

The Military Survey (Geo) Branch

Spring Newsletter 2016 – issue 59



SAPPER 300 EVENT

at

42 ENGINEER REGIMENT (GEOGRAPHIC)

&

RAF WYTON STATION ANNIVERSARY DAY

1200hrs to 1700hrs on the 25 AUGUST 2016

All retired and serving members of Mil Svy (Geo) are invited to and are welcome to attend the above families' day at Wyton Station. Details are:-

42 Engineer Regiment (Geographic) will celebrate the 300th anniversary of the Corps of Royal Engineers on Thursday 25 August 2016 at RAF Wyton (near Huntingdon). This will be a combined event including the annual Station Family Fun Day which also marks the 100th anniversary of flying at RAF Wyton. The day will be attended by the Chief Royal Engineer, Lieutenant General Sir Mark Mans KCB CBE DL.

The full programme remains to be finalised but some of the attractions currently booked are:

The Royal Engineers Band

RE Museum outreach display

Royal Signals White Helmets Motorbike Display Team

RAF Falcons Skydiving Team

Battle of Britain Memorial Flight

Current RE Geo equipment display

Individual and team sporting competitions

Local stalls and community group displays

A variety of food vendors and other entertainments

Over-bridging demo

The communities' team is also on the lookout for some other displays such as RAF police dogs etc.

In addition to the above there will be a "WYTFEST" later in the evening which will be a night of entertainment, music and dance to which all are welcome but be aware that there may be an entrance fee for this.

PLEASE NOTE THAT THIS IS NOT AN OPEN DAY - You have to notify your intention to attend, you cannot just turn up – if you do then entry will, unfortunately, be denied for security reasons. Thus if you wish to attend this historic event then you must provide the information on the attached form to our event organiser **before Wednesday the 7th July 2016**. Non-members of the Branch are also welcome to use this avenue to notify their intent to attend this event.

BE WARNED - PHOTO ID WILL BE REQUIRED TO GAIN ADMITTANCE

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Officers of the Boundary Commission – British Columbia 1858 - 1862



*Standing (l to r): Lieutenant Anderson RE; Colonel Hawkins RE; Lieutenant Wilson RE
Sitting (l to r): Captain Darrah RE; Mr Lord; Captain Haig RA*

When the Colonial Secretary of 1858, Sir Edward Bulwer Lytton, dispatched the first contingent of Royal Engineers to what is now British Columbia, he told them:

'You go not as enemies but as benefactors of the land you visit, and children unborn will, I believe, bless the hour when Queen Victoria sent forth her sappers and miners to found a second England on the shores of the Pacific'. Soldiers! You will be exposed to temptation. You go where gold is discovered, where avarice inflames all the passions. But I know that the voice of duty and the love of honour will keep you true to our officers, and worthy of the trust which your Sovereign places in her Royal Engineers'.

The 1818 agreement between the United States and Great Britain, which had made the 49th parallel the boundary from the Great Lakes only as far as the Rocky Mountains, did not address the Question of Oregon. The aggressive young American nation was keen to expand their territory to the Pacific Ocean and possess the Columbia River area called the "Oregon Territory".

However the two governments did not decide to do anything about fixing the 49th parallel until the rumours of gold discoveries reached London and Washington. Both nations appointed commissions in 1857, with the American Boundary Commission landing in Victoria on 22 June 1858, headed by Archibald Campbell. The British Boundary Commission had sailed from Southampton, almost 2 months earlier on 2 April 1858, for the West Indies, where some members unfortunately became ill with yellow fever. After crossing Panama by train they sailed north in the *Havannah* arriving at the entrance of the Strait of Juan de Fuca on 11 July 1858, before moving on to Victoria.

Lieutenant Charles Wilson RE secretary of the British Boundary Commission records his excitement upon entering the Strait of Juan de Fuca:

'We entered the straits which are about 12 miles broad at 6 in the morning and were lucky enough to have a very fine day. Thousands of puffins kept flying across our bow reminding one very much of home. The scenery going up the straits is perfectly lovely, alternately beautiful glades with trees scattered about, the very facsimile of an English park and the dark forests of gigantic pines, cedars and firs, whilst in the background you can see the Cascade Mountains, with their snowy heads. We came along with a splendid breeze'.

Also on board was the commanding officer Lieutenant-Colonel John Summerfield Hawkins RE, who would require all his skill and patience in negotiations with his intransigent American colleague Archibald Campbell.

The company included three astronomers Captain C J Darrah RE, Captain R E Haig RA, Lieutenant Anderson RE and naturalist and veterinary surgeon John Keast Lord, plus 56 non-commissioned officers and sappers.

When the work was completed Lord wrote a guidebook for prospective immigrants to the area. However it was the journal of Charles Wilson, written for the amusement of his sister Fanny, which gives the richest account of the work of the Royal Engineers of the Boundary Commission. Wilson also learned the Chinook language and wrote a useful treatise about the life of the Indian people he encountered.

'July 12th. As soon as possible we landed and set off along the trail to Victoria and found it a wonderful place, all the miners for an immense distance round the fort in tents, they are the finest collection of men I ever saw together, all in the full blow of manhood and the finest specimens of nearly every race on earth, English, American, French, German, Spanish, Chinese with their queer looking eyes, Sandwich Islanders and dusky Indians with their painted faces; as you may imagine where there is so much young blood and no female population there are sometimes fierce scenes enacted and the bowie knife and revolver which every man wears are in constant requisition, but up to this time very few fatal cases have occurred'.

With so large an increase in the population into such a small area and without police or regular soldiers it was not long before Governor of the Colony, James Douglas called on the Royal Engineers to help keep the peace. By the time the sappers arrived with the help of the navy the mob had dispersed having rescued a prisoner and knocked over the sheriff. The prisoner was recaptured by the sappers who were given a good supper by the Governor for their efforts, followed by a dreary march home at 5 in the morning.

So who were these Boundary Commission officers and how did their future careers in the Army or civilian life progress?

Colonel John Summerfield Hawkins – Commander of the Boundary Commission

Born in 1812 and like all Royal Engineer officers, was a Gentleman Cadet at the Royal Military Academy, Woolwich, where he learned his trade as an engineer, becoming a 2nd lieutenant on 12 Dec 1834. He was promoted to Lieutenant on 10th January 1837 and then to 2nd Captain on 1st April 1846. He was advanced to Captain on 1st April 1852.

On the 19th July 1852, one Sergeant and fourteen other ranks embarked for Van Diemen's Land on board the "*Lady Montagu*" as a guard over convicts, in conjunction with a detachment of the line under the command of Captain J.S. Hawkins, RE, they landed at Hobart Town Tasmania on the 11th December 1852.

The Lieutenant-Governor of the colony applied for the assistance of the sappers to constitute, the nucleus of an efficient survey body, and to carry on, both in the city and the distant bush, the trigonometrically and detail survey of the settlement. The men, eleven of whom were married and had families, were selected from the survey companies, and were all competent for the duty both as surveyors and draughtsman.

After a service of nearly four years in the triangulation and survey of Tasmania, the detachment quitted Hobart Town on the 9th February 1856, and landed at Sydney on the 13th, for similar duty.

He was promoted Major in 1858 and having been given command of the Land Boundary Survey of the 49th parallel British Columbia was advanced to Lieutenant-Colonel.

Career:-

2/Lieutenant – 12 December 1834; Lieutenant – 10 January 1837; Captain – 1 April 1846

Brevet/Major – 14 June 1858; Lt/Col – 12 August 1858; Brevet/Colonel – 12 August 1867. Major/General – 6 March 1868; CO Engineers in Barbados 1870. Lieutenant/General – 1 October 1877 K.C.M.G. – 24 May 1881

Appointed General (Honorary on retirement) – 1 July 1881 and died at Malvern, 10 Jan. 1895



Lieutenant Charles Wilson – Commission Secretary

Charles Wilson was born in Liverpool on 14th March 1836 the son of Edward Wilson, Esq of Hean Castle, Pembrokeshire and was educated at St. David's in 1844. In 1845 he moved to Liverpool Collegiate Institute and then to Cheltenham College from 1852-54. He then spent time as a Student at the University of Bonn before entering the Royal Military Academy, Woolwich. Like all Royal Engineer officers, Wilson was a Gentleman Cadet, and obtained a commission in the Royal Engineers in 1855. He passed second in first open admission to the Royal Engineers.

Lt Wilson was employed at the School of Military Engineering, Chatham from 1855-57 and then on to Dover and Portsmouth until 1858. From 1858-62 he was assigned as the Secretary of the North American Boundary Commission in British Columbia, Canada.

On his return from Canada he was employed at Chatham from 1863-64 and promoted Captain. He carried out the Ordnance Survey of Jerusalem from 1864-65, and the exploration in Palestine until 1866. In 1866-68 he was put in charge of the Ordnance Survey of Scotland and married Olivia, daughter of the late Colonel Duffin, Bengal Cavalry. He was then subsequently put in charge of the Ordnance Survey of the Sinai from 1869-70.

On his return to the UK he was made Executive Officer of the Topographical Department at the War Office from 1869-70, and subsequently Director from 1870-73 and promoted to Major. From 1873-76 he was assigned Assistant Quartermaster-General at the Intelligence Department. He was elected a Fellow of the Royal Society (F.R.S.) in 1874, and also a Fellow of the Royal Geographical Society and President of Geographical Section British Association Belfast.

He was in charge of the Ordnance Survey, Ireland from 1876-79, and created a Companion of the Most Honourable Order of the Bath (C.B.) (Civil) in 1877. From 1878-79 he was the British Representative on the Serbian Boundary Commission and Royal Commissioner for Registration of Deeds and Insurances in Ireland and promoted Lieutenant Colonel.

In 1881 he was created Knight Commander of the Most Distinguished Order of St. Michael and St. George. From 1879-82 he was Consul-General in Asia Minor (Anatolia) and employed while Consul-General in Asia Minor on a Special Mission to Rumelia, and on the inspection of the Consular stations in Asia Minor, Syria, and Palestine.

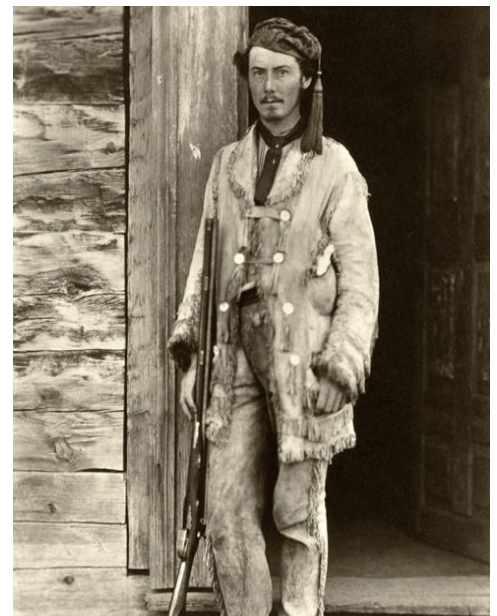
From 1882-83 he was employed on a Special Mission in Egypt, on the trial of Arabi Pasha, and under the Earl of Dufferin he was awarded Egypt 1882 Medal and Khedive's Star. From 1883-84 was in charge of the Ordnance Survey, Ireland and awarded an Honorary Doctor of Civil Law (D.C.L.), Oxford. He was promoted Brevet Colonel in 1883.

In 1884-85 he was Deputy Adjutant-General and Chief of the Intelligence Department for the Nile Expedition. Present at the action at Abu Klea. He commanded the troops at the battle of El Gubat, on the 19th February 1885 and was *mentioned in dispatches*, with thanks of the Government and two clasps to the Egypt Medal.

In 1885 he was created Knight Commander of the Most Honourable Order of the Bath (K.C.B.) and awarded an Honorary Doctor of Laws (LL.D.), Edinburgh. He was appointed Director-General of the Ordnance Survey of the United Kingdom from 1886 to 1894 and in 1888 was President, Geographical Section, British Association, Bath.

In 1893 he was appointed Temporary Major-General and made Honorary Master in Engineering (M.E.), Dublin University. A year later he was promoted to Major-General and in 1895-98 appointed Director-General of Military Education.

He retired from the Army in 1898 at age 62. He died in Tunbridge Wells, Kent on 25th October 1905.



Captain Charles John Darrah RE --- Astronomer

Like all Royal Engineer officers, was a Gentleman Cadet at the Royal Military Academy, Woolwich, where he learned his trade as a Royal Engineer Officer and received a commission as a 2nd Lieutenant on 14th August 1854, and advanced to Lieutenant on the same day.

He was promoted to Captain on 28th November 1859. Astronomer with British North American Boundary Commission, 1858 - 1862. Mount Darrah – Named after Captain Charles John Darrah, RE, astronomer to British Boundary Commission, Rockies to the Pacific, 1858-62. Located at 49°28'22"N, 114°35'37"W at the approximate centre of this feature

War Service:

Crimean War

Served at the Siege of Sebastopol from June to August 1855 – Received Crimean Campaign medal with Sebastopol Bar and Turkish Crimean Campaign medal

Abyssinian Campaign 1867 to 1868

Served as Executive Engineer in charge of the Mobile Rail System for the whole of the Campaign under Lieutenant-General Sir Charles Napier (F.M. Lord Napier of Magdala, late RE) – Mentioned in Dispatches, Brevet Major and received the Abyssinian Campaign medal



The Abyssinian Campaign Medal featuring the likeness of Queen Victoria.

A railway bridge constructed by the Royal Engineers similar to the one Darrah helped build in Abyssinia.



Commanded Bombay Sappers and Miners from 6th July 1869. Died at Kirkee, Bombay, India, 21st June 1871



Haig (standing) and Darrah (seated in tent with theodolite) at Yahk River station.

Captain Robert Wolseley Haig RA – Astronomer

Haig, like all Royal Artillery officers, was a Gentleman Cadet at the Royal Military Academy, Woolwich, where he learned his trade as an Artillery Officer, upon completion received a commission as a 2nd lieutenant on 19th December of 1848. It appears that he also received his "step up" to 1st Lieutenant on the same day, 19th December 1848.

On the 9th May 1855, Haig was promoted to Captain. Harts' 1857 record's no war service for this officer but his promotion appears rapid. He had spent the whole of the nine years up to 1857 on full pay. Haig receives word that he is to be part of the British North American Boundary Commission. The commission travels, from Southampton, England, 2nd April, 1858, on board the Steamer "*Parana*".



The "*Parana*" steams into St. Thomas, where the Commission transfers to the Steamer "*Trent*" and on to Colon (or Aspinwall) as the Americans were calling it at the time. From there the Commission takes the Panama Railway across the Isthmus to then board the "*HMS Havannah*". The Commission arrives at Esquimalt on the 11th July, 1858.

Haig was elected into the Royal Society of London on 6th June 1867 and promoted to Major on 22nd October 1870 and was also Secretary to Royal Artillery Institute. He died on 6th June 1872 at 19 Woolwich Common Kent - Brevet-Major and Captain in the Royal Artillery, leaving a widow Maria Georgina Haig - Estate under £4000 (probate record)

(Lieutenant-Colonel Sir Thomas Wolseley Haig KCIE CSI CMG CBE (7th August 1865 – 28th April 1938) - The son of Major Robert Wolseley Haig RA, FRS, (1830–72) the military astronomer - was a civil servant in British India, then Professor at Trinity College, Dublin, and later a Scottish Herald. Haig was appointed March Pursuivant of Arms in Scotland in 1923 and was Albany Herald 1927–35).

Lieutenant Samuel Anderson RE – Astronomer and Assistant Secretary

Commissioned as Lieutenant in the Royal Engineers on 21st December, 1858 and was assistant secretary to the 49th parallel commission following on from Captain Charles Wilson RE. As a Lieutenant was appointed Assistant Instructor in Telegraphy at School of Military Engineering Chatham 1870 and promoted Captain on 3rd August 1872.

Appointed to the North American Boundary Survey - Chief Astronomer for Prairie Boundary Survey from 1872 – 1875 and then posted as a Captain for Special Duty's in London in 1876 and awarded a CMG. As a Captain he was appointed – Assistant Inspector Submarine Mining Defence War Office London. Was promoted Major on 13th September 1879. He died at Bonnyrigg Co Edinburgh on 11th September 1881.



John Keast Lord - Veterinarian and Naturalist

Served as veterinary surgeon in the Crimea from 1855–56 and was Naturalist to the Boundary Commission sent to British Columbia in 1858. He joined the staff of the journal Land and Water in 1866 before being engaged by the viceroy in archaeological and scientific research in Egypt. He was a correspondent of Charles Darwin and was appointed manager of the newly established Brighton Aquarium 1872, four months before his death.

Books Published by John K Lord include: Lord, J. K. 1863: *Notes on two new species of mammals*. Proceedings of the scientific meetings of the Zoological Society of London (1863): 95--8. Lord, J. K. 1866: *The Naturalist in Vancouver Island and British Columbia*. 2 vols. London: Richard Bentley.

Noel Grimmett

Sources

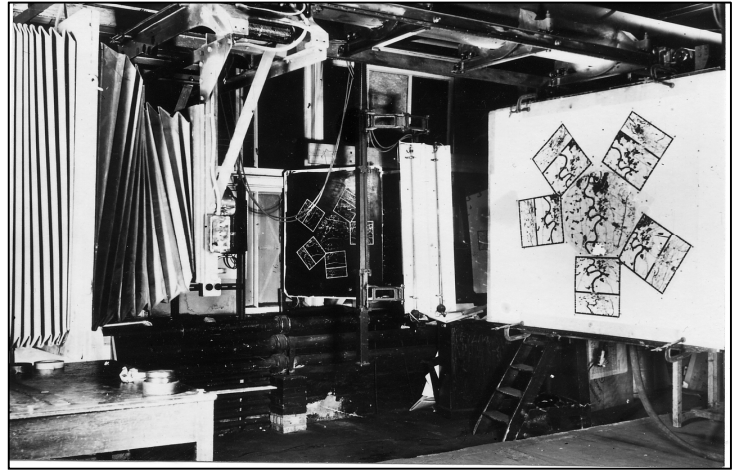
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AMERICAN TARGET PERSPECTIVE MAPS OF WORLD WAR TWO

The small-format Target Maps designed for use at night under cockpit lighting that were widely used by Bomber Command R.A.F. in World War Two receive only passing mention in "Maps and Survey", H.M.S.O., 1952. It is hoped shortly to remedy this deficiency by means of an article describing them but the collection of material for this article is not yet complete.

In the meantime the following notes attempt to describe a later development, the large-format Target Perspective Maps used by the American 8th AAF during daylight raids.

Research into these American Target Maps was prompted by a set of photographs of Ordnance Survey facilities and equipment taken during World War Two kindly donated to the Defence Surveyors' Association by one of its members, Hugh Luxmoore-Peake. These photographs included two showing a cartographer working on an unusual map and a map on a camera copy board.

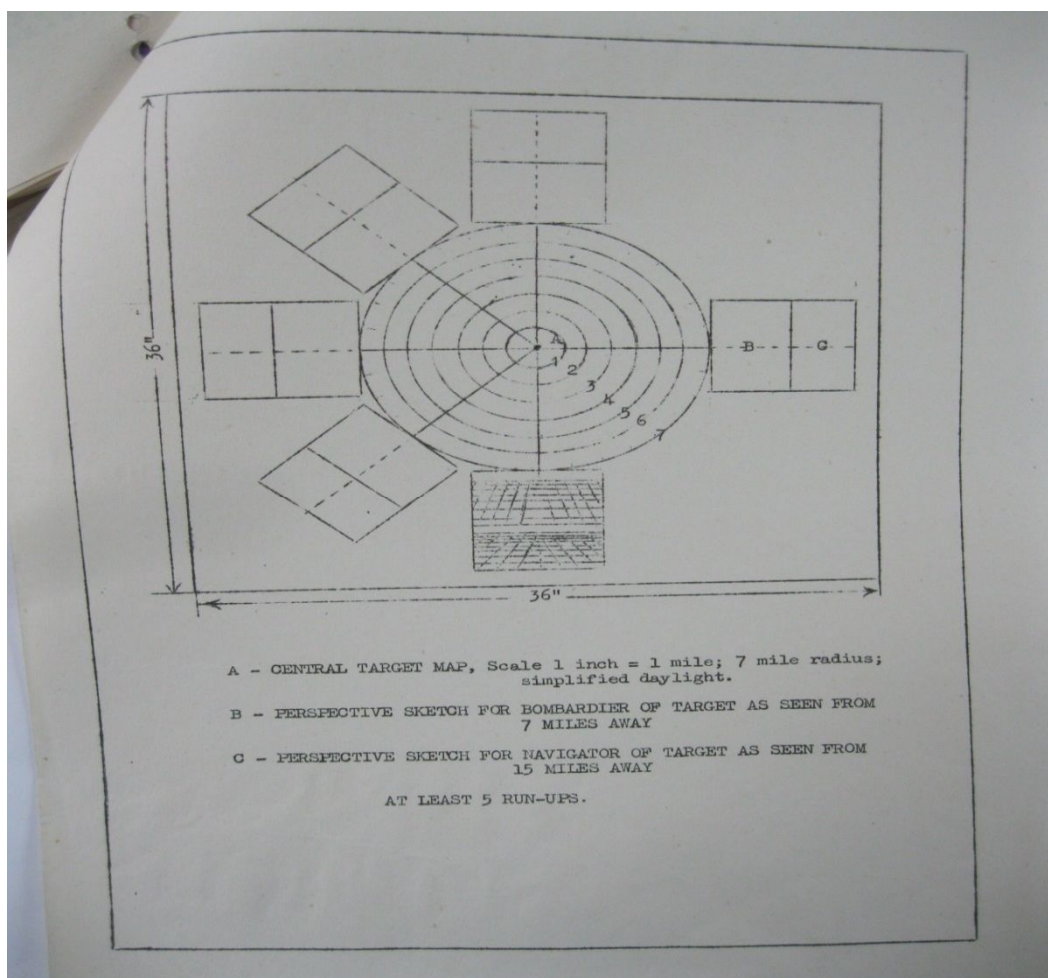


These images appeared to show a roughly circular central map surrounding by rectangular "spokes" each consisting of two oblique views of the central map as seen looking towards the centre along the bearing of the "spoke". Only some years later was the mystery of these images resolved when consulting a file in The National Archives. In this file was recorded a meeting held at A.D. Maps, Eastcote on 23rd November 1942, an edited and slightly amended transcript of which follows:-

"At a meeting at A.D. Maps, Eastcote on Monday 23rd November 1942 attended by Lt Colonel Willis, Major Hart, Captain Hunter, Captain G.K. Geerling 8th AAF Bomber Command and Squadron Leader Verity A.I.3c (1). Captain Geerling explained that 8th American Air Force had been considering the preparation of additional target map material to assist navigators to identify targets when approaching on various bearings. Having visited all the 8th AAF Groups he had prepared sketches which had been fully discussed with Navigators and Bombardiers. At meetings at 8th AAF Bomber Command, Pinetrees and 8th AAF HQ Bushey Park it had been decided to embody the proposed additional oblique map illustrations in target material. He was tasked to take charge of this work and proceed with the preparation of the target material.

A sketch was tabled showing proposed sheets measuring 36 x 36 inches, at the centre of which was an ordinary 1:63,360 scale target map of 7 mile radius from the centre of the target. Around this map were to be not less than five perspective sketches on different approach bearings showing oblique views of the target as seen from 7 and 15 miles. The number of sketches and the bearings chosen would be dependent on the terrain etc. To prepare these perspective sketches the latest available target material, revised from aerial cover, was required and the provision of this material was a main purpose of his visit. A team of draughtsmen was available at Kew and a printing press was being obtained. The 8th AAF would be pleased to supply the results to the R.A.F. if required. (Note - The U.S. Army's 660th Engineer Topographic Battalion was based at Bushy Park, Kew)

Lt Colonel Willis stated that he would assist in any way that he could. Map revision data was held either at A.D. Maps, Hillside or at Ordnance Survey, Southampton. As a first step he suggested that Captain Geerling should visit Captain Quaife at Hillside with Sqn Ldr Verity to discuss the project and to see what was available there.



For coastal targets Captain Geerling raised the question of depiction of sea levels on maps at different states of the tide. Major Hart explained that Admiralty data had been used in the preparation of the 1:250,000 scale series, (GSGS 3982 etc.), and that all the data at Eastcote was available. It was suggested that a temporary attachment of some American draughtsmen to Eastcote might be beneficial.

On the matter of distribution of the material, it was suggested that a complete machinery was already in place at Eastcote for distribution of all target material to both the R.A.F. and 8th AAF and that these new maps should be included in that system.

On the matter of printing, Colonel Willis was anxious that 8th AAF should be made aware of the production facilities already available under G.S.G.S. and A.D. Maps. He agreed that in view of the delay in installing equipment at Kew, he should be able to assist with the printing, once the task was scoped.

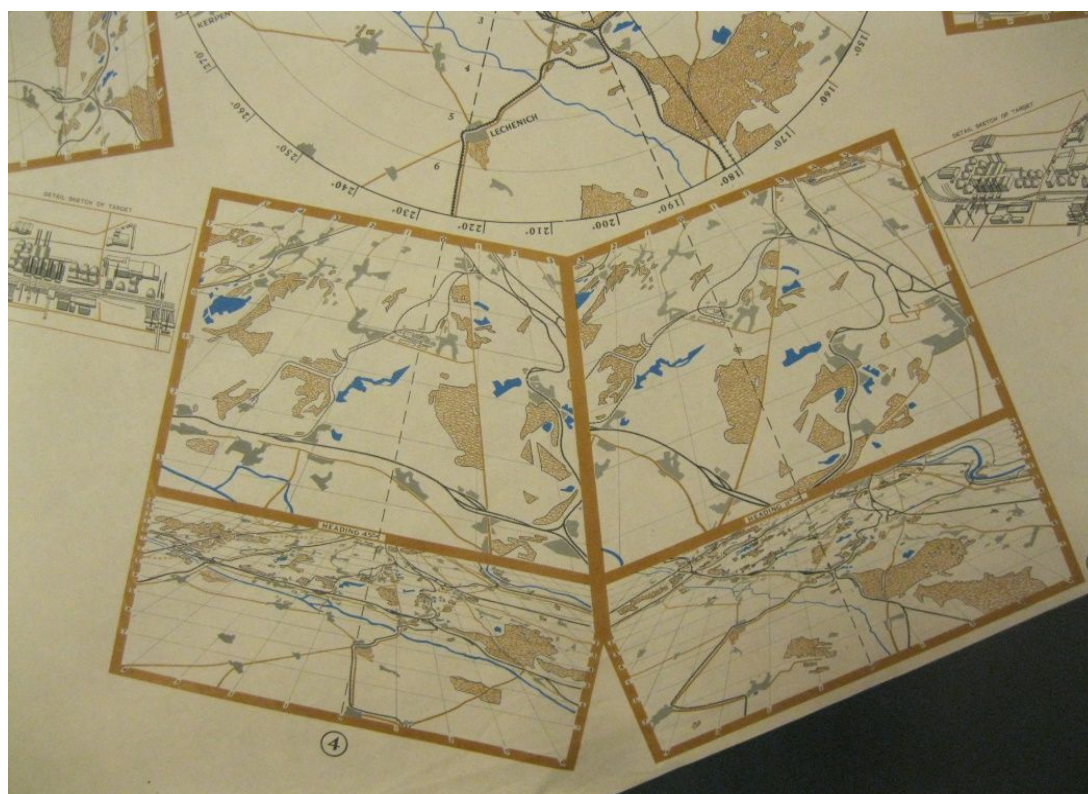
Captain Geerling stated that a report on the raids so far carried out by 8th AAF over enemy territory was being prepared for President Roosevelt. A sample copy of one of the proposed maps, the Lorient sheet, was to be included in the report and fair drawings of the three or four separate colour components for this map would be available by the 28th November. Colonel Willis agreed to print the map to enable the report to be sent to the U.S.A. on 2nd December. To ensure the new material related to existing material, it was agreed that the new target maps should include the existing Air Ministry target numbers."

The example used as an illustration for this note is "Knapsack" an industrial complex south-west of Cologne. The sheet measures 81cms x 81cms or 36 inches square. The central plan view is 32.5 cms, or 14 miles, in diameter around the circumference of which bearings are shown for every ten degrees. Seven one-mile radius circles are shown. Each "spoke" is 21 x 22 cms in size and for each, the Bombardier's perspective view shows detail 3 miles before and after the target as seen from 7 miles before the target while the Navigator's view shows detail 8 miles before and 4 miles beyond the target as seen from 15 miles before the target.

On all views, grey is used for the grid and built-up areas; black is used for railways and text, blue for drainage and brown for woods. Occasionally, as in the case of this “Knapsack” example, the perspective views are supplemented by a large scale line sketch of the target.

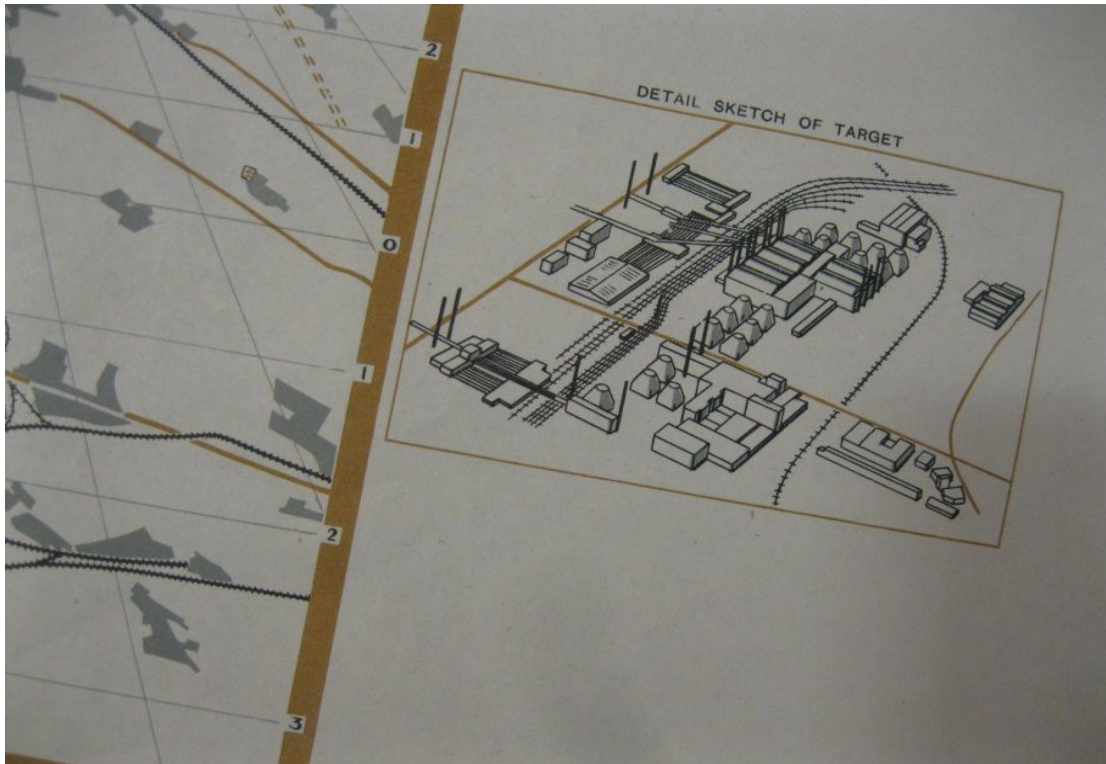


Target Perspective Map of “Knapsack” target S.W. of Cologne



An example of overlapping “Spokes”

In the British Library’s Maps MOD TP collection there are 160 sheets comprising 131 targets in Germany, 20 in France, 3 in Belgium, 2 in Austria, 2 in Norway, 1 in Czechoslovakia and 1, a training sheet of Kings Lynn, in U.K. The pilot sheet of Lorient, in France, mentioned earlier is not included in the collection.



Additional line sketch of the target complex



Circular Central Section showing colours specification clearly and bearings and one-mile radius distance circles

Each sheet shows the Target Number and the production date, the earliest being January 1943 and the latest being April 1944. As is usual, the imprints are often later than the stated production dates, the latest imprint being April 1944.

Finally, what was the target the draughtsman was working on in the two photographs? From the extent of the large river meanders shown it is believed the target might have been Paris, or perhaps Rouen.

Mike Nolan

(Previously published in *Sheetlines* - The Journal of The Charles Close Society – Number 105 – April 2016)

Formation of No 2 Air (Survey) Liaison Section RE - August 1943

Part One – The War Years

Background History

The first move in the allied plan to re-conquer Europe was to cross from North Africa over the island stepping stones of the Central Mediterranean and through southern Italy. In preparation for this a North Africa Central Interpretation Unit (CIU) was formed on February 23rd 1943 to co-ordinate all requests and tasking for the Mediterranean Photographic Reconnaissance Units (PRU's), which had recently been made into PR squadrons. 2 PRU and 4 PRU were replaced by No 680 and No 682 Sqn's respectively, while B Flt of No 69 Sqn on Malta became No 683 Sqn. A North African PR Wing was set up in March to co-ordinate the forces most concerned with the crossing to Italy, comprising the North African CIU, the US 3rd Photo Group, and No 682 Sqn, under the command of Col Elliot Rossevelt (son of the President).

Henceforth the demarcation lines between the various RAF PR squadrons around the Mediterranean were to be clearly defined. The North African PR Wing covered the area to the West of 12° E including Tunisia, Sardinia and Corsica; No 683 Sqn was made responsible for the area East of 12° E including Pantellaria, Sicily and Italy with the dividing line through Tripoli and Corfu; No 680 Sqn looked after the Eastern Mediterranean and Greece with the exception of Corfu. Northern Italian ports such as Genoa and Spezia had to wait until supplies of aviation fuel on Malta had increased enough to allow Mosquitoes from Benson to 'turn-round' at Luca.

Sardinia was originally intended to be the first stepping stone to Italy. However this was soon abandoned in favour of Sicily. The North African PR Wing was given the task of surveying the entire Sicilian coastline, assisted by Mosquitos in transit from Benson to Malta. Catania was the first choice as a landing area, but the large scale F52 prints provided by the Benson Mosquitos soon showed it to be unsuitable because of the formidable defence-works along that stretch of the coast.

The PR Mosquito was much less vulnerable to interception than the Spitfire PR IV, but requests from the Mediterranean Air Command for PR Mosquitos were always sympathetically refused on the grounds of lack of resources.

It needed a blast from General Montgomery to effect a change in priorities. His Eighth Army in the desert relied heavily on survey photography by No 60 South African Air Force (SAAF) Sqn to produce maps for the assault on the Axis Mareth Line. Day after day elderly Baltimores and unsuitable Marylands took off to try to photograph such crucial points as El Agheila, and time and again they were driven off by the Luftwaffe defences.



Baltimore



Maryland

Frustrated at the delay in receiving his assault maps, Montgomery sent for the CO of No 60 SAAF Sqn, Owen Davies, and on discovering his problem asked what sort of aircraft he needed to ensure success. "Mosquitoes" replied Davies succinctly.

Two days later he received the news that the RAF had refused to release any Mosquitos to Egypt, so Davies proposed that a Flying Fortress be used in the hope that its concentrated firepower would fend off the opposition until photography was completed.

However Montgomery's personal request to Eisenhower for the loan of a few B-17's was curtly refused, so No 60 SAAF Sqn persevered as before with the same negative results, until Montgomery finally erupted and dictated a signal to Churchill 'saying that unless his survey squadron was equipped with Mosquitos immediately he would be unable to attack the Mareth Line'. Within 24 hours a signal came back saying that two Mosquito Mk IIs were on their way. A camera was hastily fitted beneath the seat of each aircraft, and on February 4th both Mosquitos began work at RAF Castel Benito (later RAF Idris) near Tripoli in Libya.



De Havilland Mosquito PR MK I. A total of only 10 PR I's were produced, but because this aircraft had proven to be so useful, a further 29 Mosquito B.IV bombers were converted to PR I standards and designated PR IV. They had increased fuel loads with tanks being fitted in the bomb-bay, giving them 700 gallons compared to the PR I's, 540 gallons. Later some of the original PR I's had this conversion.

With the successful completion of the Tunisian campaign on 14th May 1943, the two Mosquitos of No 60 SAAF Sqn were released by the Eighth Army to assist in the planning of 'Husky'. However the release of these aircraft was not straightforward. Brigadier R E Fryer Director of Survey GHQ Middle East records in his *Survey Notes on Operation "HUSKY"* how he had to enlist the help of Gen Sir Oliver Leese (Twelfth Army) who sent an immediate wire personally to Gen Sir Harold Alexander (C-in-C M.E.) saying "Please stop Mediterranean Air Command taking our Mosquito Aircraft as we are already having them fitted with suitable Survey cameras for work in Sicily".

The two Mosquito aircraft returned to 60 Sqn on the 10th June fitted with vertical Fairchild 12" cameras and split Williamson 20" cameras. The operational sorties were commenced on the 13th June, and the total number of operational areas flown was 47, made up of 19 sorties. Eleven of these sorties were successful, the remaining six being unsuccessful owing to cloud. This gives an average of two strips per sortie, each strip being on an average 40 miles in length. Eleven Fairchild 12" films and 22 Williamson 20" films were exposed, all of these being up to standard with the exception of two 20" films, when an oil leak sprayed the fuselage glass ports, fogging the films.

Brigadier Fryer records that the strips flown were excellent in every way, and they were plotted by 7 General Section who were in Eighth Army and the work was done under the superintendence of Lt/Col Thompson RE, then AD Survey Eighth Army. The strips were used in the Stereo-Comparators for fixing the ground control, which Lt/Col Thompson said should be accurate to plus or minus 10 meters. This was, Brigadier Fryer records, 'the first time that this method has been used in war and it would be very interesting to see whether these results were used in battle in Sicily, and whether they were useful or not'.

Note on Operations:

Husky - The Allied invasion of Sicily.

Baytown - On 3rd September 1943 was part of the Allied invasion of Italy crossing the Straits of Messina from Sicily to Reggio di Calabria.

Avalanche - Scheduled to take place on 9th September, during which the main force would land around Salerno on the western coast.

Buttress and **Goblet** were cancelled after the success of **Avalanche**.

Shingle - The Allied amphibious landing in the Anzio/Nettuno area on the west coast of Italy, some 30 miles south of Rome.

Taken from the War Diaries by T/Maj W W Williams RE

The formation of "H" Air (Survey) Liaison Section RE was ordered in AFHQ letter GI (B)1003/163/A.1 dated 8th August 1943. Section to form in ALGIERS under supervision of HQ Algiers Area. Designation "H" Air (Survey) Liaison Section RE pending allotment of unit number by War Office. Serial number of Unit 19297. W E III/202/1.

Reason for formation:

1. During planning for operation 'Husky', it was found that information on Sicilian beaches was very meagre. Except main ports the charts were on a small scale. The widespread presence of offshore bars or 'false beaches' as they came to be called, was a cause of concern. Tides in SICILY are so small that it was not possible to implement the 'waterline method' of gradient determination which was being used on the French beaches by No 1 Air (Survey) Liaison Section RE on behalf of Combined Operations and GHQ Home Forces.
2. T/Maj W W Williams RE O.C. Air (Survey) Liaison Section RE had evolved a method of determining beach gradients from wave velocities as shown on air photographs. The method was largely untried and had obvious limitations. But it was decided that he should be sent to 141 Force HQ (the planning headquarters that Eisenhower set up in Algiers, known as Force 141 from its room number at the Hotel St. George) in order to give whatever help the method might make possible.
3. Major Williams and Sapper Hobbs travelled to AFHQ by air reaching HQ 141 Force on 31 March 43. The areas involved were pointed out and work was commenced. On many beaches no photographs existed. Therefore Major Williams visited the RAF Photographic Squadron, MALTA between 3rd and 14th April 1943 to arrange the necessary photography. At the same time he selected such photographs as he required from their library.
4. At this time Ensign J G Kwilecki USNR was attached and Major Williams was made one of the AFHQ Beach Committee. The duties of this Committee were then threefold: namely
 - a) Computing gradients
 - b) Compiling beach reports on all aspects of beach intelligence
 - c) Preparing Beach Diagrams.

At a later stage it was decided to produce beach information to be overprinted on collation maps. Thus the amount of work was far in excess of the capabilities of 1 officer and 1 draughtsman, and it was decided to form an Air (Survey) Liaison Section to deal with it.

5. When formed on August 8, the Section consisted of Major W W Williams and Cpl R C Hobbs. With Capt L M G Harris Buffs and Lt J G Kwilecki USNR attached. Work had been completed for operations 'HUSKY' 'BAYTOWN' and 'BUTTRESS'. That for 'GOBLET' was near completion but temporarily shelved, and 'AVALANCHE' work was in progress.
6. For each operation the procedure was as follows:
 1. A preliminary examination of entire coastline in order to select the stretches on which a landing would be possible. For this map's charts and photographs were collected.
 2. More detailed reports on the beaches selected for operations, describing these from the military and naval points of view, with definite opinions as to whether they are practicable for various vehicles or types of craft.
 3. Compiling beach information in diagrammatic form. This with defence intelligence is produced in the form of collation maps.
 4. When the plan for landings has been made, 'Beach diagrams' of the assault and maintenance areas are made on a large scale: usually 1:12,500 or 1:15,000 map.

On 18th August AFHQ letter 5485/M8 approves the following appointments to the Section:

- Capt (T/Maj) W W Williams (142621) RE from No 1 Air (Survey) Liaison Section RE to be the GSO II 'H' Air (Survey) Liaison Section RE wef. 8 Aug 43.
- Lieut P A Mann (155900) RE from 518 Corps Field Svy Coy RE to be GSO III 'H' Air (Survey) Liaison Section RE, wef. 20 Aug 43.

The section was formed at the Ecole Normale Bouzareah (Fortune). Cable No 61898 AG7 dated 22 Aug 43 authorises the allotment of unit number '2'. The unit is to be called No 2 Air (Survey) Liaison Section RE.



ÉCOLE NORMALE D'INSTITUTEURS ALGER-BOUZAREA

On 7th October 1943 T/Major E Curry from 516 Corps Field Svy Coy RE was posted to the Section reverting to w/rank of Captain and T/Captain P A Mann from this section posted to 518 Corps Fd Svy Coy RE reverting to w/rank of Lieut. Major Williams left for Sicily on the 12th and took with him L/Cpl Morris to test beach work done for the 'Husky' operation. The work undertaken by the section during the month was: Coastal revision and the supply of beach information on 1/50,000 GSGS 4228 Italy in operational areas.

In November 1943 the section was employed on: (1). The collection of Beach information and compilation of Beach Reports. (2). The preparation of Collation maps for long term planning.

Major Williams put forward the suggestion that the section move its operations on the Italian main land. T/Sgt N L PEACH of 649 Engineers Battalion US Army was attached to the section along with Lt W G Sands RE from No 118/2 Reproduction Section RE. Further programmes issued by AFHQ Naval Planning Staff and Preparation of Intelligence and Beach Diagrams of projected operations. The most recent programmes issued have undoubtedly strained the resources of the section necessitating the attachment of one officer and one OR to assist in the work.

Further work issued by Planning Staff during December 1943 dealing with long term plans means the Section was now working a 24 hour day and three sappers were attached from 518 Field Survey Coy RE. The section had taken up several new jobs during the past month. Most of these jobs were for possible future operations. The attachment of one officer and 3 OR's was found necessary during the month. Without these attachments it is doubtful if the section could have met all its commitments.

On the 8th January 1944 the unit vehicle was stolen with a Court of Inquiry held on the loss with - Capt Harris President and Lt Sands Member. Major W W Williams departed for UK on experimental work in connection with the sections present programme. Lt Lawrence attached from 516 Corps Field Survey Coy RE and Lt W G Sands left section for 514 Corps Field Survey Coy RE. On 28th Lt Lawrence left section to take charge of a special drawing section under G2 Planning Staff. On the 30th Spr Robinson was posted to 'B' Air (Survey) Liaison Section RE (this section was formed on 18th January 1944 and was based at San Severo near Foggia in Southern Italy in support of the 5th and 8th Armies). With the movement of two sappers the section is down to normal strength. There has been no sign or word of the missing vehicle and therefore an indent has been made on ADOS for a replacement. The section has been employed on Beach Information for operation **SHINGLE** (Anzio/Nettuno area) and also for future operations.

In February the section commenced work on a new operational programme. Unit received new vehicle in replacement for the one stolen on January 8th 1944. Spr Coleman posted and despatched to 13 Corp Field Survey Coy RE. Conference held on Production of Collation maps for future operations. Representatives of Force 163/G2 and US Navy G2 AFHQ and the Beach Committee were present.

Major W W Williams returned from his visit to UK. Discussions with Mediterranean Allied Photographic Reconnaissance Command (MAPRC) on types of photographs required for Branch Intelligence. New beach programme commenced.

In March 1944 Major W W Williams RE recorded the following comments in the War Diary:

- 1) It is now possible to state that this section supplied intelligence on beaches for the following operations, **BAYTOWN**, **AVALANCHE** and **SHINGLE** and also for operations **BUTTRESS** and **GOBLET** which did not take place.
- 2) The intelligence which was circulated by O.I. Topo of G2 AFHQ consisted of Collation Maps, Beach Reports and Beach Diagrams all of which included gradients computed from wave Velocities.
- 3) According to reports received the intelligence was substantially correct. The most interesting cases being the **SALERNO** and **ANZIO** beaches. At the northern end of the **SALERNO** beach was a sand bar and it was doubtful whether LST drawing 9' 6" would be able to cross the bar or not. If it was possible, they would be able to land their cargoes "dry shod", if not a considerable amount of pontoon equipment would be necessary. It was apparent that the depth of the bar was critical being very near to 10 feet. After careful examination of photographs re-calculation of results a verdict was given to the effect that the bar was negotiable, but was advised to the southward where it appeared to be more shoal. In the event, LST's cleared the bar during the assault, but the margin of clearance must have been small, because 3 weeks later, after a storm, LST's were grounding on the bar, which had moved and changed. It has been stated that the **ANZIO-NETTUNO** beaches intelligence supplied was accurate, and craft beached according to plan.
- 4) In spite of the success which has been attained in supplying beach intelligence, it is by no means certain that such accurate predictions can always be supplied. For instance on a beach with any shallow bars, so sheltered that no large waves attack it, a dangerous state of affairs might exist. For this reason it has been suggested that the Coast Erosion Board in U.S.A. should conduct experiments on the behaviour of these bars, primarily with a view to ascertaining some knowledge of their movements. At the same time investigations are afoot in England which may well enhance the accuracy of the Wave Velocity method. Cameras fitted with suitable clocks are already available, but have not been so far used because of any favourable metrological conditions.

In April Experiments to determine movement of sand bars at Sidi Dannch commenced, with further experiments undertaken. Services of 518 Field Survey Coy RE enlisted in above experiments on another part of the beach. The first attempts prove abortive. A fourth experiment was undertaken by the section. After twenty four hours of rough weather, observations taken showed that the sand bar had moved in accordance with theories held. Justification of the theory can only be proved after some months of continuous observations. Further underwater survey carried out in difficult conditions.

In May a Beach Survey was carried at Moretti Plage under ideal conditions. Major Williams and Captain Harris take leave and return after 7 days. Several special reports were made during the month to G2 and G3 AFHQ for advance planning. Due to slackening in the amount of work during the last six weeks, practically the whole section has been granted leave.

By the end of June 1944 a considerable amount of work has been done for the Joint Intelligent Collecting Agency (JICA), besides continuing with the supply of Beach Intelligence for G2 AFHQ. The present work programme is almost complete and up to date and no further work has been asked for. Experiments on sand bar measurement are continuing but results are slow in coming forward.

A Warning Order for a move was received from Survey Directorate AFHQ on 3rd July 1944. On 21st July 1944 the Section embarked on *SS VILLE A'ORAN* at Algiers and disembarked at NAPLES on the 23rd. The Section then marched to Naples central station and entrained for CASERTA arriving at 1900 hrs.



SS Ville d'Oran, following the fall of France in WW2, she reverted to her normal service until fuel shortages caused her to be laid up in Algiers. She later served with the allies as a troopship, under the Cunard Line.

On arrival at Caserta Major Williams contacted HQ 7 Army and COMNAVNAW (US Commander Naval Forces Northwest Africa Waters). Capt Curry contacted 3 District RE and REME and L/Cpl Salkild was attached to COMNAVNAW.

In early August Major Williams' is on courier duty and proceeded to ROME. The section now has received sufficient stores to commence a limited programme. On the 15th Major Williams and Capt. Curry departed on beach work north of CIVITAVECCHIA. The party returned having completed satisfactorily the survey and having verified the contention that the beaches examined would have been dangerous for an amphibious operation. Half of the section is employed on Map Distribution. 26 cases of the sections stores are still outstanding thus holding up the normal programme of work.

On 21st August Captain L M G Harris (Bufs attached) travelled to BARI to find out what beach intelligence is required for the YUGOSLAV-ALBANIAN COAST. Captain E Curry RE left section on posting to MIDDLE EAST. No replacement is contemplated for the time being. The units remaining stores arrived from North Africa. The section is occupied on Beach Intelligence of small special areas for Plans Branch of C-in-C Mediterranean. Captain Harris returned from BARI with requests for work on the EAST ADRIATIC Coast. Major W W Williams and Captain L M G Harris proceeded to SALERNO and further south to check beach intelligent supplied for amphibious operations on the mainland of Italy.

On 1st September Major Williams and Captain Harris returned after checking beach gradients at SALERNO Bay and Gulf of GIOJA and beach diagrams for the bays. Preparing Beach Intelligencer diagrams etc. for the Naval Planners Major Williams and 8 men of the section went to ANZIO to check beach intelligence supplied for operation **SHINGLE**. This was as good as could be expected in view of the small amount of photographs available but the checks made indicated that the gradient figures supplied were the worst of all operations in the Mediterranean since **TORCH**. For the rest of the month the section was compiling the best intelligence for widely scattered coastlines. There is a rapidly decreasing commitment and it has been represented to G 2 AFHQ and the Director of Surveys that the work of the section in this theatre of war is very near to completion.

By October 1944 the Sections work in this theatre was complete. Beach Intelligence was supplied for operation **MANNA** (Greece re-occupation after German withdrawal), and for other possible landings in the same area, but this required little effort from the section. All collation maps required in the Adriatic were compiled so that printing could be undertaken at short notice when necessary.

The present situation is to send the section to South East Asia Command (SEAC) though no orders for the move had been received. All other ranks will be replaced by reinforcements from the UK. Beach work is all but complete, men are being sent on leave and those remaining are engaged revising town plans for the Survey Directorate.

In view of the units probable transfer to SEAC it was decided by the Survey Directorate to substitute replacements recently arrived from the UK for all other ranks. The first four replacements arrived on 4th November and a training programme has been started. Three further replacements arrived on 19th November from the Replacement Poole – two draughtsmen topographical and one surveyor trigonometrically. On 20th November Major Williams left Italy for the UK and Capt. E W Lawrence RE was posted to the unit as 2i/c.

In view of cables from War Office London stating that the personnel proceeding to SEAC must return to the UK before being dispatched there the original personnel were posted back to this section, with the exception of three men. On 29th November Travel orders were received for personnel to travel to UK. Capt. Lawrence had instructions to report to Director of Military Survey War Office and all OR's to report to Survey Training Centre RE. During December 1944 Captain Lawrence and the other ranks of the section were on leave in the UK.

Major Williams arrived in Washington and worked with the staff of the Beach Erosion Board in their laboratory seeking solutions to two problems which have appeared vital to the accurate derivation of Beach Intelligence. They are:

- a) The accuracy of Stokes first approximation for wave velocity. This equation reflects wave height. It was established that wave height if neglected, could produce errors in depths of up to 10%. A simple system of applying a correction was evolved.
- b) Offshore sand bars move but the laws governing this movement are obscure. Experiments were made which threw light on the phenomena. But it is very complex and no easy answer can be expected. Work is being continued at the Beach Erosion Board by Dr Kentigan.

On the 31st December 1944 Major Williams embarked in New York for UK

No 2 Air (Survey) Liaison Section RE move to South East Asia

On 1st January 1945 Captain Lawrence and the section are in India and by the 7th had moved to Ceylon. By the 12th Major Williams had arrived in Kandy Ceylon; and the whole section was installed at HQ SACSEA and working under the direction of AD Survey.

Its work, at Supreme Allied Command South East Asia (SACSEA), Kandy, was to exploit photography acquired by 11 or 12 Air (Survey) Liaison Sections Royal Indian Engineers (RIE) for beach intelligence. This included working out a flying programme for beach photography compilation of mosaics and detailed beach studies of areas for which amphibious operations are being contemplated or planned.

For Operation “**Dracula**” (the invasion of Rangoon from the South 1-3 May 1945) K.18 cameras loaded with infra-red film were used to photograph the river at various stages of the tide. Collation maps were then produced.

Phuket Island, Siam, the objective of Operation “**Conrad**”, was at the extreme range of the available aircraft operating from Akyab. Mosquito XXXIV's had not yet arrived in the theatre. However, sufficient sorties, including some taken during a Fleet strike and a low oblique sortie by a Liberator, were flown to enable beach intelligence to be provided in the form of beach reports, gradient profiles and revised coastal information on 1/25,000 maps. Compilation of seven beach maps was begun, but none had been completed before the operation was called off.

Operation “**Sunfish**” was planned to meet the demand for photographs of beaches in the “**Op Zipper**” area. 120 miles of coastal cover was planned and flown for this operation. The breaking of a catapult on one of the carriers led to a postponement of the flying programme to a time when the tides were high. In the Malacca Straits the large difference in tides between the extreme ends of the coast concerned made it impossible to get low tide photographs of the whole area at the same time. For this operation K.18 cameras were used. Two Liberators were sent out with K.17 (6”) and F.52 (36”) cameras to photograph these beaches at the next low spring tide but each failed to cover the most important beach at Morib.

Operation “**Balsam**” was the second fleet operation to get suitable beach photographs in this area. This time the aircraft were fitted with twin F.52 (20”) cameras which increased the amount of coastline that could be covered by a single sortie. This photography enabled the plotting of beach gradients to proceed and the provisional beach reports were revised. Reports were written for 45 beaches between Selangor and Pontian Kechil.

Seven beach maps (HIND 612) covering the “**Zipper**” assault beaches were produced on a scale of 1/10,000 in five colours. It is considered that these maps gave as much detail as is necessary for those actually assaulting the beach. An attempt was made to show the runnels, by superimposing a blue stipple on a buff beach. It was pointed out however, that changes in these runnels were likely. Bright clean colours, essential for clear reading in poor light, were used. Tidal curves for an eight-week period were printed on the reverse side of the maps.

Collation overprints were prepared for the planners for 29 1/25,000 sheets in a first edition and a further 8 sheets in a second edition. These had a two-colour overprint - black and red - on a grey base map. In most cases, the grey was so dark that there was hardly any contrast between the base and the black overprint. Luckily the defences were few, and those showed up reasonably well. Beach limits and sectors were shown, the limits of mangrove defined and various beach, hydrographic and port notes included. The general opinion of the planners had been that these topo notes are redundant if the map is clear so notes were restricted.

In early May Lt Corkan RNVR from the Liverpool Tidal Institute and Major Thomas and Capt. Slinger of the Strategic Branch, Geological Survey of India visited the section to advise in their various capacities. Captain E W Lawrence RE left for RANGOON where he will check as far as possible intelligence supplied by this section. It is known that mangrove types are closely associated with soils and muds varying character. If therefore the mangrove species can be identified on air photography it may be possible to deduce valuable information on the ‘going’ of beaches. To this end Captain Slinger geologist, Captain Wyatt-Smith, Malayan Forestry Department and Dr V Chapman geologist have been collaborating. At the moment the outlook is not promising. There has been much discussion by all concerned about getting additional air photography of the areas being studied which are badly needed.

Captain Lawrence returned from the visit to RANGOON, where he checked intelligence for landings which was supplied by this section. In spite of considerable difficulties, he covered the greater part of the ground, and found that on the whole the predictions were correct. In some cases the nature of the mud had been slightly pessimistic.

In June the section was visited by Captain Day RN Hydrographer to the East Indies Fleet. Captain L M G Harris was absent on duty in Delhi and Major W W Williams visited DARDI in Bombay and attended trials of the Bomb Plume Method of water depth determination, but it was apparent that a continuance of these trials is justified. A consignment of large scale charts of Malaya was received. They will be invaluable.

In late July Col Angwin D D Survey 14th Army visited the section and laid down a future programme, which will keep the section fully occupied for the next 6 months. In August Work continued on examination of beaches in the SINGAPORE and PENANG area. Beach maps were started for landing places chosen south of MALACCA. Compilation of beach data for SINGAPORE collation maps started and production of collation maps and all beach maps for **MAILFIST** and **SHACKLE** were abandoned. 2nd Edition of **ZIPPER** collation maps completed and sent for printing. All known defences up to 20th August were included on these maps. Examination of possible landing places in strategic areas of SUMATRA and MALAYA begun for a programme of post-war photographic reconnaissance. The examination of beaches in SIAM and FRENCH INDO-CHINA had also begun.

In September work on a programme of photo cover in certain areas continued. Captain E W Lawrence left on a visit to Director of War Research, Survey of India DEHRA DUN and on 11th September Major Williams left the section for return to UK for release with Captain Lawrence taking over as Acting Officer Commanding. Section engaged on listing and filing all beach survey records, photography documents etc. Section warned to prepare to move from HQ SACSEA Kandy. Lieut Cdr Berncastle RN continued to work with the section during the month with various drawing and compilation jobs being carried out for D D Survey SACSEA.

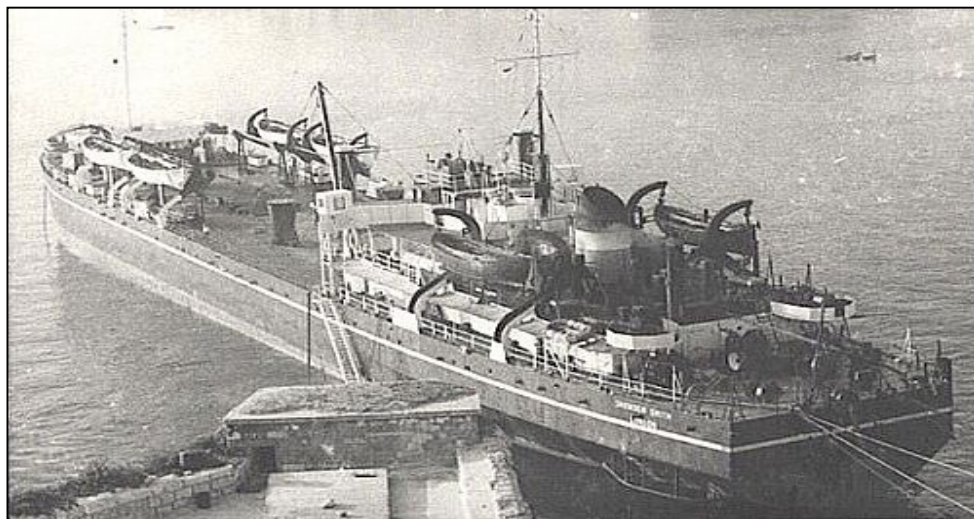
Technical work ceased and all beach survey records, photographs, and documents were sent to 5th HQ Survey Production Centre. The Section packed for move to COLOMBO. M.S Branch, SACSEA letter No MS/7/45 dated 5 Oct 1945 received promoting T/Capt E W Lawrence RE to rank of A/Major, with appointment of GSO II. On 3rd October the Section moved to 22 Dawson Road Colombo and was warned by D.D. Survey SACSEA for move to SINGAPORE.

Packing and stores check continued. Work commenced on preparations for air survey photography at SINGAPORE. W/Lts G J HUMPHRIES RE and M E BUTT RE and 5 BOR's attached to Section. T/Major B H FARMER RE attached pending posting. W/Lieut C G GHENT RE attached pending posting to No 4 Air (Survey) Liaison Section RE.

On 1st November 1945 the section undertook a stores check, and the necessary administration for:

- (a) Disbandment of unit and re-raising on W.E SEA/526/1/45 dated 26 Oct 1945.
- (b) Move of re-organised unit to Singapore

On the 16th January 1946 the Unit organised on W.E. SEA/526/1/45 on disbandment of No 2 Air (Survey) Liaison Section RE and embarked the following day on *H.M.S. L.S.T. 3028* for voyage from Colombo to Singapore - Strength: 3 Officers, 16 O.R's



HMS LST 3028

The section arrived in Singapore on 24th January 1946 and following disembarkation was established at RAF Seletar. The section was without proper accommodation so no technical work could be undertaken however temporary accommodation was obtained in Station HQ. Work on following jobs began:

- Preparations of flight maps for post-war Survey programme.
- Organisation of tactical air survey cover over JAVA



On 27th December 1945 No 888 Royal Naval Air Squadron (Grumman Hellcat's) arrived at the Royal Naval Air Station, SEMBAWANG Singapore and liaison was established as it was to participate in a post-war Air Survey programme.

Noel Grimmett and Mike Nolan

Sources

The National Archive Files - WO 169/11057, 170/1899, 172/7842, 203/2205, 203/2206 & 402/226

Photo Reconnaissance – The Operational History – Andrew J Brookes Ian Allan Ltd 1975

Survey Notes on Operation HUSKY - 22 February 1943 to 10 July 1943 – Brig R E Fryer DOS GHQ ME (WO 181/400)

Obituaries

Major General Eric Walter Barton CB MBE FRGS

Major General Barton passed away on Friday 11th March following a very short illness.

General Barton served as Director General of Military Survey after a most successful and distinguished career as a sapper surveyor. His career included service with DOS in Africa, 13 Squadron in Aden, at Feltham and with Ordnance Survey during which time he steered the separation of Military Survey from Ordnance Survey in the wake of the Serpel Report.

General Barton had also served a record breaking 13 years as the President of the Defence Surveyors Association having been a member for 32 years. The General was also Patron of the Aden Veterans Association and had been a Colonel Commandant Corps of Royal Engineers.

General Roy Wood commented: *“Eric has been such a supporter of Mil Svy/Geo activities for so many years and I think we will have been immensely impressed by his determination he – and Pam – have shown since his stroke. He will be greatly missed”*

The funeral took place on 1st April at St Peter and St John the Baptist Wivelsfield Nr Haywards Heath Sussex. All attending the funeral were invited by Mrs Pam Barton to join the family for refreshments in the village hall following the service.



Major Miles Henry RE

Committee Member and Commissioning Editor of the REA Survey Branch Newsletter

Major Miles Henry passed away on Tuesday 12th January.

Miles served with the Corp from 1954 to 1976. He had been a staunch ally of the Branch being the Commissioning Newsletter Editor for many years. He “transformed it from looking like part 1 orders into a real newsletter”, as **Alan Gordon** put it or, as **Ron Birch** wrote, “turning it from to a one or two page report to the size and excellent publication we now all enjoy”.

Mick Guise recalls: *‘That he received a call from Miles offering him the post of Chief Surveyor in a survey company he was setting up in Reading called Technicare Land Surveys. In the early days it was all staffed by ex-army surveyors who were leaving the army, either at the end of their time or through redundancy, which was in full swing due to cutbacks in the services.*

It was a fantastic little company and was a subsidiary of the Technicare Group owned and run by a local businessman, Alistair Dacre Lacy, who Miles knew. After I joined a number of other surveyors were recruited as they left the army. The ones I remember were Dave Cozens, Bud Viner, Fred Thomas (all Surveyors), Paul Mitchell (Carto Draughtsman) and a few others, plus some civilians who joined later.

We had some quite varied work as the super electronic survey world was only just emerging. The most technical piece of kit was the Aga Geodimeter which measured distances electronically by clamping it on top of an old fashioned theodolite which measured the angles.



The combination of the angle and distance was automatically converted into co-ordinates and height in the field using a portable electronic calculator. This was revolutionary at that time.

We landed some good contracts - Many site surveys for house builders (housing was a massive industry in UK then), setting-out work on the Thames Barrier being constructed, and a control survey for mapping in Libya. This latter one is interesting in the light of the chaos in Libya today. When we were working there in the late 1970's Colonel Gaddafi was the President and Libya was oil rich and peaceful. Libya was all one country with the capital, Tripoli in the West and Benghazi in the East. We were working in the Benghazi area and the control was for mapping related to the extension of Gaddafi's man-made rivers (transferring fresh water from the underground natural reservoirs in the North around the country) in addition to the modernisation of old villages and farmland. It was peaceful and the people were educated and intelligent, and we had no trouble doing our work. Look at it now, after the toppling and killing of Gaddafi with the help of the West.

Another interesting development was North Sea oil - just getting into the swing of things with the development of the Brent field amongst others. We had a long term contract with Shell to provide offshore surveyors on a permanent basis.

All of us who were involved with Miles and Technicare, at that time, owe him a huge favour as he set up the company from scratch with his skills which you pointed out that he also applied to the RE Survey Newsletter.

Miles left Technicare after setting it up and moved on to greater things. He was a great man, both in stature and character.

A Thanksgiving Service for the life of Miles Henry was held on Friday 29th January at Speen Church, Church Lane, off Speen Lane, Newbury RG14 1SA. This followed a private cremation attended by the family in the morning. Those attending the Thanksgiving Service were invited to join Jennifer and the family afterwards at The Woodspeen, Lambourn Road, Speen RG20 8BN.

Captain Stewart Fraser RE

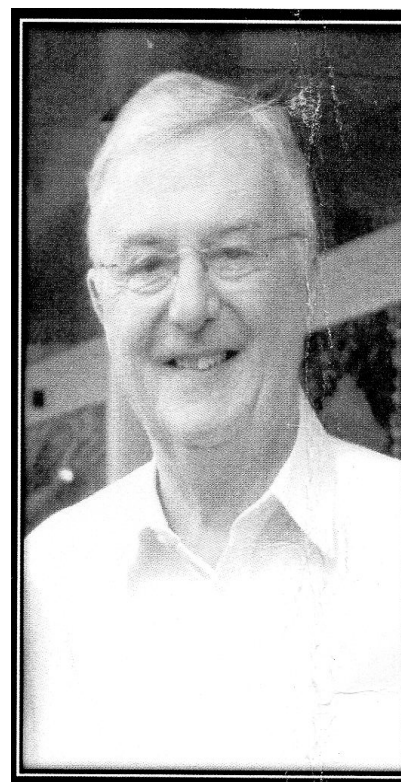
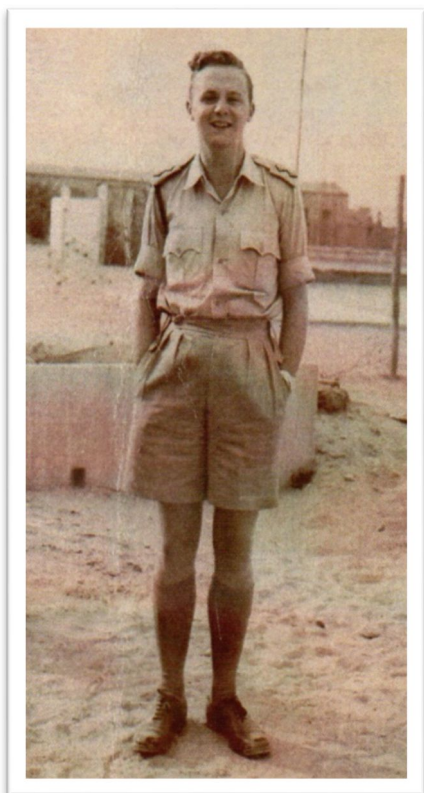
1932 - 2013

I first met Stewart on my Long Survey Course at Hermitage in 1960, when Stewart was an instructor with the Print Wing.

We then served together in 84 Svy Sqn in Singapore for 3 years. After this we were both posted to 42 Svy Engr Regt at Barton Stacey, and it was from there, in 1965, that Stewart retired from the Army.

Stewart then joined Jarrolds (a publishing firm in Norwich). After several years with Jarrolds, Stewart joined Pergamon Press and moved to London. He became a main board director at Pergamon finally retiring in the early 90s and moving to Manningtree. (His son and daughter lived in nearby Colchester.)

Stewart died in the spring of 2013. Sadly, his wife, Beryl, died a few months later. Stewart Fraser was a good friend and outstanding colleague. He was a credit to the Corps. **Peter McMaster**



Robert C. Wyse

1933-2013

Robert "Bob" Wyse passed away peacefully at the Saint John Regional Hospital on Thursday, September 26th 2013 at the age of 80. Son of the late Lothian and Mary Wyse of Edinburgh, Scotland, he is survived by L. Norton Wyse of Saint John born in Hamilton, Ontario. Bob was educated at George Watson's College Edinburgh, Scotland.

Entering the army, he rose to Staff Sergeant in the Royal Engineers (Surveying) and was posted to various Middle East and Far East locations. He then joined his brother, Norton and his wife, Joyce living in Toronto and from 1976 until his retirement in 1995 he was employed by the Metropolitan Toronto, Corporate Land Information Services Department. He was an elected member to the Association of Ontario Land Surveyors (Geodesy Branch). Bob was a resident of Marys View Seniors Facility in Hampton where he was well taken care of by its wonderful staff.

The above information was provided by **Jill Usher** the widow of **Pete Usher** and a long standing friend of Bob Wyse.



Juan (Gilly) Gilmour

Gilly died on 13th January 2016 peacefully in his sleep, after a recent heart attack and stroke over Christmas. He was due to have an operation on the 19th January but as his wife, Jen, said it wasn't meant to be. The funeral was held on Thursday the 21st January at Douglas Borough Crematorium.

Nick Cheesman recalls: Gilly and I were both in the RAOC stationed at 3BOD, Singapore opposite BMH (Hospital). We were in a long Nissan hut with a complete printing outfit having a pre-press area, a darkroom and Camera operator (this was the only air conditioned room in the building). All the other departments had roof fans. We printed Army Forms, a Ghurkha Newspaper and various other bits using Rotaprints and a Gestetner as print presses.

One morning an Army truck arrived with a couple of guys who wanted to use our guillotine to cut some paper as theirs had broken. We asked where they worked and what they did? Back came the reply "we are map printers with the Royal Engineers – you should come and have a look at what we do." So on our day off we took a trip to the RE Printing (84 Survey) and what an eye-opener - air conditioning, big presses etc. We immediately put in for a transfer to the RE's and the rest as they say - is history.

Gilly lived in the Isle of Man and as I was interested in Motorcycle racing he invited me over for a TT week in 1967. That was the TT when Mike Hailwood beat the Italian Agostini! Gilly was well known at the parties in Singapore by all the married couples, forever having a few too many – at one party he was rolled up in a carpet and was left leaning against a wall, out of mischief. He enjoyed playing football both in Singapore and back at Barton Stacey. For ten years Gilly had been the treasurer for the Royal Artillery Association in Douglas, Isle of Man.

Ted May recalls: I served with Gilly starting at 84 Sqn Singapore when he and Nick Cheesman were transferred from the RAOC Small Offset print to RE Military Survey.

He was the one with a smile for everyone and enjoyed his time in Print. We met up again at Hermitage and later in 14 Sqn, always a smile and a great friend. Gilly retired after serving at Chepstow as an instructor, and moved back to the place he loved Isle of Man.



Peter T. Mortimer

The wife of **Peter T. Mortimer** informed us of the death of her husband (in November last year) they lived at Dartford, Kent. Peter had been a Field Surveyor and served between 1952 –55, he retired as a Sgt. We currently have no details of Peter's service career.

Dennis (Ginge) Scothern

Dennis (Ginge) Scothern died on the 6th March, he had been ill for a while with cancer.

Dennis joined the Army in 1959 and attended the Army Apprentice School's at Harrogate and Chepstow. He trained as an apprentice tradesman printer and went on to be a Technician Class 1 printer and achieve Warrant Officer status.

His Funeral was held at 0945am Thursday 24th March 2016 at Newbury Crematorium, Bath Road, Thatcham, RG19 4LD. Information provided by **Nick Cheesman**



John (Tich) Ellerby

John Ellerby died during the week 15th – 19th of February 2016. John was trained as an apprentice printer at Harrogate and went on to be a Technician Class 1 printer and achieve Warrant Officer status.

A funeral Service was held at Basingstoke Crematorium on Monday 7th March 2016 at 11.00 am at Basingstoke Crematorium Manor Farm, Stockbridge Road, North Waltham RG25 2BA



Jacqueline Evans

Mike Gowlett has informed us that **Jacqueline, Terry Evans' widow**, finally lost a long battle with cancer and died Monday 7th March. Jacqui's funeral was held at Torquay Crematorium, Hele Road, Torquay TQ2 7QG on Friday 18th March, 2016.

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Visit www.militarysurvey.org

SAPPER 300 EVENT
at
42 ENGINEER REGIMENT (GEOGRAPHIC)
&
RAF WYTON STATION ANNIVERSARY DAY

1200hrs to 1700hrs on the 25 AUGUST 2016

HAS TO BE – MUST BE - RETURNED BY THE 7 JULY 2016

To: M. Perry 101 Craven Road Newbury Berks RG14 5NL
or mandpdperry@sky.com - Tel; 01635 37510

From: Forename:.....	Surname:
Address:	Tel No:
.....	E-mail:.....
.....	
Type & Make of transport:.....	
Registration No:	

I wish to attend the Sapper 300 Families/Anniversary day at RAF Wyton and intend to bring the following guests:

1.
2.
3.
4.
5.
6.

PLEASE REMEMBER THE GEO SUPPORT FUND –

I enclose a cheque to support the above fund - for the sum of

£.....

Please make it payable to “Military Survey Branch REA”

Please append any comment and any special (disability) requirements here:-

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