The Hejaz Railway

Lawrence of Arabia was elevated to global stardom, firstly by Lowell Thomas in his depiction of Col T.E. Lawrence and then by David Lean’s 1962 Hollywood epic movie. Lawrence’s ‘field of endeavour’ was the Hejaz Railway that is now the focal line for the GARP conflict archaeology study.

To understand why the rail line was never permanently closed by military action we need to know something of railway features. Once built they are: easy to maintain, environmentally friendly, difficult to destroy, easily repaired, seldom interrupted through accident, produce very little “road-kill”, require small manpower to operate, are inexpensive to maintain after the original capital expenditure and, rolling stock (the engines and carriages) is generally plentiful. Railways can move large tonnages and civil or military passenger numbers over vast distances relatively quickly, including the return of casualties to hospital facilities. Although used with success earlier, the American Civil War 1861-65 proved the strategic and tactical use of railways. Note, damaging or destroying one train has not destroyed a rail network.

One major problem is inconsistency of the gauge (distance between the rails) from country to country and regions within a country (often determined by flat or mountainous terrain). And in a desert, locomotive fuel and water is scarce. The biggest plight to an effective rail system is neglect by the regulator and, in times of war, operation by an unfamiliar military.

In a modern world of huge and fast aircraft criss-crossing the skies, enormous ships carrying huge tonnages of everything, highways filled with semi-trailers and lorries polluting the atmosphere and churning road surfaces, railways get little attention and are scarcely appreciated for past glories.

In times gone, railways were a source of power for political, social, commercial and military advantage. They were particularly advantaged when outside the range of an enemy’s dominant naval power and, aircraft had limited range and effect.

Even today in the vastness of countries like America, Australia and throughout Europe, railways have a vital part in commerce and social movements. They simply get on with their business, quietly and effectively.

Overview

Sultan Abdul-Hamid II, was a despot. He was corrupt and powerful; feared and fearful, never venturing out of the Topaki Palace in Constantinople for fear of assassination. Leader of the Ottoman Empire and world Muslims, he was “keeper” of the Holy Sites and held great sway with Muslims. But, he was on borrowed time and he could feel it.

Much of the Empire in North Africa and South East Europe had been war-lost to European nations in the late 19th and early 20th Centuries and, the Arab tribes were becoming rebellious in the Arabian Peninsular – the Empire was crumbling. Dissatisfied with him, the Young Turks and the Committee of Union and Progress (CUP) were plotting to curb the Sultan’s powers and impose a more Turkish dominated rule in the Empire.
In addition, Germany was on the prowl for military and economic expansion and after the Kaiser’s visit to the Ottomans in 1898, the Sultan was receptive. Britain’s pact some years earlier with Russia, the long-time enemy of the Ottomans, effectively abandoned the Ottomans creating mutual attraction with the Germans.

With strategic boldness and foresight, in early 1900, the Sultan ordered the Hejaz Railway to be built from Damascus to Mecca – although it only got as far as Medina. To be built onto it was a branch line from Deraa to Haifa on the Mediterranean Sea so shipping could unload and distribute inland, plus smaller branch lines from Deraa to Bosra and Afule to Nablus.

In a flash, the Germans saw the Hejaz Railway could become a major addition to their Berlin to Baghdad Railway, with various branch lines to bolster their secret economic and military ambitions. The “Baghdad Railway (is) designed to ensure the establishment of a German Middle-Asian Empire, bringing under German control the entire region from the Mediterranean to the Persian Gulf, and providing convenient stepping-off places from which an advance might be made on Egypt in the one direction and India in the other.”

The Germans had their eyes set on Africa and Asia Minor to build Empires to rival those of Britain and France and meet their own needs for population expansion (not possible in Europe) and access to the fertile crop growing areas and oil supplies. German influence over the Turkish railway system had already replaced much of what had been French railway and their influence was increasing. The Hejaz Railway was a perfect fit.

Today, the southern Jordan area is the centre for the conflict archaeology study by the University of Bristol’s Great Arab Revolt Project (GARP). This paper gives an overview of the life of the Hejaz Railway.

Why a Railway Anyway?

Firstly, Sultan Abdul Hamid II was “on watch” as the Ottoman Empire was crumbling and losing significance. He needed to restore his subjects’ faith in him. Creating a railway would enable those faithful Muslim Hajj pilgrims from all over Europe a three or four day train journey from Damascus to Mecca (one of the Five Pillars of Islam) in relative safety and comfort, rather than a 40 day overland journey through the hostile desert with a Bedouin escort to protect against other marauding Bedouins.

But, for centuries tribal Bedouin had been able to sell food, supplies, camels, goats and safety to the pilgrims and, combined with thievery and looting, the Hajj was an economic lifeline for them. A railway would be the lifestyle ruin of tribal Bedouin. However, towns and villages would rejoice in a new economic benefit, from increased passenger movements and stops at village stores along the rail line.

The existing alternative to the long desert march was a faster and more secure shipping route for those who could afford it, through the Suez Canal but with the encumbrance of British supervision. The Hejaz railway negated this alternative.

The Sultan knew the power of satisfying religious fervour and “the Hejaz Railway was presented to the Ottoman people as a work of religious charity. It was dedicated to improving the pilgrimage and to the protection and economic betterment of the Holy Cities of Islam.” He could revive his prestige.

The second benefit was military. A railway was an effective way to reinforce and supply the Ottoman garrisons all the way to Medina and Mecca. Troop and supply movement would be many times faster than current methods of overland travel or via the Suez Canal with British monitoring.

By-products of this speedy rail movement was the ability to deal swiftly with tribal dissent, tax collections, military and social expansions, avoidance of British influence and the Suez Canal,
access with overland connections to Yemen and the Indian Ocean and, an ability to deal relatively quickly with the other major desert tribes of the Rashids, Sauds and Indrissi.

Although not stated directly, the Sultan was aware that the development of rail would enhance the economic status of Mecca and Medina through greater pilgrim numbers, further increasing his prestige.

Astoundingly, the resident British Consul in Damascus was caught totally unaware of the intent to build a railway until it was announced. He reported his excuses to his Ambassador in Constantinople in 1900 with a statement that such a scheme was viewed “with scepticism and incredulity by all thinking men here” after having finally studied the proposal for some months.

An office-bound Consul and a team of office-bound bureaucrats could be forgiven; a railway would initially pass through fertile plains but then the desert was a 1,000 km vast sand and rock waste, no local railroad stores or supplies (rails, sleepers, ballast, spikes, bolts, rolling stock) water didn’t exist, there were no trees for sleepers, limited and unreliable local work-force, wadis dried for years would become raging torrents when rains did arrive, flat sands changed to boulderous cliffs and volcanic rocky ridges, temperatures varied from 50 Celsius to zero. Then the workforce had to contend with flies, scorpions, snakes, disease, infections, lack of leisure facilities, boring food, distance from home and loved ones then hostile Bedouin. And, who would finance it? Going to the moon would be easier surely, thought the thinking men.

Corrupt and incompetent he may have been, but the Sultan made sense on this issue.

**The Hejaz Railway**

Global conflict and major military operations were not contemplated when rail planning commenced. Only local issues prevailed. Railways however, are versatile and once in place can easily adapt to greater traffic to meet a need. Further, even in wartime, they are resilient to attack as had been well proven in America and Europe in earlier decades. Planning incorporates such contingencies.

The main track from Damascus to Medina was 1,302 kilometres long and contained around 80 stations (some researchers count 77 or 78), at an average distance of 16.3 km apart – which allowed for efficient track monitoring, maintenance and rapid-response troop deployment for additional protection against anticipated Bedouin assaults. Many stations had forts or barbed wired trenches, garrisoned by a Company of Turkish troops for protection and administration. Larger garrisons were established at Amman, Ma'an and Medina from where reserve supplies of track, stores and soldiers could be quickly deployed.

The branch line Deraa to Haifa was 162 km long with 16 stations, an average distance apart of 10 km. The Deraa to Bosra line to the east was a mere 40 km with 5 stations and the branch Afule south to Nablus was 78 km with 6 stations.

The Sultan was overjoyed with the official opening of the completed railway at Medina, with grandiose pomp and celebration, on 1st September 1908. Construction had begun on 1st September 1900 followed by progressive section completions and openings with equal pomp and celebration, all timed to be on 1st September each year, the anniversary of the Sultan’s accession.

Damascus was connected northwards to European rail (as part of the German Berlin to Baghdad railway) for the overland carriage of passengers and goods but, the section through Turkey was inefficient due to gauge differences, poor and incomplete tunnel and bridge constructions (resulting in off-loading and re-loading) and, rugged terrain often resulting in track closings. This created great disadvantage during WW1.
European rail had proven very effective to move large military forces and their supplies since 1859 in France’s ‘Italian Campaign’, as it was well away from an effective enemy navy and aircraft had not yet met their zenith. It was thought that a Hejaz railway could similarly be very effective for the Ottoman Empire.

**Financing**

The Sultan did not want outside financial assistance so sought ‘donations’ from world Islamic sources – and got (some of) it. “The total cost of the railway was over TL 4,000,000; this was about 15% of the Ottoman Empire’s budget expenditures in 1909. To obtain such an amount was difficult as the financial resources were committed to the Baghdad Railway, other debts and funding the Army, leaving the State nearly bankrupt every year.”

Around one quarter of the cost came from voluntary and ‘suggested’ donations within the empire plus voluntary donations from outside. Some monies came from carriage of passengers and freight as stages were completed and put into operation. The balance came from new taxes and revenue schemes introduced on locals and foreigners within the Empire.

Mystically, it was paid for without direct foreign support so the Empire was beholding to no-one.

**Phases of Railway Operation**

There were four main phases;

1. construction from late 1900 to 1908,
2. pre-WW1 operations
3. operations during WW1
4. neglect and disintegration post-WW1 with what is visible today.

**Phase 1 - Construction**

The Sultan wanted a totally Ottoman project, without foreign aid. A task of such engineering and administrative complexity was beyond the Ottomans so the need for speed of construction outweighed the Islamic-centric notion.

A senior engineer, the proven capable German Herr Heinrich Meissner, conducted the supervision over the eight-year project. Meissner had worked extensively throughout the Ottoman Empire for many years and was well accustomed to their culture and was able, as a non-Muslim, to get effective works completed. He initially employed a large number of European specialists from Germany, Belgium and France for the technical bridge building, embankment cutting, explosives for rock removal and the like – but as work progressed closer to the Muslim Holy Cities, Christians could not be in the vicinity so Muslims replaced them.

Generally, the line followed the old pilgrim route making navigation easy and was the flattest route for ease of construction. It also ensured the local Bedouin and villages could provide supplies and services, as well as not have to go too far to conduct their petty thefts (although this was probably not the intention of the Turkish constructors). Populations were limited and a local workforce scant and unreliable as desertions to return home were considerable.

A construction force of around 5,600 Turkish troops was engaged. Over 3,000 infantry labourers and some specialist tradesmen became the workforce for two railway Battalions of skilled artisans (each of 1,200 men).
There were also numerous pre-existing fortifications established to protect the overland Hajj pilgrims and these were strengthened and utilized. The need for defence of the workforce was also required so armed construction camps were set up along the route. It is therefore likely that some of the tent rings we can see today are from this Phase.

Specialist construction for bridges over rivers, culverts in Wadis to prevent rain waters washing out the tracks, cuttings through embankments, tunnels and extensive track on raised embankments above the rain water line was demanded. Many of these were later targets for Lawrence and the various railway saboteurs.

And of course, the stations and forts had to be supplied with water and wood for the engines as well as the garrison supplies – providing excellent booty for the marauding Bedouin, before and during the Lawrence campaign.

At Batn-al-Ghoul (the site of the 2008 GARP survey) the long, flat limestone rock desert from Ma’an changes towards the south. A step limestone rock escarpment drops 300 feet almost instantly (very steep!) towards Wadi Rutm, requiring five kilometres of track to negotiate the descent. It took 400 soldiers over five months to dig the cuttings, create the track embankments, lay the ‘S’ shaped track and build the station. It is possible that the tent ring camp still visible was initially from this construction period. Royal Flying Corps records indicate no occupation of this site and only one or two bombings on the track here during WW1. Conflict evidence of spent munitions found there could have been from Bedouin marauders at the time of construction or pre-WW1 attacks on the slow moving trains before their steep descent. There was no evidence of a permanent garrison or barracks here but, on the higher ridge (Fassua Ridge) there is an ancient stone camp of significance. From here and other parts of the high ground, effective artillery, machine gun and mortar fire could have been directed onto attackers of the vulnerable section of curved track - a sought after target to create maximum disruption with its unusual and hard to replace curved track and steepness of track foundation (cutting, sleepers, bed and ballast). However, there is no evidence yet that confirms this did occur.

Overall, the construction task was enormous to convert virgin desert to a modern and workable railway. These men had to build track embankments, blow rock, blast cuttings, build bridges over rivers then dry wadis until the rains then through the waters, build the stations and forts, then lay over 1,300 km of track – then fight off the Bedouin, write letters home; and contend with the environment. What a sought-after job, all for the pay of Turkish Lira (T.L.) 10 per year in comparison to an Army Captain salary of TL 50 per year (and a Brigadier General salary of TL 600 per year). Desertions were common.
Despite the Sultan’s dream that the railway and rolling stock should be provided from within the Empire, that was just never going to happen. The majority of rail came from German or American steel mills and rolling stock from Europe and America. Some few carriages were constructed in Constantinople from local materials but costs became prohibitive and resources were limited.

An essential aspect of the railway was the telegraph and its ability to pass communications along the line between stations and to military posts. Similarly, in-ground water tanks, rather than the more common above ground type, were essential against sabotage and heat.

As construction was progressively completed, sections of line were opened and trains flowed with passengers and freight. This gave a financial return throughout, which aided the otherwise financially strapped Empire.

Major infrastructure works are never problem free. Quite apart from thieving Bedouins who stole and murdered, the environmental impact on the labour force brought sickness and poor productivity from an unskilled an unmotivated work force. But still, completion was a monumental effort of vision, planning and execution by a combined European and Ottoman group.

**Phase 2 – Pre-WWI Operation**

Completion of the railway and commencement of full-line operations coincided, in December 1908, with the return of Sheik Hussein ibn Ali to the Hejaz from his forced 15-year internment in Constantinople by the Sultan. The Young Turks who by now had severely reduced the Sultan’s power (in fact, the Sultan would be deposed a few months later and replaced) had insisted Hussein be returned to restore order to the Arabian Peninsular and he was given the position Emir of Mecca – a position of great influence on the Muslims and tribes. However, Hussein was vigorously opposed to the railway as it took away the Bedouin tribal lifestyle and, he could see it as a source of military domination by the Ottomans and even deeper control over the Hejaz Arabs.

Consequently, with tribal insurrection, the line Medina to Mecca was never built.

But, just as the railways of America’s ‘wild west’ opened up that new country, so the Hejaz Railway had the effect of moving people and freight to the benefit of towns and villages along the way.

Trains operated three times a week from Damascus to Medina, scheduled to take two and a half days – but were generally three to four. Rail passengers nearly doubled the pilgrim numbers from pre-railway times. This magnified the economics of the religious sites and cities of Medina and Mecca, as well as the villages along the route, thus fulfilling another of the Sultan’s aims. But whilst the villages benefited, the tribal Bedu who had depended on their camel trade did not.

Passenger movements accounted for around half the railway revenue over the years.

Freight quickly became a vital component of carriage and revenue, especially to and from Haifa port, then into and from the Hejaz. Wheat was exported from the Hauran then, into the Hejaz went fruit and vegetables, wood, salt, coal, petrol, rice and metal while from the Hejaz came dates, dairy and sheep-skins.

Military movements were rapid and devastatingly effective, catching the Arabs by surprise, and putting down rebellions in Kerak, Ma’an and the Hauran at different times. Troop movements increased exponentially in this period.

During the Hajj period though, frantic schedules and massive disruptions put strain on systems and people. But even this maelstrom was better than the previous 40 day overland journey.

Nevertheless, Hussein was easily able to incite the Bedouin tribes who had now been subjected to increased taxation to help pay for the railway, and military conscription due to the Empire’s numerous conflicts, even before WW1. They were loosing out on revenue plus expected to pay
higher taxes. Further, the “fee” due to be paid to them by the Ottomans to compensate for lost revenue did not happen.

Bedouin tribes, even the disorganised ones, attacked trains and stations so they could loot the passengers, railway staff and soldiery protectors. So the journey was still perilous but not as perilous as the long overland trek. Attacks on maintenance gangs and small garrisons or camps were also regular occurrences. Such aggression resulted in increased fortifications, trench works, barbed wire, weapon emplacements and troops. Rarely did the Arabs directly attack the well-protected stations for fear of casualties – hit, loot and run was standard.

Permanent Turkish fortifications and track maintenance personnel ensured continuity of rail operations and gave a degree of safety to rail users. Trenches and barbed wire hazards sprung up.

Temporary tent ring camps may have been used at different places and at different times as needs arose but the permanent barracks would have given better protection and administrative support. Again, it is possible that some of the visible tent rings today are from this phase and further archaeology works may confirm or reject this.

So the Hejaz Railway did provide an economic and military benefit to the Ottomans while at the same time giving good service to the local settled village population, just as the old Sultan forecast. Nevertheless, the Bedouin and tribal Arabs under Hussein waged war on it.

Phase 3 – World War 1

The Arab Revolt did not formally start (Jun 1916) until nearly two years after WW1 began (Aug 1914). Prior to the Revolt though, tribal interdiction continued. Attacks and sabotage got much more virulent once the Revolt began, especially once British advisers and materiel arrived.

Once more, the Sultan’s foresight proved to have been well founded. From the outset of WW1 the Hejaz Railway allowed the passage of troops and supplies throughout the Arabian Peninsular without interference from the Royal Navy and British control of the Suez Canal and Red Sea.

Whilst Hussein’s Arab armies occasioned interdiction to the railway over the next few years, by far the greatest impediment to the effectiveness of the Hejaz Railway was the incomplete and ineffective state of the Baghdad Railway. Although troops and their integral equipments could be easily moved, major supplies could not easily be transported from Germany through Anatolia in Turkey, to the Hejaz.

The war prompted the extension of the rail branch lines through Jerusalem to Beer’sheba to supply the Ottoman forces in the southern region. Then, a spur line was built from the station at Unayza to Shaubek. This line carried timber for the locomotives’ fuel as British blockades of the Suez/Red Sea prevented coal supplies.

Cleverly, the Ottoman’s ‘acquired’ materiel for these lines from the existing French lines that had been in place in northern Palestine before the Hejaz was built. Further, much of the track that was not used in the proposed Medina to Mecca line was also available for track repair and maintenance. This necessity was due to shortages and difficulty moving new materiel from Europe after hostilities began.

Damage to the track could be repaired fairly quickly and caused little interruption. Replacement of rolling stock, engines in particular, was a different matter as their replacement was almost impossible after war’s outbreak. Hence, attacks on the engines and their fuel became the ‘order of the day’. Fortuitously for the Ottomans, a large supply of engines, passenger and freight carriages had been built up pre-war.

The combined actions of Lawrence and the Arabs with Emir Feisal in the north and the Arab Army under Emirs Ali and Abdullah with their British officers in the south did inconvenience the Turkish
Army – but didn’t stop its operation. The large Medina garrison was constantly supplied until around April 1918 when the service was finally stopped, but never able to leave that locale and interfere with the Arab Revolt or British strategy in Palestine – the British argued they were happy with that situation, as they had no idea what they would do with 15,000 prisoners if they starved it into submission.

“The damage the Arab forces inflicted on the railroad was repaired in many cases. Although the number of bridges and culverts destroyed and of tracks uprooted increased steadily in 1917, the damage could still be overcome by temporary repair.”

Hit-and-run raids were a sensational use of guerrilla tactics for which Lawrence has been credited with developing a ‘guerrilla warfare’ model that is still quoted in some military academies. His task was made somewhat easier as tribal tactics had always been hit-and-run and rarely was a large pitched battle to be seen in Arab tactics – very sensible when we compare the low casualties of such a strategy with the stupidity and devastation of the France/Western Front and Gallipoli debacles in WW1.

In addition to Lawrence, other British officers turned their attention to the railway – Newcombe (successfully raided the railway many times before being captured then, with the aid of representation by an influential Arabic lady who gained his release, took his leave and married the lady!), Stirling, Hornby, Peake, Garland (the first British officer to derail a train in the Hejaz), Joyce, Davenport and Young were just some of them; with their Arab forces. Lawrence reports that he conducted 30 attacks in two years! It would seem the other British officers did some outstanding work.

The Royal Flying Corps (RFC) sent a Flight of aircraft to be stationed at Rabijh as early as Nov 1916. From here the aircraft would bomb and photograph stations along the southern section of the railway. After the capture of Aqaba in July 1917 the RFC (with some Australian Flying Corps [AFC] help) joined the action around the Ma’an area. Later in the campaign both the RFC and the AFC did extensive damage to the railway in the section north of Ma’an as part of Allenby’s overall campaign strategy and especially around Deraa in Sep 1918.

From late 1917 the port of Aqaba was able to bring in all types of supplies for use against the railway – including armoured cars and Rolls Royce tenders. These would support Lawrence and the Arab forces for the next 18 months. They provided speed of movement, fire support, resupply, security, observation, stores and explosives for their saboteurial exploits and, ambulance service for medivac. Lawrence makes mention of the extensive use of armoured cars and he does list over 120 British Army support personnel.

In May 1918, General Allenby concluded that there was a need to secure the right flank of the EEF before his strategic advance north could occur. To do this he needed to capture Amman and the railway station and operations. Further, this would cut the Hejaz Railway and a force could then proceed south to progressively capture the stations and Turkish forces or simply cut-off their supplies and let them “wither on the vine”. With poor planning, lousy weather and the failure of the Beni Sakr tribe of Bedouins to arrive as planned, the attacks on Amman failed at this time and no advantage was gained. The Turks (temporarily) continued to enjoy the rail.

On 9th May 1918 the British officers Peake and Hornby set about destroying some of the difficult to repair curved track and the steep embankment at Batn al Ghoul. They also completely destroyed the station buildings that were still in destruction state during the 2008 GARP field program. That they could do this indicates there was not an Ottoman camp there, nor on Fassua Ridge at that time.

Certainly the effectiveness of the Hejaz Railway fell away as Allenby’s campaign progressed. From April 1918 there was very little rail movement south of Ma’an and from June, little movement between Damascus and Amman. The Ottomans and their German advisers did find it a useful
evacuation system once operations went convincingly against them and they also managed to cause considerable damage to track and control systems along their withdrawal route.

Nevertheless, rail once more proved its strategic importance in logistic re-supply, troop movement, medical evacuation and, gave the Ottomans more useful support than camel caravans could ever have done.

**Phase 4 – Post War**

Nightmare! The Paris “Peace” Conference and division of the spoils!

By war’s end there was extensive damage to track, bridges, culverts, embankments and rolling stock on the main lines and branch lines from allied attacks and retreating Ottoman forces. Some repair was conducted in the first few years but not extensive.

Of major concern was the political demise of the whole area and which victorious countries were to administer each Region and therefore be responsible for railway operations. This issue is far too complex for this paper so lets just say that the Hejaz Railway no longer operates as intended.

![A 3rd Class carriage for the Pilgrims compared to the Author's 1st Class renovated carriage at the Hejaz Railway Museum, Amman](image)

**Conclusion**

Many Turkish and German railway records were destroyed during a fire in Damascus in 1921 in a rebellion. Any other records have not yet been studied to compare with GARP’s conflict archaeology findings. Nevertheless, it can be identified that the Hejaz Railway was a great engineering feat, with the totally Muslim financed and German supervised construction program. Its purpose was well thought-out and visionary by a man many considered mentally unstable at the best of times.
It served its post-construction/pre-WW1 aims of pilgrim passage and military/economic transport to the benefit of the Ottoman Empire and many of the local inhabitants, although not all.

WW1 actions against it by the British and Arab forces served the strategic role of tying up tens of thousands of Ottoman troops along the line from Damascus to Medina and provided a right flank protection for General Allenby’s campaign in Palestine and Syria.

Unfortunately, the railway has now fallen into dis-use although in Damascus, there is a museum and the façade of the original station with restored offices and furnishings that is a sight to behold. It is understood from Nicholson’s book that the Saudis have restored the Medina station. In Jordan, parts of the line are in use for the phosphate mining trains that run to Aqaba (this section was created during WW2 when Australian Army Engineers relocated the track for this purpose) and it is still a source of archaeological study, with the cooperation of the Jordanian authorities. There is a wonderful museum at the Amman Station that includes rolling stock, model of the railway, turntable, water point, crane, workshops, station building and memorabilia – well worth a visit. There is also a running train for groups or scheduled public runs from time to time.

This railway was made all the more famous by the explosion of the Lawrence of Arabia stories and global fascination with his exploits. But it must be understood that there were many others who made an equal, at least, contribution to the war effort against this railway, they simply were not publicised to the same extent and their recognition is less public, albeit it as deserving.

Sultan Abdul Hamid II had no idea he was offering the world such a historical gem, but he did.

Notes:

2. Ibid, Chap XX, describes the German philosophy and strategic importance of the Ottoman Empire being added to the German Empire once the ‘sick-man’ gave up life
3. The other four Pillars are; acknowledging that Allah is the only God and Mohammed is his Prophet, fasting (Ramadan), alms to the poor, daily prayers.
6. Ochsenwald, 59
7. Ibid, 25
8. Nicholson, 38
9. Winterburn, John, presentation to GARP field team Nov 2009
10. Ochsenwald, 61
11. Ibid, 143
12. Ibid, 145
14. Ibid, 685-6
15. Barr, James, *Setting the Desert on Fire*, Bloomsbury 2006, 235

© Neil Dearberg, 2010