our original E.T.A. on Wadi Halfa, where we landed for re-fuelling of tanks and all hands. Here the ice in our drinks rapidly disintegrated under buffets of 96° air from the attendant fans. Khartoum improved on this with 108° ground temperature, and a stifling night was spent by all (including those surfacing on the balcony, suitably enlivened by a dust-storm which had a lot of the old dervish in it. A good place to get away from in the morning, lob down at Juba for lunch (green and humid after over-night rain), and no complaints at our next port of call - Lake Victoria Hotel, Entebbe - where a fair sprinkling of the local Europeans were sipping out a languid Sabbath with sun-downers on the terrace and lawns.

At Salisbury we were greeted by John Scott, also some of 'Charlie Tango' crew, who were reeling from the effects of a 13 day non-stop run  
on/

on the Federal Surveys contract, during which period they appear to have clocked some 21,000 sq. miles ! Paul Heimes stayed on in Salisbury to join Geoff Milsom, our No. 2 position being taken over by Tom Kirkwood. John Scott came along with us to Johannesburg (for discussions with Trig. Surveys, Pretoria), and after circling the Rand gold tailing dumps, we landed at the new Jan Smuts Airport, to be met by representatives of Commercial Air Services, with whom we were dealing on the Union contract. Jo'burg has quite a sky-line, and with a ground-level of 6,000 ft. the skyscrapers rise from the concrete jungle of the city centre to a most impressive altitude.

On 5th June the gold dumps were exchanged for the blue diamond variety, and we had arrived at Kimberley, which appeared to be in the centre of a lofty plain, the parched veld relieved merely by the occasional outcrop of a small kopje - a landscape of almost infinite visibility. The possibility of cloud in that particular area seemed fairly remote, but no sooner had we got the processing headquarters organised in the disused tea-room, than we were immobilised the following day by heavy overcast. We were soon to learn that South African winter temperatures could be lower than anticipated, particularly at night with a 4,000 ft. ground level. We discovered that our rivals had just vacated the area, breathing vapourous imprecations on survey flying at operational temperatures of minus 35 ! Pat, Jock and Harold soon confirmed that this was not so much of an exaggeration after all.

With a mean daily average of  $8\frac{1}{2}$  hours sunshine (just about the Union's best) it can be imagined that the Kimberley sky soon cleared, but soon after we had got 'into production', trouble arrived from the blue, due to circumstances over which we had no control. From the individual point of view such unfortunate hold-ups do at least provide some measure of opportunity for exploring immediate surroundings - in this instance the "Diamond City", the object of a universal plea from all friends at home to "bring 'em back one" ! Our first impressions of Kimberley were of a quiet easy-going and friendly town, with the city streets running rather haphazardly - an indication of the days when rough trails skirted around the first diggers' workings. Of latter years quite a number of modern structures are replacing the old colonnaded fronts, such as "Siege Buildings", which name goes 60 years back to a time when the besieged would welcome anything in the brick line to shelter from the Boer bombardment. Actually, the shafts and galleries of the "Big Hole" were the best bet for such occasions, and in here the women and children found an ideal refuge. This is Kimberley's most famous showpiece - 38 acres of it - and with a depth of 3,600 ft. and a 1,500 ft. axis, is the largest man-made hole in the world. Closed down in 1914 after 43 years of working, which had yielded  $14\frac{1}{2}$  million carats (3 tons) from 25 million tons of excavated kimberlite, and for those interested in the £ s d side this haul netted about £50,000,000 - mostly for De Beers ! Amongst all those who flocked to this sensational 'glory hole', were thousands from the alluvial diggings of the Vaal River, centred on Klipdrift which was renamed Barkly West after the annexation of the diamond fields by the British Govt. in 1871. There still remains a few hundred diggers at Barkly West, and this 'sleepy' hollow retains quite an atmosphere of the old pioneer days.

Unlike Jo'burg and Durban, there appears to be very little racial tension in Kimberley, and the one day we'd understood to be  
planned/

planned for a native strike, turned out as uneventful as usual, the Bantus and other types pressing on with their allotted tasks, or casual lounging, with customary passiveness.

Kimberley Airport is 5 miles from town - at Diskbolos, just off the road to Capetown - and here the large expanse of war-time R.A.F. and S.A.A.F. training blocks are being admirably utilised for Govt. schools, the Elizabeth Conradie and the Hoerberoepskool. These provide care and training for the physically handicapped, including a later addition for epileptics. To the west is the landmark of Alexandersfontein, a hamlet lying quiet and dusty under a line of high cypress, and with little to indicate, to the stranger, that it was once quite a play-ground for privileged De Beers. From 'Alex' the roads go really rough, one skirting a 35,000 acre ranch belonging to "Sailor" Malan, who at the time was away in England seeking specialist advice on suspected Parkinson's disease. Another 'tyre-scourer' runs alongside the Oppenheimer preserves, and both these estates hold quite a lot of spring-bok, the target for organised shoots during the open season. One of these handsome bucks must keep a "Biltong" production line going for quite a while, this form of dried meat being a great favourite in the Union, and marketed in the same way as our renowned potato crisp. Presumably the idea is to get chewing and think hard of the great Voortrek, thus possibly saving yourself a pilgrimage to the massive monument at Pretoria...

There is much more I could write on the subject of the "Diamond City" (including a visit to Du Toit's Pan Mine), but this possible infliction on the reader must wait for another issue, otherwise I could well be accused of "hogging" !

We made good progress after the initial hold-ups, and left Kimberley on 27th July, to transfer base to Jo'burg - operating from Germiston on northern area 428. Due in the U.K. the following week, our aircraft having to be prepared for another season in British Guiana, it was obvious that we would be working on borrowed time. Our luck was in, the weather just holding out, and on the 31st the final sortie was made, with the 42nd film processed and final pack-up completed - all in just about minimum time. On the previous day a visit to Pretoria with John Scott had confirmed our hopes of F.A.S.'s rating with the Director of Trig. Surveys, and so our mission appeared to have been successful.

On our fifth day in the Transvaal we took off for the U.K., and soon the Rand dumps and towering city blocks were merging into the southern horizon. At Salisbury we did another "swap", Geoff Milsom coming aboard, with Tom Kirkwood taking over 'Charlie Tango' to complete balance of the Federation job etc. Here also we left Adrian Workman to aid a hard-pressed John Thevenard in the Salisbury Lab. At Malta we met Jim Storrie, who took over from Pat for the last legs, the latter being 'time expired', (having run out of hours), and we touched-down at Blackbushe the following evening.

ANG.

A PUBLIC DENIAL.

As a keen but inexpert mechanic, my pride has been rather hurt to learn of the malicious rumour being spread by a certain member of the plotting section.

I should, therefore, like to take this opportunity of repudiating such unkind statements, and denying most emphatically the rumour that I stripped my small motorcycle down for a de-coke, and had to carry the bits around to the local garage for re-assembly in a bucket.

C.D.S.S.  
"Operation 'Compression' ? Ed.)

PILOT'S LAMENT.

Yonder see the morning blink:  
The sun must up, and up must I,  
To wash and dress and eat and drink  
And look at things and talk and think  
And work, and God knows why...

Oh often have I washed and dressed  
And what's to show for all my pain ?  
Let me lie abed and rest:  
Ten thousand times I've done my best  
And all's to do again.

J.S.

CHESS PLAY.

"Dear Ed."

The eccentricities of Mr.J.A. Cheffins are known to many, but his invitation to White to mate in 182 moves, in the addendum to the penultimate issue of the "Air Surveyor", is ridiculous. Not even Casanova himself could seduce the Queen from the board in less than 183 moves, and allowing 15 moves before marriage, the consummation of the position could not take place in less than 199 moves. As for the price offered for the correct solution: Mr.K (of B. and K fame) has ruled that Turks always carry cars around in trunks, and the Encyclopaedia Dalyana ('GEB' opposition ? Ed.) confirms that there is no such thing as a car case, and especially not in Turkey. Is there no limit to Mr.Cheffins' electricity ?

"Chess Enthusiast."

When a man says, "Well, to make a long story short," it's too late. D.H. in "R.D."

WORK STUDY.

Mathematical evidence has proved conclusively that we are all paid for doing nothing. Progress-chasers now understand why they always seem to be running in ever-decreasing circles - like the Oozlum Bird, which every time it lays a square egg says "Gah !

Professor Einstein, who last appeared in a Limberick, and of whom it has been said "A wonderful family is Stein," "There's Gert and there's Ep and there's Ein "Gert's poems are bunk" "Ep's statues are junk" "While nobody understands Ein." produced the following equation, which makes the production of time-sheets completely unnecessary:-

	<u>Days.</u>
8 hrs. (1/3) per day for 365 days ...	121 2/3
Less 52 week-ends per yr ...	104
	17 2/3
Less 13 days annual leave ...	4 2/3
Less 3 Bank Holidays per year ...	1 1/3
Less Xmas Day and Boxing Day ...	2

Net result appears to be time in arrears !

FOOD FOR THOUGHT.

What does the word "Increment" mean to Departments of the Firm.

- Drawing Office: Being able to live.
- Multiplex: Being able to stop some overtime and see the family again.
- Compilation: Money for toys of any description.
- Reproduction: What they join the Union for.
- Survey: Claiming extra field allowance
- Research: Less Housekeeping Experimental
- Photographic: To buy a camera of their own.
- Pilots: They've had it.

ANON (HOPEFUL !)

FOUND - A RADIO CRATE.

The Editor learns that Cyril Blundell is now in the market for reptilian import forms. This new branch in Stores Research became necessary as from 2nd September, date of arrival in the U.K. of the Fairchild 'Lodestar' from Afghanistan. Subsequent check of radio equipment revealed a krait (repeat "krait" phon.), but we were spared exclamations of "Snakes alive", said reptile fortunately being defunct. At one time Cyril's quest spread "Rapidely" south to Lyon (Province Rhone - not Joe's).

-----oOo-----

Mercator's projection: an expanding waist-line; he should have been more temperate.



TYPES OF RESEARCH.

It has been pointed out that recent issues of the "Air Surveyor" have carried no news about the Research Department, and that it would be interesting to hear what, if anything, that department is doing.

The lack of news was not intentional, and in fact, a brief summary of exactly what was going on was prepared for the last issue. After being vetted for security the first paragraph read as follows:-

"During the past year the Department has been engaged on the design and development of xxxxxxxx for the xxxxxxxx. In addition work has continued on xxxxxxxx for xxxxxxxxxx, and a production order has been received for xxxxxxxxxx. Dakota 'G-ALWC' has been busy flying xxxxxxxxxx and xxxxxx for xxxxxxxxxxxxxxxxxxxx."

Since it was felt that this article was singularly uninformative it was never published, but readers will understand the difficulties in producing any interesting report. Moreover, people are always more interesting than inanimate objects, so perhaps some inside information, on the individuals who inhabit the various Research territories, would be more appropriate.

Above the Surgery is situated the nerve centre of the Department, and believe me, it's a real bundle of nerves. Entry to the Inner Sanctum is made difficult for the visitor by the confusion of doors which greets one at the top of the stairs, but once inside one is met by an even greater confusion of papers, graphs, photographs and reports - on the desk behind which one may or may not find B.J.A. He is more likely to be away enjoying the quiet countryside of Hampshire or Wiltshire, and listening to the melodious notes of the 'Avons', 'Sapphires' and 'Olympus', which are to be found in these parts.

Guarding the Sanctum one finds Mrs. Newell and Michael Hall. Day in and day out, from morning to night, Mrs. Newell is to be seen industriously writing figures in large ledgers, but rumours that good odds can be obtained there, for Ascot and Epsom, are entirely wrong. Michael Hall has recently joined the exalted company who find the air of Camberley and Frimley preferable to that of places nearer London. Perhaps this air gives him the energy needed to try and help reduce the above-mentioned confusion of paper, by dealing with the multitude of specifications, monthly reports and routine correspondence, which seem to be needed.

Recently the rest of the staff, occupying the adjoining rooms, broke through the wall and expanded into the remainder of the first floor accommodation previously used by Ivor Powell. This has become the Flight Trials Section, watched over by Freddie Worton - now a proud father. Freddie spends a great deal of his time in 'Whiskey Charlie', playing with all manner of weird devices, but when on the ground can be found in his office, leading out of the Photo. Lab. In this lab. Norman Court prepares the weird devices for flight, and Ken Miller and Michael Aldridge develop, print and analyse any films which may result. Recently they have had fitted out a new darkroom, complete with stainless steel sink unit, electric kettle and teapot.

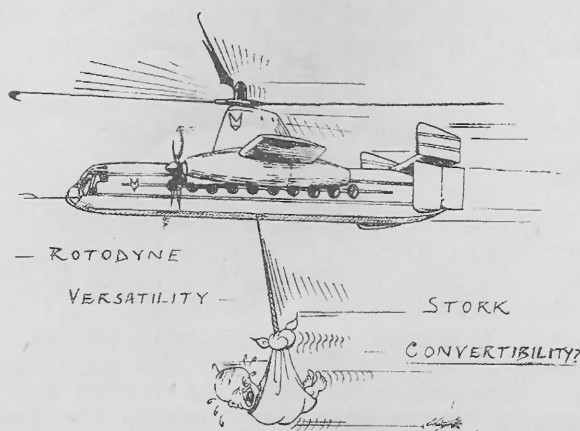


When en route to visit Cyril Blundell in his Stores, you happen to turn sharp left before making your objective, and proceed down a narrow alley, you will reach the Research Drawing Office - situated in splendid isolation. Here reside those two motoring enthusiasts - A.R. Phillips (Phil to all and sundry) and Geoff Light. When not studiously employed over their drawing boards, Phil divides his time between replacing big ends and rehearsing for a new play, while Geoff tries to get his Singer to run like a sewing machine, and draws pithy cartoons.

From the Drawing Office to the far-flung outposts of Research, involves a cross-country trip past the big experimental hangar to the two single-storey buildings - relics of the war years. In the first of these the Workshop staff, under the benevolent eye of John Frost, try to construct the objects Phil and Co. have drawn. A camping enthusiast, John experimented this year on the Continent, and with such success that he is already planning next year's trip. His enthusiasm was so great that it spurred on Bill Rowsell to try it, and he's just done the Riviera and back with an auto-scooter and tent. Jimmy Dunne went home to Ireland this summer for some fly fishing, but thanks to the wonderful summer, the only water he saw was the Irish Sea. The second building houses the Technical Office and Laboratory, where Reg. Caudle holds court. We understand that Reg., who is another scooter enthusiast, may be adding a sidecar to the scooter shortly. Congratulations to Mick Wilkey on passing his Higher National Certificate, and to Tony Phillips on managing to borrow the family car for his holiday.

This report has only been able to mention a few of the Research staff, but we hope that for the next issue we can find room to bring in a few more names from this growing organisation, which is opening up new fields of interest for the Company.

-----c0o-----



BARREL VAULTING - A CHAPTER OF ACCIDENTS.

The following letter was written by a bricklayer in Barbados to his employers:-

"Respected Sir,

When I got to the building I found that the hurricane had knocked some bricks off the top. So I rigged up a beam with a pulley at the top of the building and hoisted up a couple of barrels full of bricks.

When I had fixed the building, there was a lot of bricks left over, I hoisted the barrel back up again and secured the line at the bottom, and then went up and filled the barrel with extra bricks. Then I went to the bottom and cast off the line. Unfortunately the barrel of bricks was heavier than I was and before I knew what was happening the barrel started down jerking me off the ground. I decided to hang on and half-way up I met the barrel coming down and received a severe blow on the shoulder. I then continued to the top, banging my head against the beam and getting my fingers jammed in the pulley.

When the barrel hit the ground it bursted its bottom, allowing all the bricks to spill out. I was now heavier than the barrel and so I started down again at high speed. Half-way down I met the barrel coming up and received severe injuries to my shins. When I hit the ground I landed on the bricks getting several painful cuts from the sharp edges.

When at this point I must have lost my presence of mind, because I let go of the line. The barrel then came down giving me another heavy blow on the head and putting me in hospital. I respectfully request sick leave.

I am, Your obedient servant,  
(Signed) "JACK".

From the Bulletin of the Civil Engineers, and Ted Jones denies any similarity to certain unpublished memoirs of the "Fletton Self-Build Lot".

IT'S ON THE FIRM.

Steaming sedately into the City the other day at the wheel of my horseless carriage, I was astonished, not for the first time, at the risks some people continually take. There were cars and vans weaving and cutting, boring and bumping their way ruthlessly up the queue, their progress marked by a chain reaction of screaming brakes, blaring horns, flashing headlights, frustration, sudden swerves and anger.

Many of these cars bore the scars of many encounters. One in particular was little more than a partly motorised and rapidly moving heap of crumpled chromium and bent panelling.

The clue is, of course, that four-fifths of these people don't own the cars they are driving. They don't have to replace misused engines, gearboxes, tyres and brake linings; they don't have to stump up ever-increasing insurance premiums, fork out the first £5 of every repair, or find a new car when this one falls to bits. All this is done for them by their boss or their business, with the help of the unfortunate taxpayer. One sure way of keeping death off the roads would be to restore the proper financial connection between the driver and what he drives. No wonder accidents are common when they can be charged to expenses.

Velocipeder ?

JERIE ANALOGUE COMPUTER.

What are those "eerie" sounds we hear coming from the small drawing office, comparable only to the noise of a certain vertical take-off airliner? They are, of course, the sounds of the Jerie Analogue Computer being shaken up! There is only room for a brief explanation here, but it is hoped to produce an intelligible pamphlet on the subject in the near future.

The purpose of the computer is to solve, by mechanical means, the Least Square adjustment of points contained in a block of aerial triangulation (compare the Slide-Rule, which is an analogue computer for multiplication). The adjustment of plan co-ordinates is done on the flat-board on the floor, and the adjustment of height is done separately on a board held vertically against a wall. Thus the mathematical solution of the Least Square adjustment, a highly complicated procedure, is avoided and replaced by a comparatively simple routine. Also this routine can be broken down into several parts, so that if there is an emergency several people can be employed at the same time. Finally, only eight or so ground control points are required round the edge of the block (at the corners and approximately half-way between), as opposed to six well-positioned control points every strip, and blocks of up to 12 strips, each of 24 photographs, may be dealt with in this way.

How does it work? Strips are run through the C.8 Stereoplanigraph on the limited control. Square sections of two overlaps each are then chosen, these sections being bounded by "tie-points" common to adjacent strips, and each being considered as an undeformed unit. "Tie-points" will thus appear on up to four sections, having different values in each section, and it is these values which we are trying to reconcile. The difference of each "tie-point" value from the mean, is introduced as a correction, at a large scale, on a metal multiplate, which has a stud at the end on a spring. When the cobex stereo-templates, representing the individual sections (not to be confused with the ordinary slotted templates, which represent individual photographs, and depend on the Radial Line Assumption) are placed over these studs, the whole computer is shaken up to remove any friction between moving parts. The former will then take up new positions according to the way they have been pushed and pulled by the multiplate arms. The reason everything does not fly off the board during the shake-up is that the control points are held by pins driven right home through studs, and each multiplate is also held to the board by two pins. The springs on the studs now each have equal tension in them, giving the Least Square adjustment on the accidental or observing errors. The next stage is to measure the amount the sections have moved, and the individual section movements are applied to all points contained within that section.

In an experimental block of Kenya air triangulation, results show that the Jerie answers, controlled by 10 "trigs" on the edges, agree with the ground co-ordinates of over 80% of "trigs" within the block, to less than 5 feet on 1/25,000 photography, which is amazing.

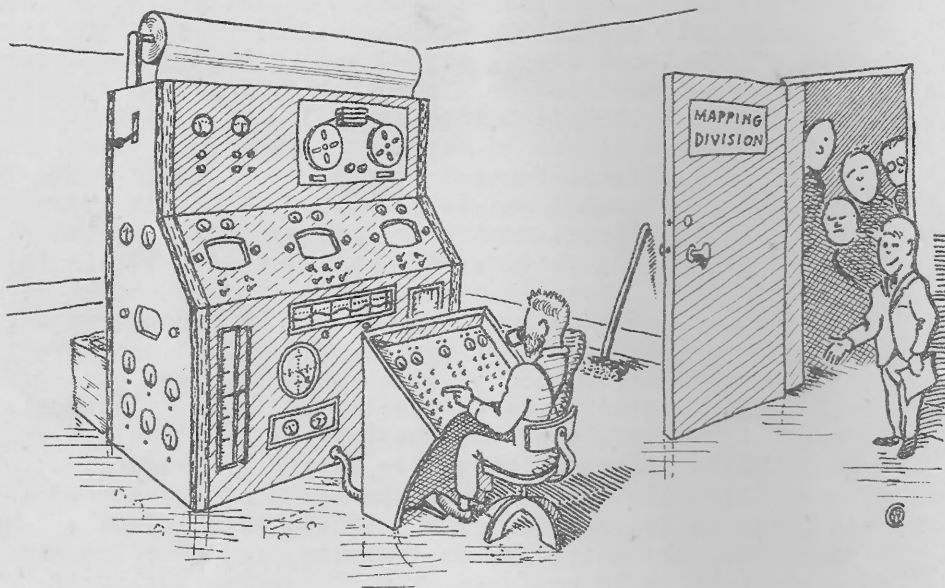
In spite of what has been said, a fair amount of computing is still involved, but it is not very complicated, and well within the scope/



scope of anyone with an average survey background. However, it is the saving in ground control which is perhaps the most important factor from an economical point of view, and so we can hardly blame the ground surveyor for being a little disappointed that the computer works so well !

'Ground Surveyor'.

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COMMONWEALTH SURVEYORS' VISIT, 1963

NEW LIBRARY MATERIAL.

Freddie Worton has produced the following Technical Reports, which are now available from the Library:-

- Report No.V.20. The Vibration Characteristics of the Wild R.C.5a and the E.IX Camera Mountings, when used in a piston-engined aircraft.
- Report No.P.5. A comparison of the distortions produced on topographic base film when dried on the A.5 machine, and when dried on the Fairey Air Survey Radial Film Drier.

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MORE ABOUT BOATS.

A recent article described the good service the steel lighter gave us during the Zambesi job. Not all the craft we have used from time to time have been so reliable or well made. Perhaps it would be as well not to linger over a canvas canoe, supplied by another organisation, which proved very erratic when launched on the Euphrates, minus keel; in any case, that story belongs to another raconteur.

In Siam we saw nearly every kind of boat in use; dug-out canoes, sampans of all sizes, up to 50 feet barges, made of solid teak. The latter were built at Nakhon Sawan, and could have been bought straight off the slips for £400, but it was a long way from the Menam to the Pool of London. Mostly we used the small ferry sampans, from the hotel to the station, these being designed for four Siamese and a crew of two - built to suit their statures. After one experience I found it wiser to let Jack Blackburn step in first... It was funnier to see the alarm on bow's face when pussy-foot stepped into the stern.

Somehow boats are made for indignities. At Kampangpet, where the river was shallow and swift-flowing, the ferry-men used the Raentaeng Pole-boats. We would call them punts, except that they were much longer and narrow, like a racing-punt. Like any graduate from the Cam, I rather prided myself on handling a punt, and at the first opportunity took the pole. All went well for the first two or three thrusts, until the current suddenly swung the bows around as I had the pole on the river-bottom. For a moment the long boat pivoted, the pole sliding farther and farther under the hull, and then I was in with a mighty splash. I didn't even have the satisfaction of being in the position of the traditional joke - stranded in midstream, up the pole.

We rarely had occasion to use boats across the Tigris, but there were a few ferries of quite substantial size. On one of these I crossed - with a donkey, carrying sacks of grain to a mill on the opposite bank. Considering the reputation of donkeys I was quite surprised when it trotted into the boat, over the Pram-shaped bows, without any fuss. Presumably it made the journey frequently. At about that time Dai Jenkins passed across the Tigris in a tin bath. There was no boat at the place he chose to take the level across, but the village headman said it could be arranged. The Arabs produced a long bath (similar to those found in quite a few houses here in the pre-bathroom days), and supported on each side by two sturdy villagers of rather alarming appearance - who waded across, at times nearly up to their chests - he made the crossing dry-shod. It only cost him three shillings, but afterwards he vowed that no matter what disclosure we might find along that line, he would not cross again!

Robin Fursdon.

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American newspaper ad: "World Wide Photo Service helps you bore your friends sooner than you ever thought possible! Now you can spring your holiday pictures on unsuspecting friends who drop in to welcome you back. Your films developed by us can be waiting for you when you arrive home."

(A new poser for projected victims?).

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THEY SAY - WHAT DO THEY SAY ?.

1. Jim Daly contends that by purchasing him a walkie-talkie, the firm would soon recover the cost by eliminating all the futile "Is Jim D. there ?" telephone calls.
2. "Walkie-Walkie" Wendy is looking forward to the day when Cyril Blundell rings up and tells her that the long-awaited roller skates have arrived.
3. "Talkie-Talkie" Eddie Holmes didn't want to go Holme to Compilation.
4. The number 3, inside a red circle on the Iranian Cities job, covers a multitude of bins.
5. There have been no more engagements in Bunny Bureaux Matrimonial Burrow since the last edition.
6. 'Mac' Mackenzie is compiling a report based on his observations during his last visit to London. A "Mackenzie Report" ?.

THESE FINANCIAL TIMES.

See how the Board their gifts allot !	If I were the Board - which I'm not -
For A is happy - B is not.	B would enjoy A's happy lot,
Yet B is worthy, (so he'd say),	And no promotion board there'd be,
Of more prosperity than A !	(That is, assuming I am B).
Is B more worthy ?	Is A down-graded ?
I would say	He should be
He's worth a great deal more than A.	(Of course assuming I am B !)
Yet A is happy !	B should be happy !
(Of course he's happy !)	Oh, so happy !
He's passed that bar	Wages rising,
And should go far,	Supervising,
In fact, he's got another car !	Departmental organising !
Increments ahead, I'd say,	But condemned to study, he,
Is "I'm-already-Grade-One" A !	Wretched "reached-his-ceiling" B.

T.D. (With apologies to W.S.Gilbert.)

DEFINITION -

(FROM H.G. - ALOOF IN B.G.).

Loof. Loof, n, the after part of a ship's bow where the planks begin to curve in towards the cut-water. (Dut. loef, the weather gauge, luff, orig. a paddle for steering; perh. conn. with loof, palm).

Loof. Loof, n. (Scot) the palm of the hand. (Ice. lofi.)

(Editorial Note. Apropos perplexity of "Worried Bighead" (Woman's Section, Spring Issue) reference to the Greenhill Encyclo.Brit. (henceforth known as "GEB") appears to provide us with all that we may wish to know of - "a loof").

Good luck to Reg.Freeman on his new appointment as General Manager of the Rhodesian Co. (Which reminds the Editor that he would welcome magazine material from that area, also from all overseas parties - please !)

Also very good wishes to John Scott upon his departure.



BATTLE OF THE GREEN INK.

Having been dragged from his ancestral fishing territory (by the diabolical efficiency of certain H.Q. personnel of the Irish Police) before he had time to bait the hook, Martin Lynch proceeded - by the devious means of donkey, car, plane and train - to replace the reportedly expiring Mike Young.

Mike Young and Paul Heimes had been flying on the geophysical contract in East Africa, with Jim Farrell and Nils Axedal of Lundberg Exploration. This contract required two planes flying in tandem; the first aircraft - Rapide 'G-AKJS' - flying at 300 feet, trailing a 'Bird' approximately 80 feet below, and the second - 'G-AMJK' - flew level and in line with the Bird, 800 feet in the rear. If the second plane flew closer than 750 feet, two lights flashed on the leading aircraft, and at anything more than 850 feet one light flashed; in the correct position both lights remained steady. So it can well be imagined that it was a constant battle on the part of the pilot of 'MJK' to keep the lights steady. In addition to the lights, deviation from the correct distance caused a tell-tale splash of green to be thrown on a recording tape.

Mike had elected to fly the rear aircraft, therefore Martin - with almost unanimous approval - (his own being the only dissenting voice !) decided to carry on the Battle of the Green Ink.

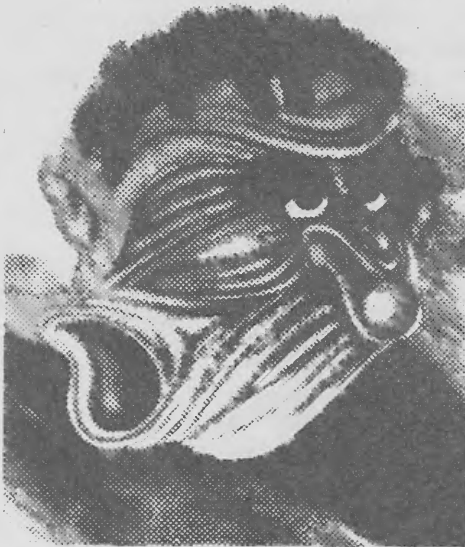
Apart from the Green Ink, there were other things which may, or may not, have left an indelible trace. The radio altimeter, which indicated to the pilot when he was the necessary 300 above ground, did not worry much about trees; therefore, occasionally one had an unusually good close-up of tropical foliage when climbing a hill. Sometimes one found a hill which the Rapide found difficult to climb, then one beat a hasty retreat and took another run at it.

This geophysical work appears to have a strange effect on some men... I know of one pilot who claimed, quite seriously, that he saw shuttle-cocks going past during the sortie; stranger still, another pilot agreed with him, stating that he also had witnessed this phenomenon.

We do not think there is any truth in the rumour that Mike Young's illness was caused by a certain witch-doctor who was allergic to low-flying. The second rumour we think is more likely, i.e., he was bitten by a snake whilst flying slightly lower than usual around the Geita Hills. Mike recovered his health and strength, and was declared by the hospital authorities in Kampala to be immune. This appeared to be a very profound declaration as no-one knew exactly from what he was suffering. He returned to the U.K. with Martin Lynch in 'G-AMJK', Paul Heimes and Bob Potter flying back in 'G-AKJS'.

Despite all difficulties, approximately 4,500 line miles were flown in East Africa.

"Hans Andersen".



We are not positive whether these somewhat candid shots are of types who have just completed a geophysical task, or those recently struck by lightning ! It must be emphasized that any resemblance to particular F.A.S. aircrew can only be purely coincidental...

-----oOo-----  
Acknowledgements: Cartoons by Geoff Light and Bill Cheffins.  
Photographs by the Editor and F.A.C.

MISCELLANEA.

Arrivals.

Welcome to F.A.S.:

Miss Jean Rowe  
 Miss Anne Shiers  
 Mr. E.A. Atkinson  
 " R.G. Brown.  
 " D.E.R. Deacon.  
 " L.E. Southgate.  
 " B. Slark.  
 " G.M. Sullivan.  
 " B.K. Gray.

Departures.

Good wishes to the following:

Mr. & Mrs. Jimmy Cheffins.  
 Miss Gerrelli.  
 Mr. John Scott.  
 " Rodney Pringle.  
 " Jack Render.  
 " W.N. Hemsley.  
 " B.J. Wilkins.  
 " D.C. Smith.  
 " P.C. Cripps.

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Congratulations due: (since last issue)

Engagement: Joan Watford to Ron Walker.  
 Marriage: Gillian Waring to Mayne Manton.  
 Births: A son to Freddie Worton, John Penrose, Pete Forsey and Jack Briggs.  
 A daughter to Peter Radford.

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GREAT EXPECTATIONS (or 7-Plus Pakistani).

The following appeal was received by John Rushton in Dacca:-  
 "We have the honour most respectfully beg to state that we are serving under you for a long period. We are very much pleased with your kind manner and are getting every facility due to your generosity. Now we are approaching to you with a great expectation of getting some bonus or as you can say some moneys in addition to our pay to enjoy our great festival the "ID" which will be held on 10th Inst."

(Signed) 4+ ?

5+ *v. agi of woody*  
 6+ *Amanullah*  
 7+ *Mand Rafiq*

Yours faithfully,

(Signed) 1+ *Khalid Ruler*  
 2+ *Mol Durr*  
 3+ *St. Guep*

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LATE FINAL.

BURMA (The 'hat-trick').

For the third season running we have secured another contract with the Director of Surveys, Burma, for 35,000 sq.miles at 1/50,000 and 6,000 sq.miles at 1/20,000, representing those areas of the country not yet covered by air survey. Project Manager for this season is Eric Freeman, who left for Calcutta and Rangoon on 20th October, and Geoff Milson (skipper of the Indian Company's Dakota 'VT-AUI' - carrying out this work) left for Dum-Dum on the 21st, to be followed shortly by Adrian Saul.

PAKISTAN.

F.A.S. also return to Pakistan this season, with Martin Lynch, John Penrose and 'Tug Wilson' flying in Rapide 'X-Ray Willy', the engineer being Bob Potter. This survey is for 9,000 sq.miles in the Ganges-Kobadak and Teester River area, and there are also projects in West Pakistan and Karnaphuli areas - all at 10,000 scale and comprising some 120 films and 70,000 prints in the field. Due to leave, to make the necessary preparations in Dacca, is John Rushton with Bob Purcell, to be followed shortly by Bob Butler.

AND THE BEST OF LUCK TO BOTH PARTIES !



SOLUTION TO CROSSWORD ("AIR SURVEYOR" NO.9).

ACROSS:

1. DEPOSE. 2. USURPERS. 10. ANNUAL INCREMENT. 11. OBELISK.  
12. TREFOIL. 13. ADULTURER. 14. SEAR. 17. UFFA.  
19. A FRACTION. 23. HOLSTER. 24. AMATEUR. 25. SURVEY IN  
ENGLAND. 26. NOMOLOGY. 27. ARRECT.

DOWN:

1. DRAGON. 2. PIN-HEAD. 3. SPANIELS. 5. SACK THE MANAGER.  
6. REELED. 7. EYESORE. 8. SETTLERS. 9. PINKNEY FOR KING.  
15. RUSHES ON. 16. STRANGER. 18. FULCRUM. 20. OPERATE.  
21. IT FELL. 22. CREDIT.

Across:

10. Anagram: Mine a tanner, un, C 1. 11. Anagram.  
13. Anagram. 24. Anagram. 25. Anagram: D, n lie, sunny grave.  
27. 3 down ! not 3-dimensions.

Down:

1. Chess opening. 2. Anagram. 5. Anagram. 8. Sett-L-ers.  
16. Anagram (without Al). 2. In the Tower of London !

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(Editorial Note: Volunteer required to take over the Cheffins' Cross).  
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To: The Editor, "Air Surveyor".  
Subject: RICHARD FAIREY CRICKET CUP.

As usual we entered a team in this year's competition for the Richard Fairey Cup. 28 teams entered, and we won through to the final, where we were defeated by Technical Office, Hays.

More than ever before our team had a professional look about it this year, with all members clad in white, which from all points of view - not least gamesmanship - is a highly desirable state to be in. The playing strength of the Company seems to be increasing each year in both quantity and quality, and we all feel confident that given that necessary bit of luck we can win the trophy again in the very near future.

Special mention this year must be made of batsmen Bill Stedman and Jack Briggs, for big scores during the competition, also bowlers Peter Challis and Vic Brown. Incidentally Vic achieved a hat trick in the quarter-final round. In this match acting-captain Basil Wheeler dismissed the last batsman by holding a 'fizzer' close to the bat, in what really was, in topical terms, a "marginal" match. Throughout the competition the unruffled efficiency of Tony Phillips, our wicket-keeper, was a feature, and it denied our opponents the 'bonus' one usually expects in these rather torrid circumstances, from Mr. Extras.

Overall, a most enjoyable season and well-earned runners-up prizes to show for it.

(Signed) Pete Forsey.



A.O.C. LODESTAR & OUR D.C.3 AT KIMBERLEY.



DOWN BY THE ALLUVIAL DIGGINGS  
VAAL RIVER - BARKLY WEST.



CRICKET FINALS GROUP.

FRONT ROW - L. TO R.

P. CRIPPS, R. FREEMAN, P. FORSEY, P. CHALLIS, B. ATTWELL.

BACK ROW - L. TO R.

H. EATON, A. PHILLIPS, W. STEDMAN, I. EVANS, A. WALKER, J. STORRIE.

ABSENTEES FROM FINAL:

J. BRIGGS, V. BROTH, B. WHEELER.

