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*of* EDINBURGH

**Geography, Cartography and Military Intelligence; Gertrude Bell's Cartographic  
Work for The Royal Geographical Society In 1913 To 1918**

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Author:

Olivia Russell

s1521828

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## Declaration

*I hereby declare that this dissertation has been composed by me and is based on my own work'*

Signature: Olena Russell

## **Acknowledgements**

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## **Abstract**

This dissertation examines how the cartographic work of Gertrude Bell in 1913 to 1918 was implicated in military intelligence during the First World War. The focus on this is fundamental for its contribution to the validation of geography as a discipline (Heffernan 1996) and the examination of Gertrude Bell is critical to investigating whether we need to place women in a historiography of geography (Domosh 1991). To do so, the dissertation has consulted the RGS-IBG archive to investigate the manuscript map of Gertrude Bell's journey from Adrah to Nedjef in 1913 and from Ramadi to Adrah in 1914. It has consulted other archives and has utilised a range of primary and secondary sources. The dissertation has also examined Gertrude Bell biographically to position her ability to form geographic knowledge. The dissertation exposes the importance of the Royal Geographical Society, the map's multiple authorship and discusses the critical role of local intermediaries who are silenced in the map. This dissertation argues that Gertrude Bell was fundamental to the creation of geographic knowledge. Yet, it seeks to expose the multiple knowledges at work in the map, in particular the invisible functionaries at the Royal Geographical Society and the local intermediaries. In doing so, this dissertation argues that in order to provide a fuller, more 'critical' historiography of geography we must include, not only women, but *all* marginalised knowledges.

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## 1–Introduction

This dissertation examines how Gertrude Bell's map of her journey from Adrah to Nedjef in 1913 and from Ramadi to Adrah in 1914 became implicated in military intelligence during the First World War. The focus on military intelligence in the First World War is critical for its contribution to the validation of geography as a discipline (Heffernan 1996) and the examination of Gertrude Bell is fundamental in demonstrating the need to place women in a historiography of geography (Domosh 1991). Gertrude Bell was critical to disseminating geographic knowledge for the map, yet, and as this dissertation seeks to expose, the map was not solely formed by her – multiple agents were active in its construction. This does not, in its entirety, undermine the need to place Gertrude Bell in a historiography of geography, rather it stresses the necessity to extend one to *all* knowledges. As Edney (2009) propounds, there is a critical need to focus on how, and by whom, maps were produced, as opposed to the typical focus on the generic power relations of the 'finished' map content (Edney 2009, 14). In order to investigate Gertrude Bell, military intelligence and the authorship of the map, this dissertation examines the manuscript map of Gertrude Bell's journey held at the Royal Geographical Society. The correspondence between Gertrude Bell and the leading members of the Royal Geographical Society – Douglas Freshfield, John Keltie and Arthur Hinks – are also examined, along with other primary and secondary sources. To investigate the map and Gertrude Bell's contribution to it, Chapter Two discusses the relevant literature on feminist epistemology, espionage, military mapping and the geographies of war, by which Gertrude Bell's life and geographical work must be understood. It also demonstrates the construction of Gertrude Bell biographically, to help situate her ability to produce knowledge. Chapter Three then goes on to identify the sources and methods applied. Chapter Four, the first empirical chapter, analyses the role of the Royal Geographical Society in provisioning Gertrude Bell with the required training and instruments for the mobilisation of *Gertrude*



*Bell's* knowledge. This is necessary to establish in order to discuss the stabilisation of *Gertrude Bell's* geographic knowledge in Chapter Five, which focuses on the multiple authorship of the map. It examines Gertrude Bell's corrections, and Douglas Carruthers' selective reading of them and introduces the invisible functionaries who worked on the map at the Royal Geographical Society. Building on this, the final empirical chapter on excluding, discusses the local intermediaries who helped disseminate geographic knowledge. The dissertation concludes by arguing that the Royal Geographical Society played an influential role in the construction of an inherently Western map and emphasises the need to situate the construction of the map in regard to all knowledges applied. This dissertation calls for a more inclusive historiography of geography.

## **2–Placing Gertrude Bell: Feminist Epistemology, War-Time Intelligence and Cartography**

This chapter positions Gertrude Bell in relation to broader geographical and contextual literature. Particular attention is paid to feminist critiques of the nature and history of geographical knowledge, to biography, and to the nature of war-time intelligence and cartography.

### **Feminist Epistemology and Biographies of Gertrude Bell**

Recent work in the history of geography has sought to put women back in the picture in order to provide a fuller, more ‘critical’ approach to the history of geography (Maddrell 2009). Where attention has been paid to white men as figures of geography’s imperialist history, feminist scholars have tried both to incorporate female scholars and to broaden definitions of the discipline of geography (McEwan 1998; Haraway 1989).

Too commonly, (imperial) histories of geography have relegated or renamed women. The belief that only men were able to create ‘true’ geographical knowledge led to the marginalisation of women as producers and subjects of geographical knowledge. For Riedi (2002), ‘imperial history does not often engage with women’s history, resulting in the mischaracterisation of the empire as a masculine venture and pushing women to its margins’ (Riedi 2002, 56). The focus in histories of geography on ‘great men’, ‘geography’s paternal lines of descent’, has produced, as a result, disciplinary narratives where the feminine is excluded (Morin 2008, 10; Kobayashi 1995; Rose 1993, 1995).

Feminist work on the history and practice of science has been helpful in the 1980s and 1990s in helping to recover women’s place in the social construction of knowledge (Keller 1984; Harding 1986, 1991). Women’s relative invisibility in received histories of the discipline was the object of an influential paper by Domosh (1991). For Domosh (1991),

there is a need to reveal what ‘a women’s way of knowing’ (Belenky et al. 1986) could contribute to our rewriting of the history of geography and, by implication, to a feminist historiography of geography. Domosh (1991) focuses on the experiences of Victorian and post-Victorian women explorers, of whom Gertrude Bell was one, to demonstrate their role as active producers of geographical knowledge. This need for an engagement with a wider gender-sensitive history of geographical thought was not endorsed by others. Stoddart (1991), argued that women travellers made little or no contribution to the emergence of the discipline. In his view, such Women could not be classified as ‘geographers’ because they failed to take measurements (Stoddart 1991). Stoddart (1991) equates ‘true’ geographical knowledge to that of objective empirical knowledge.

This dissertation follows Domosh (1991) in arguing that we *do* need a historiography of geography, which incorporates the active work of women, since ‘part of a good conceptual history is the recovery of forgotten ideas and personalities’ (Godlewska 1999, 9). Even as I seek to recover a place for Bell from her relative exclusion, it is clear that she has been differently treated in biographical scholarship.

### Situating Gertrude Bell Biographically

One dominant theme in the biographical representation of Gertrude Bell affirms Domosh’s (1991) argument that Bell’s geographical knowledge was important, indeed ‘strategically vital’ (Tripp 2017; Lukitz 2004; Maddrell 2009; O’Brien 2000; Wallach 2005; McCarthy 2014). O’Brien (2000) stresses the importance of her contribution to geographical knowledge, stating that travellers such as Bell ‘provided the British Empire with the raw material that enabled it to govern large parts of the globe’ (O’Brien 2000, 11). This was in part a result of her pre-war expeditions for the British Empire where she met with leaders of two of Arabia’s greatest clans, Ibn Rashid and Ibn Saud, to determine who would be reliable

Arab allies against the Turks (Wallach 2005; McCarthy 2014) and her work for the Arab Bulletin, which as Lukitz (2004) argues, was ‘one of the best sources of information on the events of the Middle East during the war’ (Lukitz 2004). In contrast, Winstone (1978) argues that Bell ‘was not, in any serious sense of the word, an explorer’, precisely because she did not seek conclusive goals, to discover new places or to map unknown land (Winstone 1978, 134).

Many biographical constructions of Bell stress her ability to act as an ‘honorary man’ in her dissemination of critical knowledge of the Arab tribes and topography of the Middle East (Wallach 2005; Maddrell 2009; Tripp 2017). Wallach (2005) argues explicitly that Bell’s ‘high position in the government confirmed her status as an ‘honorary man’ (Wallach 2005, 196) and Maddrell (2009), ‘her honorary status as a ‘man’ in many Arab circles and her official position’ (Maddrell 2009, 97). Others treat Bell’s femininity, as a central theme. There is an emphasis on the motivations of Bell’s work in 1913 and 1914 being attributed to her personal confusion and uncertainty arising from her failed relationship with Charles Doughty-Wylie, with travel allowing her personal independence (Wallach 2005). This argument supports Stoddart’s (1991) criticism of Domosh (1991), namely that for women discovery was not a goal and their insights were purely personal (Stoddart 1991, 485). For Lukitz (2004), Bell’s expedition should be connected to her inner-need to be part of the period, both as a voluntary agent of Britain’s interests in the Middle East and as a woman trying to break one of the most challenging barriers of her time: physical conquest of the desert and understanding the moral and ethical code of its inhabitants (Lukitz 2004).

In contrast to Bell’s construction as geographer (Domosh 1991) or non-geographer (Stoddart, 1991), other biographies emphasise her high social standing. Bell, a ‘favoured child of fortune’ (Graham-Brown 1985, 6), was raised amid the wealth accumulated by her industrialist grandfather and attended Queen’s College London, and later the University of

Oxford (Lukitz 2004). After her studies, she was sent by her family to Bucharest in 1888 to 1889 where she was introduced to intellectuals, including Charles Hardinge, later Viceroy of India, whose knowledge of the Ottoman Empire sparked her desire to travel to the East (Wallach 2005). Imperial historian Bernard Porter (2004) argues that the upper and upper middle-classes were prime environments for creating imperialists, 'high society and educational communities fostered imperialist activity' (Porter 2004, 41). While it is important to note that Bell's life does not fit a simple binary between Bell as geographer (Domosh 1991) and non-geographer (Stoddart 1991), it is equally important to situate her as part of complex, personal and imperial worlds (Porter 2004; Duplisea 2016).

This dissertation argues that we must write women in a historiography of geography, but, in so doing, not simplify or idealise women – notably Bell – as purely, or simply, 'heroic', which many biographies appear to do. Bell must be understood as a complex figure in a complicated period: for Duplisea, 'rather than rebel against gender convention, Bell employed masculine and imperialist strategies in her career to place herself within communities of knowledge and power' (Duplisea 2016, 55). The three *Bell's* at work in the biographies, Bell as a woman of high social standing, an 'honorary' man, and a woman in search of personal independence, allowed her to do so.

### **The RGS and Military Intelligence**

War is altogether based on geography (George 1907). Yet, and despite the obvious significance of geographical expertise in wartime, there have been few studies of the role of geography in war (Heffernan 1996).

Britain began to use military intelligence systematically for its imperial expansion in the nineteenth century (Heffernan 1996). The first British intelligence agency was the Depot of Military Knowledge (1803-1815) established to collect foreign maps and information on

military resources and topography. This intelligence-gathering ceased after 1815 and it was not until Major Thomas Best Jervis, Senior Officer in the Survey of India in the 1830s, was the need for better intelligence reaffirmed (Heffernan 1996). Jervis foresaw a central government agency which collected and compiled accurate maps and oversaw a new Topographical Department in 1855 (Andrew 2018). Further reforms took place after 1870 when Major Charles Wilson helped to establish the Intelligence Bureau, which was charged with devising war strategies (Andrew 2018). Despite these advocates for better intelligence, later failures in the Boer War demonstrate that intelligence was not employed effectively, or accepted collectively, as a strategic tool before 1914.

This failure to use intelligence effectively in Britain was in contrast to their enemies. Heffernan (2000) uses Sven Hedin and Albrecht Penck, as examples of enemy spies who passed sensitive information to the German high command. The furore surrounding Penck and Hedin exemplified the sustained xenophobic climate of fear about secret plots and enemy sabotage that predated the outbreak of the Great War (Heffernan 2000). This attitude towards espionage would shift during the First World War with the realisation that spying could be turned to Britain's advantage (Heffernan 2000). An unsigned secret memorandum of 1909 among the papers of Vernon Kell, founder of the British Security Services, urged the British to emulate the German, French and Russian in the levels of state-led deceit (Satia 2008). As Satia (2008) argues, 'ultimately the state that could not see became a state that could not be seen' (Satia 2008, 7). This 'professionalization' of espionage helped validate geography as a discipline. The First World War, 'the first truly modern intelligence war' (Mohs 2007, 2), provided an important epoch for the establishment of military intelligence in helping create a 'covert empire' (Satia 2008, 24). This dissertation contributes to what Heffernan (1996) terms one of 'geography's ignored histories' (Heffernan 1996, 505) by focusing on Bell's activities in the period between 1913 and 1918 in the Near East.

## The RGS and Military Intelligence in the Middle East

The Middle East was the subject of widespread foreign interest during the First World War: Russian's influence was expanding in the Balkans and the Caucasus, German ambitions were growing, evident in their construction of a Berlin to Baghdad railway, which threatened Britain's imperial route to India, and the French were staking claims in Syria. These interests were of concern to the British, who conceived of the Middle East as a transitional space between Europe and India, a region the British Empire had under its influence (Folliard 2017).

Britain's strategic approach to the War varied between two factions. On the one hand, 'westerners' insisted that British and Allied forces should be concentrated on the western front against the Germans. On the other, 'easterners' felt that a vigorous campaign against a weak Ottoman Empire would allow Britain and France to link effectively with Russia. Most senior army officers were committed 'westerners' but several politicians preferred the 'eastern' option, including Winston Churchill who advocated an all-out assault on Gallipoli in order to pressurise the Turkish capital. The question regarding Britain's approach to the Middle East was later revised by an intelligence unit in Cairo, which developed a different 'eastern' option, arguing that British interests were best served by encouraging pan-Arab independence. This option gained greater traction, including Bell's support, after the failure of Gallipoli and the retreat from Baghdad. The interest in the Middle East instigated Britain's desire to understand its topography and the RGS became responsible for disseminating maps on the area (Heffernan, 1996). Arthur Hinks, assistant to the Society's secretary John Keltie, was ordered to cease work on the European 1:1 million mapping project and, instead, to prepare maps of the Ottoman Empire. These relied on the observations and recordings of the explorers, scholars and intelligence officers who had spent much of the pre-war era working in the region.

It is important to delineate here more about the 1:1 project. Devised in 1891 by German geographer Albrecht Penck, the 1:1 project was advanced to produce a new world map by the mapmaking agencies of the major powers (Heffernan 2002). The explicit objective was to challenge the assumption that cartography was an inherently national or imperial activity undertaken by, and for, specific nation states to facilitate and affirm territorial ambitions (Heffernan 2002). The 1:1 project was a tool used to dictate territory and to pursue imperialist interests. Powerful imperialist voices in London and Paris remained hostile to talk of post-war Arab independence as this would compromise the proposed division of the Ottoman spoils amongst the Allied powers after Turkey's defeat. The secret Anglo-French negotiation, the Sykes-Picot agreement (Barr 2012), aimed to clarify Allied policy, and establish the 'spheres of influence', towards the Middle East (Heffernan 1996, 518). The architects of the scheme believed that this arrangement would be sufficient to facilitate an Arab rising against the Turks and stimulated the creation of the British Arab Bureau as a new intelligence agency to prepare for this revolt. This shows how geographical knowledge and expertise were implicated in broader political and ideological conflicts during the First World War (Heffernan 1996).

The dissertation focuses on the map of Bell's journey which was incorporated in this project. As many studies have shown, maps are not 'neutral' documents. They are powerful, and *power-full*, documents for inscribing how people view the world rather than acting as mirrors to that world (Edney 2011, 2009; Driver 2010; Burnett 2000). This is especially so for the Near East whose representation has long been authoritative to certain outside perspectives (Said 1978). In terms of cartography 'maps are not only forms of knowledge, but also processes as well as performances, which thereby reveal assumptions and, in turn, shape reality (Foliard 2017, 4). Notfors (2018) explores how the processes of authorship resulted in the production and mediation of 'Arabia' as an imaginative geography (Said



1978). By ‘geographical imaginations’ I mean, the ‘mode of interpreting reality which stems from the accretion of social and collective representations of spatiality’ (Foliard, 2017 pg. 4). A ‘critical’ perspective on geographical imaginations necessarily emphasizes the many-sidedness and discursive nature of the cultural representations of place. Literature on nineteenth and twentieth century military maps, as products of covert activity and imperial control, argue ‘as much as guns and warships, maps have been weapons of imperialism’ (Harley 2002, 132). This is too overarching of what the development of British world power implied for the area and fails to reveal the reality for how it was: ‘an intricate network rather than a raw projection of superiority’ (Foliard 2017). While this work does not downplay the power of maps and geographical knowledge, it shows that overly simplistic binaries do not mirror the articulation between cartographic intelligence, imaginaries and geopolitical power with sufficient accuracy (Foliard 2017).

## Conclusion

It is against the themes of feminist epistemology, espionage, military mapping and the geographies of war that Gertrude Bell’s life and geographical work, need to be understood. This has been, of necessity, only a limited survey of the background to Gertrude Bell, but these themes form the three empirical chapters in what follows. Before turning to them, it is necessary to discuss the sources and the methods used in the dissertation.

### **3–Researching Gertrude Bell: Question of Sources and Methodology**

This chapter explains why the dates 1913 to 1918 have been selected and the importance of positioning the dissertation in the Near East. It then goes on to discuss the sources and methods applied. Particular attention is placed on the archive, and Derrida's (1995) etymology that archival data are never raw.

The period in question – 1913 to 1918 – is chosen to explore the authorship of the map during the First World War. Bell went on multiple pre-war expeditions (Table 1), yet it was the map of her journey to Hail in 1913 to 1914, which played a fundamental role in military intelligence in its incorporation in the 1:1 project. Heffernan (1996) argues the importance of the RGS and its wartime activities on behalf of the British intelligence services and advocates for further attempts to interrogate the role of geography in war. This dissertation seeks to analyse this, in relation to the authorship of *Bell's* cartographic work. Selecting these dates was also fundamental to form a manageable operational task for the research at hand. The dissertation is situated in the Near East, in-part, due to the RGS' significant, albeit short term, metropolitan focus here for the 1:1 project: the 'easterners' privileged over the 'westerners' (Foliard 2017). The importance of positioning cartography in the Near East is demonstrated by Foliard (2017) in his argument that maps, and knowledge, were critical to the construction of the 'imagined' Near East and stresses the need to see maps of the region as a product of an assemblage of people and of discursive practices (Foliard 2017, 3). It is for these reasons that this dissertation focuses on this period in question and the vitality of situating the study of cartographic authorship in the Near East.

In order to investigate Bell, and her contribution to geographic knowledge, the dissertation has consulted biographies. Three '*Bell's*' have been identified: Bell as an 'honorary man', Bell's high social standing and Bell's desire for personal independence. The dissertation turns to these biographical constructions to explain Bell's ability to establish

herself amongst communities of knowledge and power in the British establishment (Duplisa 2016). All were fundamental to the RGS' institutional support, her ability to author the map and her ability to situate herself in relation to her 'Other' (Said 1978).

In order to examine the cartographic work of Bell's journey, this dissertation has analysed the five sheets of manuscript map, along with Bell's notebooks from 1905 to 1924 held at the RGS-IBG archive. The dissertation focused on the notebooks of the period in question and paid particular attention to the series of loose papers of Bell's meteorological readings, accompanied. The correspondence collection, 'Miss Bell's Letters 1913 to 1919, brief news of her work during the War', at the RGS-IBG archive was also analysed, a fundamental source on Bell's relationship with the RGS, the production of the map and the multiple functionaries behind its making. The National Library of Scotland's archive was also used, which held Bell's publication in the Arab Bulletin of *The Arab War - Confidential Information for General Headquarters* in 1917, critical for the examination of how Bell's geographic knowledge manifested into military intelligence. The online archive of the Newcastle University Library was endorsed for photographs, letters and diary entries.

Despite providing a fundamental repository for information, it is important to note that the archive is never neutral, impartial or objective (Cook 2001). Rather, records 'are active agents in the formation of human and organisational memory' (Cook 2001) and the ability to determine what is remembered and forgotten is fundamentally an act of power (Derrida 1995). The RGS-IBG's thirteen notebooks of Bell, for example, is supplemented by a book titled *Gertrude Bell (1868-1926) RGS-IBG Archives London* (Gordon 1994). In the preface of the book it explicitly states that it is 'Not intended to be a biography' and that, 'the main activities and words quoted are her own, Gertrude Bell's' (Gordon 1994, 1). Despite this preface stating its impartiality, what is selected to represent Bell is partial. In the opening quote it states, 'She was, I think, the greatest woman of our time, perhaps amongst the

greatest of all time' (Janet Hogarth Courtney 1927, 661). This forms a particular 'master narrative' (Thijs 2008) that sustains the privileging of Bell's voice over other knowledges employed.

This is corroborated in the fact that the map is referred to by the RGS as 'Gertrude Bell's manuscript map', which fails to identify the functionaries who helped form the geographic knowledge for the map. The RGS sustains the understanding of the map through purely a Western understanding of it, as constructed by Bell. Thus, both disseminator of the material and archival appraiser, play active and powerful roles in shaping what is remembered and forgotten. Archivists far from being neutral and impartial custodians of 'truth' (Jenkinson 19147) are shapers and creators of the archival content (Cook 2001). This was kept in mind throughout the research of this dissertation.

The dissertation has also drawn on primary published sources, including *The Arab of Mesopotamia*, a book written by Bell for military and political officials with a 'complete' background on the local tribes and *The Handbook of Arabia II*, which details the routes taken by intelligence officers in the Arabian Peninsula. These published primary sources proved fundamental evidence on Bell's relationship to the inhabitants in her formation of geographic knowledge. The dissertation also used newspapers and journals to garner insight into the people and motivations shaping the map, that cannot be read necessarily *off* the map itself. It is important to note, that Bell was unable to complete her narrative of the journey to Hail in 1913 to 1914 in *The Geographic Journal*. This dissertation draws heavily on Douglas Hogarth's 1927 reconstructed narrative of her journey, which was formed from Bell's diaries, letters and recollection of conversations held with her. The evidence provided in this dissertation thus relies, in-part, on Hogarth's (1927), rather than Bell's, interpretation. Finally, this dissertation has employed secondary sources to ground my analysis of Bell's work in relation to the wider literature.

## Conclusion

It has been of necessity to explain the period in question and the importance of situating the dissertation in the Near East (Foliard 2017). The sources and methods have been clarified and their implications addressed. Archives are ‘not passive storehouses of old stuff but active sites where social power is negotiated, contested and confirmed’ (Schwartz and Cook 2002, 1). This chapter has introduced the Royal Geographical Society’s influential role in shaping knowledge, which is explored further in the following chapter.

#### **4–Provisioning: The Royal Geographical Society and Its Mobilisation of *Gertrude Bell's* Knowledge**

This chapter positions the Royal Geographical Society, in particular its Map Room, as what Bruno Latour (1987) terms a 'centre of calculation' to demonstrate its well-established and influential infrastructure for administering Gertrude Bell's journey for the map.

##### **The RGS, Survey Training and The Administration of The Theodolite**

The RGS displayed many of the characteristics that Bruno Latour (1987) attributes to a 'centre of calculation' (Latour 1987, 239). This is a place wherein knowledge is gathered, stored and theorised upon (Jöns 2011). They are the clearing houses for what Latour terms 'immutable mobiles' (Latour 1987), those items of information that made 'knowledge at a distance' possible for imperial powers and their strategic and geopolitical interests (Heffernan 2000) – the 1:1 project. The observations taken by Bell on her journey in 1913 to 1914 were transmitted to the Map Room at the RGS where it was 'stabilised' by the Map Curator, Douglas Carruthers and the principal draughtsman Mr. Addison. Being a centre of calculation was an important aspect of the work of the RGS and this role was embodied, as Driver and Gilbert (1998) suggest, in the RGS' move in 1913 to South Kensington, a location that symbolised imperial scientific knowledge, and the significance of the Society's locality in the 'brain of empire' (Heffernan 2000; Crone and Day 1960). The RGS fitted into a show of material mastery over knowledge through its individuals – Bell – with their travels, maps and presentations, which provided the performances of imperial science (Heffernan 2000). The acquisition of knowledge for imperial needs, part of the 'new' geography, was mirrored in the development and purposes of 'science' in general (Heffernan 2000).

The Society's focus on the development of geography as a scientific discipline required the shift towards more systematic geographic knowledge in mapping through

instrumentation (Collier and Inkpen 2003). As Rae et al. (2015) state, ‘The RGS took instruments, and their correct use, to be key features associated with the advance of geographical science’ (Rae et al. 2015, 158). It is important to note the introduction of aerial photography in the First World War, an instrument used for map-makers, geographers and explorers to gather ‘accurate’ geographic knowledge on activities behind enemy lines (Collier 1994; Satia 2006). Bell did not adopt this approach, yet its implementation demonstrates the Society’s aspiration in the early twentieth century to ‘ground truth’ in mapping (Collier 2015, 183). This desire was exemplified by the expertise of the cartographers and surveyors trained in the Raj, a feature of the Anglo-Indian system of government, which became a pioneer in the standardisation of data collection (Edney 1997) and extended to Mesopotamia and Persia (Foliard 2017). Instruments were fundamental for standardisation, used to ‘translate’ natural processes into measurable quantities and provided the RGS with authority and credibility in their quest for accurate and precise geographic knowledge for the mapping of the Near East (Withers 2018).

The RGS administered Bell instruments for her 1913 to 1914 journey to standardise her survey of Northern Arabia ‘with an acceptable degree of accuracy’ (O’Brien 2000; Foliard 2017, 110). In a letter to Keltie in 1913, Bell writes, ‘I should probably like the money in the form of an instrument’ (Figure 4.1 RGS CB8 Bell to Keltie 1913). Bell was administered a transit theodolite for the measurement of direction, position and height for the map. As Edward Reeves (1913), the Society’s Map Curator and instructor in surveying, notes, the transit theodolite was created ‘to meet the need of the geographical surveyor who desires to do reliable work’ (Reeves 1913, 360). Bell was also provisioned other instruments, as Hogarth (1927) notes, ‘Miss Bell took her bearings and kept her marching times, also daily readings of barometer and thermometer without a break from one end of this journey to the other’ (Hogarth 1927, 16). These instruments equipped Bell with authority and credibility in

her measurements and acted as ‘the paraphernalia necessary (for her) to enter the scientific community’ (Wess 2017, 30).

Despite the authority and credibility attributed through the use of instruments it is important to note their potential fallibility in knowledge creation (Withers and Wess 2018). Instruments could, and did, break-down and go slow in the field, with consequences for accuracy of record and completeness of coverage, ‘making them (instruments) work properly was often a matter of contingency’ (Withers and Wess 2018, 13). In the correspondence between Bell and Keltie, there is no mention of issues with the data received, yet as Withers and Wess (2018) argue, ‘writing about one’s travel and instrument use afterwards, did not always give agency to the processes and practices of instrument use’ (Withers and Wess 2018, 13). To not account for the fallibility of instruments, undermines rather than endorses the truth claims made by them (Rae et al. 2015). In one letter in 1915 to Hinks, Bell states ‘My work calculations were fairly correct I think’ (Figure 4.2 RGS CB8 Hinks to Bell 1915). The use of the word ‘fairly’ and ‘I think’ do not convey certainty in Bell’s measurements and perhaps suggest her concerns in the accuracy of her instrument or anxiety in her use of them.

A prerequisite to attaining an instrument from the RGS was training in their use (Collier and Inkpen 2003). Bell was trained in surveying, astronomical observations and the techniques of mapmaking by the RGS, ‘At the Royal Geographical Society, sextants and horizons and measurements by the stars became familiar to her’ (Monroe 1980, 15). The measurements of Bell’s trip to Hail also reflect her competency in numerical inscriptions, for example ‘Longitude by Chronometer from Altitude of The Sun’ and ‘Theodolite Observation’ (Figure 4.3 and 4.4 RGS GLB/1). It is important to note that Bell’s ability to ground accurate geographic knowledge for the map counters Stoddart’s (1991) argument that women were not ‘geographers’ because they failed to take measurements. Rather, Bell, trained in the use of instruments, was able to generate what Stoddart (1991) equates to ‘true’



geographic knowledge in the form of objective empirical knowledge. The Society's provisioning of Bell's instruments, and her instruction in them, allowed her to mobilise geographic knowledge in an accurate, and transferrable form for it to be processed at 'home'. As Latour sums, 'by coding every sighting of nay land in longitude and latitude and by sending this code back, the shape of the sighted lands may be redrawn by those (Mr. Addison the principal draughtsman – Figure 4.5 RGS CB8 Keltie to Bell 1914) who have not sighted them' (Latour 1987, 224).

It was Bell's high social standing (Graham-Brown 1985) and the Society's regard of her as an 'honorary man' (Wallach 2005 and Tripp 2017), which placed her firmly in the institutional support of the RGS, and from which their reliance and confidence in her ability to disseminate 'accurate' geographic knowledge was formed. This is reflected in the Society's admittance of Bell in 1913, amongst the first Women Fellows, (Figure 4.6 *The Times of India* 1913, 5) and her award of the Gill Memorial Prize, for her work in Syria, Mesopotamia and Turkey in Asia (Bell and McEwan 1996). In her acknowledgement of the award Bell responded to Keltie, 'The Geographical Society is doing me far too much honour. I feel profoundly that my travels are not deserved the recognition which they are about to make me' (Figure 4.7 RGS CB8 Bell to Keltie 1913). She wrote to Freshfield in a similar tone, 'my only reluctance is a real sense of not being fit to stand in your great line of success' (RGS CB8 Bell to Freshfield 1913). This, perhaps, introduces Bell's anxiety over her gender. The reliance, and confidence, in Bell, is further emphasised in a letter she writes to Hinks of the Indian Gazetteer, a 'geographical index' of intelligence data on places, individuals, and tribes in the Arabian Peninsula (Chaudhary 1975; Scoville 1981), 'A man who is drawing up the Indian gov. Gazetteer of Arabia has sent me the article on Hayil to read. It is very good. And needs little amendment but he has not got the latitude and longitude, not got the altitude. I have no time to look up books – could you have these particulars sent to me?' (Figure 4.8

RGS CB8 Bell to Hinks 1915). The request for Bell to proofread the Gazetteer demonstrates the value placed on Bell's knowledge amongst the Near East intelligence community, and her request for measurements reinforces Bell's understanding of the importance of systematic knowledge.

Bell benefitted from the RGS' recognition of her ability to produce geographic knowledge in their provisioning of training and instruments. In a letter to Keltie in 1915, Bell writes, 'Will you be very kind and let me know what I owe the Society for this job when it is finished? I could not have got it done so well or so quickly elsewhere' (Figure 4.9 RGS CB8 Bell to Keltie 1915). In response Keltie writes, 'I understand it (the map) is being done in the Society's time and with our materials, and I'm glad to know this because it allows me to say that I think it should be treated as a very small contribution from the Society to your enterprise and that we clearly could not take any payment for it' (Figure 4.10 RGS CB8 Keltie to Bell 1915). Despite the RGS' suggestion here that they were the ones who contributed to Bell's 'enterprise', it was in the interests of the Society to provision Bell for the 1:1 project. In a letter to Bell, Keltie states, 'We hope also in the course of a few months to cover the whole of this area (Arabia) upon the scale 1/M when the compilation of the sheets is finished' (Figure 4.11 RGS CB8 Keltie to Bell 1915). As Bertram Cubitt, a civil servant in the British War Office, states, 'The Arabia sheets owe much to the unpublished observations of the Miss Gertrude Bell' (Cubitt 1919, 337). It is evident that both the RGS and Bell relied heavily on each other to disseminate the geographic knowledge for the map.

### **The RGS' War-Time Profile and The Limitations Imposed by War**

The RGS often expected explorers, provisioned with the necessary instruments and training, to contribute to the Society's geographic profile. The Society scheduled lectures, for example, which addressed matters of the War (Freshfield 1915). This is demonstrated in a

letter from Keltie to Bell, where he writes ‘Hilaire Belloc to give us a war lecture on the 9<sup>th</sup>, and Viscount Bryce’ (Figure 4.12 RGS CB8 Keltie to Bell 1914). Hilaire Belloc, an author turned War propagandist in 1915, lectured on ‘The Geography of the War’ (Belloc 1915) and Viscount Bryce lectured on ‘Geographical War Problems in the Near East’ (Bryce 1918). This was part of an RGS lecture series which Freshfield and Keltie had inaugurated on geography of the war in their attempt to increase the wartime profile of the Society (Heffernan 1996). The Society requested Bell to lecture amongst these men. In a letter from Bell to Keltie in 1914 she states, ‘What is the date fixed for the lecture?’ (Figure 4.13 RGS CB8 Bell to Keltie 1914) and in response, Keltie writes, ‘About the date of your lecture, I cannot say definitely as yet, but I hope it will be in November’ (See 4.5). The Society also requested Bell to publish papers in the Society’s journal. In a letter to Bell, Keltie states, ‘Would you mind sending me, for publication in the July number of the journal, about a thousand words, or more if you like, giving an outline of the interesting journey, which you have just completed’ (Figure 4.14 RGS CB8 Keltie to Bell 1914) and ‘May we not look forward to you giving us a paper at the beginning of next session at one of your meetings on your journey, with map and slides?’ (See 4.14). The Society’s request for Bell to lecture and to publish journals demonstrates the Society’s value of, and confidence in, Bell’s ability to form geographic knowledge.

The explorers requested by the Society to lecture, or publish in their journal, were often unable to do so due to the War. In a letter to Bell, Keltie states ‘I was expecting Col. Sykes to give us a paper on the 9<sup>th</sup> of November on his new work in Persia, but he has been [unable], in which case I might look to you for a paper on that date’ (Figure 4.15 RGS CB8 Keltie to Bell 1914). In another letter to Bell, Keltie writes, ‘De Filippi has just failed us, and the paper arranged for the 31<sup>st</sup> May has had to be put forward. If you are not returning to France I shall hope that you may be able to give us the paper’ (Figure 4.16 RGS CB8 Keltie

to Bell). This demonstrates perhaps the Society's request for Bell's publication as subsidiary, to her male counterparts. Bell was also too preoccupied with the war efforts. In a letter to Hinks, Bell states, 'I am in London, but I might just as well not be, as far as you or anybody else, outside the Wounded and Missing Office, is concerned. I am in this office from 9 a.m. till 7:30 p.m. seven days a week, and I see no likelihood of the hours being shortened. Under these conditions I need to explain to you that I cannot lecture to the Geographical Society. You must forgive me; it is absolutely all I can do to get through my work. I see nobody and go nowhere' (See 4.8). Bell's pre-occupation with the war effort is further emphasised in her inability to publish a full account of her 1913 to 1914 journey. As Hogarth (1927) states, 'It is, therefore, not surprising that she published no narrative of her journey to Hayil' (Hogarth 1927, 1). Despite Bell's inability to publish geographic knowledge of her journey, she added to the Society's wartime profile through her contribution to the 1:1 project.

## Conclusion

This chapter has demonstrated the Royal Geographical Society's mobilisation of *Gertrude Bell's* geographic knowledge for its transmission to the Society's Map Room—the centre of calculation. This has been of necessity for the following two chapters, which focus on the 'stabilisation' of *Gertrude Bell's* map, more specifically how the authorship of Gertrude Bell and the Royal Geographical Society formed a specific, Western, understanding of it.

## **5–Authoring: The Map of Arabia and Its Multiple Inscribers**

This chapter examines the lines of narration in the map. Particular attention is paid to Gertrude Bell's corrections, and the Map Curator's, Douglas Carruthers, reading of them, the European explorers referenced, and the invisible functionaries that worked on the map at the Royal Geographical Society.

### **Bell's Authorship: Strategic Observations and The Question of Orthography**

The map of Bell's journey was required for strategical studies, and for supply, in the First World War (Freshfield 1915). This is demonstrated in Bell's inscriptions of the topographical features on the map, for example, Bell makes note of the 'hazard hills', 'water holes' and 'sandy' regions (Figure 5.1 RGS N06) and in one correction states, 'note J. Friddat is not a continuous range but a series of rock out crops' (Figure 5.2 RGS N06). Bell also makes corrections to the direction, such as, 'there is a mistake here, survey Helqûm was North East of my camp at 165, not South West (GB)' (Figure 5.3 RGS N06), and in one alteration draws a circle around Jelib al Raq'ah and writes '280°' (See Figure 5.1). The precision of Bell's corrections reflects the requirement for topographic accuracy and directional precision for strategic navigation and military strategy (Foliard 2017; Rocque 1953).

The map is also inscribed with Bell's corrections of Arabic place-names, for example Bell corrects 'Swaifly' to 'Swaifleh' (Figure 5.4 RGS N06) and states, 'note the high northern rocks of J. Misma are called J. Aujah' (See Figure 5.2). The importance of orthography is expressed by Freshfield (1915) when he stated, 'One of the uses of the map will be to put the spelling of place-names in the war-zone on a more systematic basis. In our compilations we have followed strictly the rules of the International map' (Freshfield 1915, 3). The authority held by Bell in the accurate spelling of Arabic place-names provides evidence of the Society's reliance and trust in her ability to conform to the rules of the 1:1

project. This is emphasised by the fact Carruthers inks-in Bell's corrections to place-names. Colonel Francis Pirrie (1918), the deputy director of surveys in Mesopotamia, summarised, 'Miss Gertrude Bell's thorough knowledge of the Arabic language and of Mesopotamia and adjacent countries, was of the greatest use in the verification and transliteration of names' (Pirrie 1918, 356). The reliance on Bell's topographic knowledge and authority in Arabic transliteration is further demonstrated in the *Handbook of Arabia*, where Bell was one of the authorities who helped compile a 'Note on the System of Transliteration and Glossary of Topographical and Common Terms' (*Handbook of Arabia II* 1917, 475).

Bell places question-marks beside several of her place-names, suggesting uncertainty in her translation, for example the 'slope called el Raboch?' (See Figure 5.1) and in one note the original name of 'Dedeach' is corrected by Bell as Dechàch, filled-in by Carruthers, yet Bell places a question-mark beside it and writes '¿Dekak Dikakah?', demonstrating her other possible spellings of the area (See Figure 5.1). Bell also cites 'See Chesney Under Hill mentioned by Rousseau 1808' in her correction of 'Miyâ' (Figure 5.5 RGS N06). Samuel Rousseau, a printer and orientalist working at the Arabic and Persian Press, produced a number of works on punctuation and elocution, one of which centred in the Near East (Baigent 2004). This perhaps suggests Bell's reliance on Rousseau for the spelling of Arabic place-names. This is also demonstrated in regard to topography, by the corrections in blue, possibly made by Captain Shakespear who too provided geographic knowledge for the RGS' 1:1 project (Heffernan 1996), which state, 'Well-150 water good and abundant' (See Figure 5.4) and 'Huasa Well-about 3 miles N. of Camp 29' (Figure 5.6 RGS N06). The use of these additional sources introduces the collaborative construction of the map.

### **Heteroglossic Itineraries: Lines of Narration in *Bell's* map**

The map is inked-in by Douglas Carruthers, who compiled maps at the Arab Bureau during the First World War (Lukitz 2004). Carruthers' involvement in the production of the map is demonstrated, for example, in a letter from Bell to Hinks, 'Will you file and thank the Carruthers for this letter, I'll write to him next week about a number of things' (Figure 5.7 RGS CB8 Bell to Hinks 1918). His influence on the map is seen in the inscriptions in red over Bell's corrections in pencil, with two notes stating, 'corrections in Red are Miss G. Bell's original manuscript corrections inked in by the DC–July 1917' (Figure 5.8 RGS N06, 5.9 RGS N06 and 5.10 RGS N06). Multiple corrections by Bell are not filled in, for example Bell's note 'greatly exaggerating' (See Figure 5.10) and 'Error' (See Figure 5.2). The decision by Carruthers' to ignore these inscriptions demonstrates his partial reading of Bell's corrections and the failure to highlight the 'exaggeration' of topographical features suggests the maps inaccuracy. As Notfors (2018) states, cartography is 'the result of a mode of representation that is inherently selective' (Notfors 2018, 592).

It is important to investigate Carruthers' career prior to his dissemination of the map at the RGS. Carruthers was an explorer, and naturalist (Anon 2004), and in 1909 had travelled in north-western Arabia on a similar route to Bell (Carruthers 1910). This allowed Bell to use his geographic knowledge of the region for her own journey. As Bell states, 'For the next three weeks I crossed not infrequently the two routes of Mr. Carruthers and was much helped by his map' (Bell 1914, 76 – Figure 5.11 to 5.14). Yet it is also important to note the difference of interpretation between Bell and Carruthers on their similar traverse, as Hogarth stated, 'The ruin which Carruthers saw on his return journey. He guessed it to have been a caravanserai on a Roman trade-route to the Persian Gulf, but Miss Bell thought it an early Islamic castle like Tuba' (Hogarth 1927, 6). This difference in opinion may have extended to other differences in interpretation, such as topographical observations.

The use of prior knowledge is evident in Bell's reference to several, other, European explorers on the map. Bell, for example, makes reference to Alois Musil, 'Djelih el Guief (Musil)' (See Figure 5.8), 'Name see Musil (Hijaz)' (See Figure 5.6) and 'Musil "Kuban et Tayarie"' (See Figure). Musil, an Austrian intelligence spy (Heffernan 1982), travelled to Northern Arabia in 1908 to 1909 and published information on his journey, including the map of Arabia Petraea, a map of Northern Arabia (Figure 5.15) and a topographical report with plans, sketches, photographs and an 'exact' description of the whole area explored (The Geographical Journal 1910, 581). Bell cites this topographical report on the map for example, 'Musil p. 20 1908-1909' (See Figure 5.5). Bell also makes reference to Charles Huber, a French traveller who explored the Arabian Desert from Palmyra to Syria (Bowersock 1996). Huber, similar to Carruthers' and Musil, produced a map in 1884, which provides topographic features including 'basalt plateau' and 'water flow' (Figure 5.16 – World Digital Library). Bell makes reference to this knowledge, for example, at T. Agharri 'Huber says Melussa well also chilled El Rah El Ghrary' (See Figure 5.5), which demonstrates Bell's use of Huber's strategic observations in the map (Foliard 2017). The RGS relied on Huber's observations to assess Bell's geographic knowledge, as Hogarth stated, 'Judged by a subsequent observation at Hayil, which, when computed, agreed within 42" with another obtained by Charles Huber, her latitudes may be relied upon' (Hogarth 1927, 6). The reliance of the RGS on Huber's observation to assess Bell's, undermines her ability to make accurate measurements. It is important to note that the use of foreign explorers by Bell – Huber and Musil – was due to the collaboration of geographic knowledge between the major powers for the imperialist 1:1 project (Heffernan 2002) and Huber's knowledge would have been available at the time of the map's authorship in 1917, with the Sykes-Picot agreement signed in 1916.



On the map, Bell also makes reference, as Sir Percy Cox (1927) stated, to ‘the great expeditions of Sir Charles Doughty-Wylie, Lady Anne Blunt and Charles Huber’ (Cox et al. 1927, 17). Lady Anne Blunt is referenced by Bell; ‘Kasr Hazih (Blunt)’ (See Figure 5.5). Bell consulted Blunt’s work, *A Pilgrimage to Nejd* (1881), which contained a map and notes on the physical geography of Northern Arabia before her journey. This is evident where Bell labels a pair of hills, Jebel Marabib and Ims el Ma, with a quote from the book (Figure 5.17 RGS N06). This quote, implemented by Bell, and employed by Blunt, originates from a previous traveller, Dr. Colvill’s, observation, ‘To take the bearings of the country, for there is a splendid view now of Jebel Shammar, no isolated peak, as Dr. Colvill would have it last year, but a long range of fantastic mountains’ (Blunt 1881, 202). Three layers of recorded observation are seen here with each successive traveller engaged with the work of their predecessors to draw an ‘accurate’ reading of Arabia (Notfors 2018, 596).

Doughty traversed a similar route in Northern Arabia, as Hogarth (1927) states in regard to Bell’s meeting with the nominal leader of Hail Ibrahim as Subhan, ‘They had a polite conversation about former European visitors, especially the Blunts and Doughty’ (Hogarth 1927, 11). Bell makes several references to Doughty, for example, ‘For the spelling see Doughty’ (See Figure 5.9) and ‘Doughty – was ruined village’ (See Figure 5.4). This demonstrates that Bell incorporated Doughty’s previous expedition in 1877 and, perhaps, used ‘the Sketch Map Itinerarium of part of North Western Arabia and Nejd’ (Notfors 2018, 590), produced for the RGS in his *Travels in Arabia Deserta* in 1883 (Figure 5.18). It is important to note that Carruthers also mentions Doughty in his account of his own journey, ‘I now reached a most interesting region called ‘Itbaik’, which I am of an opinion is the same as the range of hills mentioned by Doughty’ (Carruthers 1910, 234). This reinforces the point that each traveller engaged with the work of their previous travellers.

Finally, Bell makes reference to Sir William Willcocks. Willcocks was a civil engineer in British India, who developed irrigation systems for the benefit of British protectorates (Foliard 2017, 122). Bell in *Amurath to Amaruth* states ‘The one ray of hope for the future sprang from the labours of the irrigation survey’ (Bell 1911, 87). This demonstrates Bell’s admiration for Willcocks’ work and perhaps suggests why his knowledge of the region is cited in her map. Bell makes reference to Willcocks for example, ‘Hit and Ramadie placed in relation to Nejef according to Wilcox’ (RGS N06). This makes clear that her route intersects with Willcocks’ earlier expeditions, and Bell and Carruthers’ placement of these towns in relation to one another depends, in part, on Willcocks’ judgement. It is important to note, Willcocks’ ‘imperialist ideology of development’ and his use of his role as an engineer to fuel his ‘exploratory appetite’ (Foliard 2017, 122). The ‘imperialist ideology’ held by Willcocks perhaps holds influence in the map, for example where Willcocks places Hit and Ramadie may have been for his development plans, rather than as an accurate representation of their location.

It is important to note that this imperialist incentive, held by Willcocks, is sustained by other Europeans referenced in their desire to fill in the ‘blank spaces of Arabia’ (Satia 2008, 60). This is demonstrated by Carruthers, for example where he states, ‘I therefore determined to make an effort to travel over and map out the blank that exists between the Hijaz railway and the Wadi Sirhan, to determine the Western limits of the Great Nafud’ (Carruthers 1910, 225). In similar vein on Musil’s expedition, ‘By his last journey Alois Musil has removed from our maps the blank space which covered the whole large triangle between Arabia Petraea and Syria, on the one hand, and Mesopotamia on the other’ (The Geographical Journal 1910, 579). This demonstrates their work as a contribution to the construction of the ‘imaginative geography’ of Arabia (Foliard 2017).

The European explorers referenced by Bell – Musil, Huber, Blunt, Doughty and Willcocks – demonstrate its multiple authorship, and certify the map as a ‘heteroglossic travel narrative’ (Notfors 2018, 596). Bell’s corrections, and Carruthers reading of them, along with Bell’s incorporation of European explorers inherently constructs a Western reading of the region (Foliard 2017).

The use of Europeans’ prior knowledge in the map demonstrates that Bell’s route was well-traversed. As Hogarth (1927) notes, Bell’s ‘stay in Hayil was fruitful, not of fresh topographical matter – for the place had been well described a generation before and had not materially changed’ (Hogarth 1927, 16). In an entry written by Bell in 1914 she states her doubt over the importance of her role in the British project in Arabia, ‘A compass traverse over country which was more or less known, a few names added to the map and probably that is all. And the road to Baghdad has been travelled many times before. It is nothing, the journey to Nejd, so far as any real advantage goes, or any real addition to knowledge, but I am beginning to see pretty clearly that it is all that I can do’ (GBA NUL Diaries Bell 1914). Bell’s concern lies in her re-treading already well-travelled ground – the landscape she depicts is more or less known and the road to Baghdad is established.

This inability to produce geographic knowledge is exemplified by Bell’s difficulties on her journey, for example in Hail where her sense of isolation, ‘an unwelcome consciousness of being alien and incongruous’ (Hogarth 1927, 12), hindered her collation of geographic knowledge. For Hogarth (1927), ‘What could she add to his (Doughty’s) picture, penned, as she was, like a plague-stricken patient, within an implacable cord’ (Hogarth 1927, 12). This suggests why Bell was so reliant on the use of the knowledge of her European predecessors, as she was unable, herself, to produce the knowledge. It is the difficult journey to Nejd, a vast desert well, that becomes ‘nothing so far as any real advantage goes, or any real addition to knowledge’ (GBA NUL Bell 1914). For Notfors (2018) it is her lack of

having made a contribution to knowledge and to national advantage within the context of other explorers that her anxieties hinge upon (Notfors 2018, 600). This corroborates the perspective that women travellers were not truly adding to geographic knowledge because they were not surveying ‘new’ lands (Stoddart 1991; Winstone 1978).

### Invisible functionaries

The map’s production was reliant on functionaries at the RGS, whose comments are hidden from material view (See Figure 5.3). In a letter to Bell in 1914, Hinks states, ‘If you asked for Mr Addison, the principal draughtsman, he will do everything that is necessary’ (See Figure 4.5 RGS CB8) and in 1915 Bell states, ‘I was so very grateful to Mr Ashley for coming around to do some map mounting for me’ (See Figure 4.9). This demonstrates the additional functionaries working on the map – Mr Ashley and Mr Addison – who would have played a fundamental role in the interpretation of Bell’s geographic knowledge. In a letter to Bell, Hinks states, ‘They (the draughtsmen) will no doubt be able to go on working them out, up at any rate to a certain point, when perhaps they may have to call in your aid’ (See Figure 4.5 RGS CB8). This suggests that Mr Addison was left to interpret much of Bell’s work at the RGS. In another letter to Hinks in 1916, Bell states, ‘Many many messages to Mr. Carruthers. I wish he were here. I wanted him as map officer, but they preferred to retain a gentleman who had never seen a map since he was taught the use of the globes in infancy. Or so I judged. Abject stupidity, we must remember the Gods themselves fight vainly’ (Figure 5.19 RGS CB8 Bell to Hinks 1916). This demonstrates an alternate functionary on the map who goes unnamed and is condemned by Bell for his ‘Abject stupidity’. The failure to account for these functionaries, demonstrates the partial representation of those at work in the map.

## Conclusion

Far from being solely 'Gertrude Bell's' construction, the map of Arabia was the work of multiple agents. The focus of this chapter has been on those explicitly cited in the map, with brief mention of the invisible functionaries who played an important role in the map's creation. The following chapter goes on to discuss, in depth, those who are silenced.

## **6: Excluding: The Marginalisation of Indigenous Knowledges**

This chapter gives voice to the knowledge and observations of those unaccounted for in the map. More specifically, the local intermediaries whose work Gertrude Bell relied on to navigate and negotiate her way through Northern Arabia (Jones 2010, Schaffer et al. 2009).

### **Local Intermediaries and Their Facilitation of Bell's Travel**

In order to navigate the land, Bell was heavily reliant on her guide 'Fattuh' – Jay Abdo (Figure 6.1 GBA, NUL, Photographs X\_018–Album X, 1913-1914). This is demonstrated when Bell's initial route was revised due to her guide's illness. As Hogarth stated, 'The original plan was to slip into the Hamad desert on the east of the Damascus oasis. An illness, however, which struck down Fattuh, her indispensable body-servant, led her so to modify this plan' (Hogarth 1927, 2). The reliance on native contacts was also fundamental for safety (Figure 6.2 GBA NUL Y\_001 – Y Album 1913). This is demonstrated as Hogarth (1927) notes, 'the party fell-in with armed shepherds of the Masaid tribe. In the nick of time, however, two of its members were recognised for friends and sheikhs, coming up, called off the attack, restored the booty and supplied a rafiq' (Hogarth 1927, 4). The RGS may have provisioned the necessary training and equipment, but it was the native contacts who provisioned, more importantly, Bell's navigation and safety.

It was not only their lives but their reputations, which Europeans relied on to form geographic knowledge (Driver 2015). As Foliard (2017) notes, 'The local point of view was always a factor that determined the quality of the survey and the map' (Foliard 2017, 41). The Europeans referenced by Bell were heavily reliant on their native contacts. Musil, for example states, 'My latitudes for points between my routes were determined either by plane-table or from precise topographical descriptions given me by various natives who sketched

for me maps of regions which I could not visit in person' (Musil 1927, 13). This demonstrates that 'Europeans were not at all masters of all they surveyed' (Driver 2015, 14). Thus, when Bell cites 'Musil' in her map she is not actually citing Musil per se, but the work of his local contacts who disseminated the geographic knowledge of the region for him.

It has been suggested by Notfors (2018) that the map's exclusion of native contacts was a result of Bell's anxiety over her gender. This is in contrast to Bell's male counterpart T.E Lawrence, an intelligence officer (Lawrence 2004), who includes indigenous contacts in his Compass Traverse in 1917. Lawrence makes no reference to previous Western travellers but rather makes note of a local contact Auda Abu Tayi. In doing so he marks the traverse as an 'intellectual product' (Notfors 2018) dependent upon the situated local knowledge of this inhabitant. For Notfors (2018), Lawrence thus includes more detailed indications of the Wadis and undulations of terrain through which, his route travels than Bell is able to do, 'Lawrence uses local testimony to give more compositional, and thereby conceptual weight, indicating a more tentative approach to the environment than Bell' (Notfors 2018, 599). It is perhaps Lawrence's position as a man, which facilitates the confidence needed to incorporate the native knowledges. Bell's failure to demonstrate her knowledge as co-produced with local intermediaries is a result of her anxiety to prove her presence in the landscape and consequentially the knowledge disseminated is less informed.

The RGS in publications of Bell's 1913 to 1914 journey stress Bell's ability to 'penetrate Nejd alone' and claim her journey was a 'single-handed achievement' (Hogarth 1927, 1). The emittance of Bell's indigenous guides corroborates the view that native contacts were not credited for the geographic knowledge produced. Hogarth also states that Bell was 'the first European to find a way across the south-western angle of the Nefud and to prove the existence of wells there' (Hogarth 1927, 16). The emphasis of Bell being 'the first European' recognises that natives had already established a way across the Nefud and would

have known the existence of the wells prior to Bell's journey. The marginalisation of native contacts is further illustrated in an extract from *The Times of India* (1927), which states that Bell 'had travelled unaccompanied save by a few servants' (*The Times of India* 1927, 14 – Figure 6.3). This does not provide credit to the local guides who facilitated the navigation and safety of Bell's journey and reduces their role to 'servants'. With the contribution of local contacts commonly removed from view, European travellers – namely Bell – were, so it seemed, 'invested with magical powers enabling them to float across desert without the slightest need for support or guidance' (Driver and Jones 2010, 5).

### **'Effendim': Bell's Status as an 'Honorary Man' Amongst Local Elite**

The practice of disguise as a local, was used to facilitate Bell's travel. 'Becoming' a native was held to lend a degree of verisimilitude for the transient explorer, even 'as it raised questions about disclosure of travel facts by deceit' (Withers et al. 2015, 84). There is evidence of Bell's disguise, for example, in an earlier trip to Syria and Jordan, where she wrote 'I wear a big white Keffieh bound over my hat and wound round me so that only my eyes show, and they are partly hidden by a blue veil' (GBA NUL, Bell to Hugh Bell, letter 30 April 1900). Bell's fluency in the language, also constituted part of her disguise as a local (Howell 2007). The decision to dress as a local, demonstrates Bell's awareness of the privileges gained from disseminating geographic knowledge as a native. For Withers (2018) 'In its more practical senses adopting suitable dress, for example, or learning the language, disguise was a matter of security and of common sense' (Withers 2018, 499).

Bell also disguised herself as a man, in the same account she states 'the chief comfort of this journey is my masculine saddle. Till I speak, the people always think I'm a man and address me as Effendim!' (GBA NUL, Bell to Hugh Bell, letter 30 April 1900). Being called Effendim, a Turkish masculine title of respect, conveys that Bell was treated as an 'honorary



man' amongst Arab circles (Maddrell 2009). The photographs of Bell from her travels usually depict her wearing Western feminine dress, indicating that Bell was practical, in balancing propriety with the physical demands of desert travel (Withers 2018 – Figure 6.4 GBA, NUL, Photographs W\_056 – Album W, 1916-1917; Figure 6.5 Y\_379 – Album Y, 1913-1914). Her dress was, as Duplisea (2016) notes, 'the most visual demonstration that masculinity was a tool for her, not a rebellious lifestyle choice' (Duplisea 2016 73).

This suggests that Bell used her disguise as a man, and also as a local, for practical purposes for travel in accordance with the heat and transport by camel, as opposed to employing it to gain geographic knowledge *purposefully* through deceit (Figure 6.6 – GBA, NUL, Photographs X\_018–Album X, 1913-1914). Richard Pope (1916), expresses the arduous journey when he states, 'I hope Gertrude's countrymen and countrywomen will be told how nobly she has served England under conditions of climate and discomfort which might well have daunted a man of iron' (Richard Pope–Hennessy 1916). Yet, as Withers (2018) argues disguise 'at its heart, is a form of lying, of self-serving interests, not of encapsulated trust' (Withers 2018, 499) and thus, despite the use of disguise for practicality the relationships of trust formed with local elite were still achieved through 'underhanded means' (Withers 2018, 499).

Rather than disguise as the fundamental tool for Bell's ability to form relations with local elite, Duplisea (2016) argues it was her high social standing at 'home', which connected her to the upper classes on her journey in Arabia (Duplisea 2016, 59). For Howell (2007), Bell's fluency in Arabic, understanding of proper deference and gifts, in addition to being able to prove that even as a woman she was the sheikh's social equal, were vital to moving through Arab tribal society (Howell 2007, 183). The native contacts helped Bell produce knowledge, yet it is important to commend Bell for her ability to form relations with those in

power, to speak Arabic and to understand the customs, all of which facilitated her ability to produce critical geographic knowledge.

It was Bell's social connections in Arab circles, and her regard as 'Effendim', which proved instrumental in her dissemination of military intelligence on tribal affairs. As Sir Henry Dobbs, an administrator in India (Shuckburgh 2004), stated, 'Her long acquaintance with the sheikhs makes her advice in the recurring crises in tribal affairs invaluable. She is, in fact, the connecting link between the British and Arab races' (Dobbs 1927). This is demonstrated in Bell's publication in the Arab Bulletin – *The Arab War – Confidential Information for General Headquarters* – where Bell discusses, for example, 'Tribal fights in the Shamiyah' (Arab Bulletin 1917) and a detailed report on 'Ibn Saud' (Arab Bulletin 1917). In the Arab Bulletin, Bell also expresses the ineptitude of the Ottoman Empire, 'No country which turned to the eye of the world an appearance of established rule and centralised Government was to a greater extent than the Ottoman Empire, a land of make-believe' (Arab Bulletin 1916, 9). *The Arab of Mesopotamia* also emphasises the benefits that the British government administration would bring to the country. This justification of the British presence in the region demonstrates Bell's employment of the imperialist rhetoric. This is further demonstrated in Bell's description of local society as one 'which, is yet in an elementary stage of development' (Arab Bulletin 1916, 15). To the British administration, Bell's knowledge of the Orient and its people made her an acceptable white, educated, upper class supplement for local knowledge.

The adoption of these imperialist strategies was used by Bell to place herself within communities of knowledge and power (Duplisea 2016). As Bell states in *The Arab of Mesopotamia*, '[t]rue the Turks were bad masters, but who shall say the English will in the end be better?' (Bell 1917, 123). This demonstrates Bell's imperial voice was a strategic one, not an absolute reflection of her beliefs (Duplisea 2016).

It is important to note that *The Arab of Mesopotamia*'s preface states, the essays therein had been written 'by persons (Bell) with special knowledge of the subjects dealt with' (Bell 1917, 5). This is reiterated in *The Times of India* in 1918 (*The Times of India* 1918, 2 – Figure 6.7). Here Bell's knowledge is regarded as 'special knowledge' demonstrating its value, and although the book was anonymously authored, the fact the government granted Bell the authority to write it demonstrates the value and importance of her geographic knowledge (Duplisea 2016).

Despite Bell's knowledge being valued, Bell was not provided an official position in the Arab Bureau until 1916, as Oriental Secretary of the High Commissioner – intelligence expert and chief adviser of Arab affairs (Lukitz 2004). As Philip Graves later recalled 'though she took it for granted that she was a member she had joined the staff in Mesopotamia as a free-lance' (Satia 2008). Bell expressed her informality uncomfortable, after Hogarth published private letters in the Arab Bulletin and requested Sir Percy Cox, Chief Political Officer, to define her duties more clearly. The desire to consolidate official standing was 'an attempt to protect her position with a veneer of formality' (Satia 2008,). Bell's anxiety over her gender, and thus her decision to exclude native knowledge from her work with the RGS, may have been fuelled from the failure of the British administration to formerly acknowledge her.

## Conclusion

This chapter has demonstrated the critical role of local intermediaries in their facilitation and dissemination of geographic knowledge. While viewing the encounters through the eyes of the locals is impossible, it is imperative that their role be acknowledged and discussed appropriately for the essential contribution they made (Wess 2017).

## **7–Conclusion**

This final chapter reflects on the findings of this dissertation, its limitations and the implications of my research. In doing so, I argue we must include *all* knowledges in a historiography of geography.

In conclusion, Gertrude Bell supplied fundamental military intelligence in her cartographic work for the Royal Geographical Society's 1:1 million mapping project in the First World War. Gertrude Bell demonstrated competency in the use of instruments for 'accurate' dissemination of geographic knowledge. The reliance of the Royal Geographical Society on her topographic observations and authority in transliteration also demonstrates that her knowledge was strategically vital (Tripp 2017; Lukitz 2004; Maddrell 2009; O'Brien 2000; Wallach 2005; McCarthy 2014). This is exemplified by the Royal Geographical Society's provisioning of the necessary training and instruments for Gertrude Bell's 1913 to 1914 journey and their request for her to lecture and publish in their journal. It is important, also, to credit Gertrude Bell with her ability to form relations with the local elite on her journey, which facilitated her formation of critical geographic knowledge for the British administration (Howell 2007). For these reasons Gertrude Bell should be included in a historiography of geography as propagated by Domosh (1991). Yet, Gertrude Bell was heavily reliant on specific factors, and multiple knowledges to disseminate this geographic knowledge. Gertrude Bell's high social standing (Graham-Brown 1985) and position as an 'honorary man' (Wallach 2005; Maddrell 2009; Tripp 2017) placed her firmly in the institutional support of the Royal Geographical Society. This is important as it was Gertrude Bell's position amongst the high social strata, rather than her gender, which allowed her to immerse herself in communities of knowledge and power (Duplisea 2016). It is also fundamental to highlight the influence of the Royal Geographical Society, in particular the Map Curator, Douglas Carruthers, and the invisible functionaries who constructed a

particular reading of Gertrude Bell's corrections. The knowledge produced by Gertrude Bell was reliant on the European explorers who traversed Northern Arabia prior to her journey and the local intermediaries who helped to navigate and negotiate her way through Northern Arabia. This demonstrates that multiple agents were active in the map's construction. The contribution of Douglas Carruthers and the European explorers are identified, but the functionaries at the Royal Geographical Society and the local intermediaries are excluded. I argue these marginalised knowledges must be included in a historiography of geography. By arguing the need to place only women in a historiography of geography, Domosh (1991) constructs exclusion in her failure to account for other marginalised voices. As Godlewska (1991) propounds, 'part of a good conceptual history is the recovery of forgotten ideas and personalities' (Godlewska 1999, 9), which includes the knowledges of the invisible functionaries and the local intermediaries, paramount to the construction of *Gertrude Bell's* geographic knowledge. I thus, stress the need to produce a historiography of geography, not simply, or exclusively of women, but of *all* marginalised knowledges. Once we have achieved this, we can finally say we have produced a fuller and more 'critical' historiography of geography.

I want to note here the limitations faced in this research. Gertrude Bell was unable to produce a full account of her 1913 to 1914 journey. Thus, this dissertation draws heavily on Hogarth's (1927) reconstructed narrative based on his interpretation, rather than Gertrude Bell's. This is significant as Hogarth (1927) may have interpreted Gertrude Bell's journey incorrectly and thus my evidence impeded. It is also important to note, that some of the letters in the correspondence collection did not specify the author and date. This is important to note, as the dissertation references the Royal Geographical Society's prediction of these providential classifications, which could be incorrect. It is also critical to note, that not all the material disseminated by Gertrude Bell for the Royal Geographical Society was accessible –

some material was confidential at the RGS-IBG archive. Thus, the research in this dissertation is not a full reflection of Gertrude Bell's work for the Royal Geographical Society. I have also chosen in this research to focus entirely on the manuscript map to investigate its authorship. Further studies on her work, would benefit from an analysis of the authorship in the manuscript map in comparison to that of the published map.

I now want to demonstrate how the research of this dissertation has important implications for future research. I have shown the fundamental role of military intelligence to the First World War (Heffernan 1996) and argue for further studies to do the same. I have also demonstrated the importance of studying cartography in the Near East in regard to the inherently Western 'imagined geography' of the region (Foliard 2017). In focusing on the authorship of the map this dissertation has demonstrated the need to show how, and by whom, maps were produced, as opposed to the typical focus on the generic power relations of the 'finished' map content (Edney 2009, 14). Maps do not exist in a vacuum. Rather, 'they are the product of an assemblage of people and of discursive practices' (Foliard 2017, 3). It is essential for studies to investigate the authorship of the map to expose the multiple knowledges which construct them. Finally, the overarching argument of this dissertation has far reaching implications. It emphasises the need to not only place women in a historiography of geography but *all* marginalised knowledges. By doing so, geographers will propagate a fuller, more 'critical' historiography of geography.

## 8–Table and Illustrations.

Table 3.1 – It is of necessity to demonstrate the principal dates and information on Gertrude Bell’s pre-war expeditions where she began accumulating geographic knowledge on the region.

<b>1900</b>	Travelled to Petra, Palmyra and Baalbek, the first of a series of desert journeys and aroused an interest in Syrian archaeology (Lukitz, 2004).
<b>1905-1906</b>	Embarked on a journey through the Syrian desert to Konia in Asia Minor, where she pursued her interest in the Byzantine churches of Anatolia (Lukitz, 2004).
<b>1907</b>	Explored the Hittite and Byzantine site of Bin-bir-kilisse in Turkey, establishing the chronology of Byzantine churches in the region. (Returning to Britain Bell published <i>The Thousand and One Churches</i> (1909) writing on the buildings and ecclesiastical architecture).  Published <i>The Desert and the Sown</i> , which politically described the heavy Ottoman presence in the Arab towns and cities (the ‘sown’ areas) but practical absence from the desert areas where the Bedouin tribes were the effective rulers (Lukitz, 2004).

<p><b>1909</b></p>	<p>Surveyed the Roman and Byzantine fortresses on the banks of the Euphrates in Mesopotamia. Started from Aleppo and reached Ukhaidir March 1909, returning through Baghdad and Mosul to Asia Minor.</p>
<p><b>1911</b></p>	<p>Account of her journey <i>Amurath to Amurath</i> (1911). It is argued as notable for its account of the changes that took place in the Arab provinces of the Ottoman empire after the Young Turks' rise to power in 1908 and the dissemination of their ideas in the empire's provinces.</p> <p>A further expedition to Mesopotamia in 1911 enabled Bell to undertake a fuller survey of the palace of Ukhaidir, completing her initial sketches and drafts while exchanging notes with a German archaeological team.</p> <p>Published <i>The Palace and Mosque of Ukhaidir: a study in Early Mohammadan Architecture</i> (1914).</p>



Figure 4.1 – Letter from Gertrude Bell to John Keltie in 1913, where Gertrude Bell asks for 'the money in the form of an instrument' (RGS CB8).

am about to make to me.

But since they have  
determined upon it

I must express my  
very grateful thanks.

Yrs. of course I will

come to the meeting

on May 26<sup>th</sup>. I think

I should probably like to

have the money in the

form of an instrument

but will you let me know

a day or two to

consider the matter?

Believe me yours

Sincerely

Gertrude Bell

Figure 4.2 – Letter from Arthur Hinks to Gertrude Bell in 1915 stating ‘My work calculations were fairly correct I think’ (RGS CB8). The words ‘fairly’ and ‘I think’ do not imply absolute certainty in her measurements.

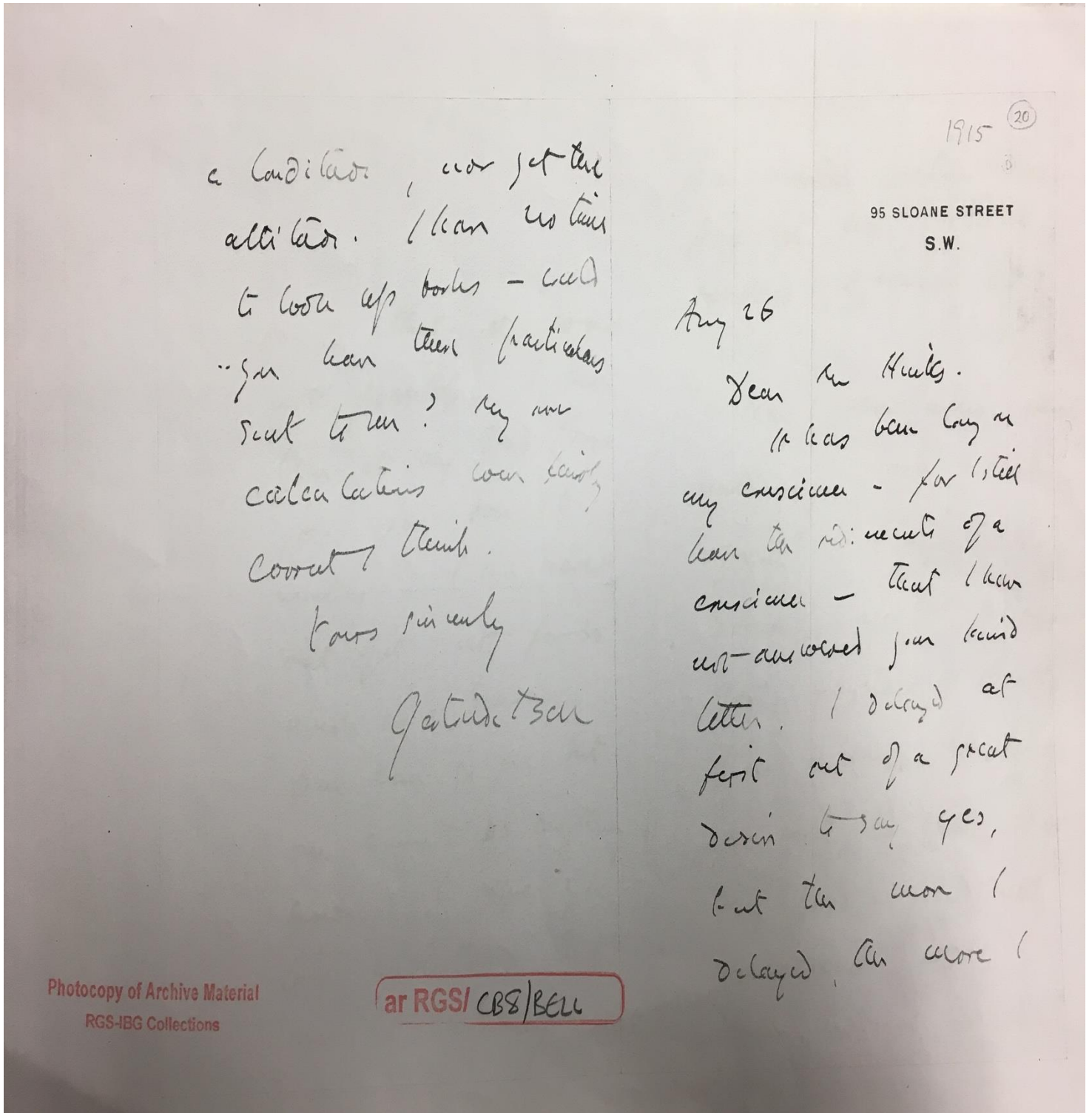


Figure 4.3 – Evidence of Gertrude Bell's competency in measurements – Longitude by Chronometer from Altitude of Sun. Theodolite Observation (RGS GLB/1).

ar RGS/ GLB / 1

LONGITUDE BY CHRONOMETER FROM ALTITUDE OF SUN. THEODOLITE OBSERVATION.

Latitude  $27^{\circ} 31' 0''$  Bar. 26.6 inches  
 Ther.  $70^{\circ}$

Year. Month. Day. 1914 Feb. 28<sup>th</sup> Times by Watch. h. m. sec. E. Level Readings. E. O. Altitude of  $\odot$ . Mean of A & B verniers.

4-29-35	FR <sup>A</sup> / <sub>B</sub>	79-8-0	10-52-0
4-33-11	FR <sup>A</sup> / <sub>B</sub>	10-52-0	10-52-0
P.M. 4-34-30	FR <sup>A</sup> / <sub>B</sub>	10-35-0	10-35-0
4-37-58	FR <sup>A</sup> / <sub>B</sub>	80-51-0	9-9-0
4-39-12	FR <sup>A</sup> / <sub>B</sub>	81-4-0	8-56-0
4-43-25	FR <sup>A</sup> / <sub>B</sub>	8-40-0	8-40-0
	FR <sup>A</sup> / <sub>B</sub>		
	FR <sup>A</sup> / <sub>B</sub>		

Mean =  $4-38-46.2$       Mean =  $9-20-0$   
 Error of Watch on G.M.T. +  $37-18$       Level Error  $\pm$   
 G.M.T. =  $5-16-42$       Refraction -  $4-50$   
 Apparent Longitude }  $2-48-12$       Semidiameter  $\pm$   $9-15-10$        $\odot$ 's Declination (P. II. N.A.)  $8-10-22.5$   
 Apparent G.M.T. =  $2-27-52$       Parallax +  $9-31-20.0$       Correction for Hourly Diff.  $2-19.7$   
 Corrected Declination  $8-8-29$   
 True Altitude  $9-31-29.2$       Polar Distance (N. or S.)  $98-8-3$

True Altitude  $9-31-29$       Secant  $10.052137$   
 Latitude  $27-31-0$       Cosec.  $10.004391$   
 Polar Distance  $95-8-3$   
 $2) 135-10-32$   
 $\frac{1}{2}$  Sum  $67-35-16$       Cosine  $9.581230$   
 $\frac{1}{2}$  Diff. between Sum and True Alt.  $58-3-47$       Sine  $9.928718$

$\odot$ 's Hour  $4-59-15$        $\dagger$  log sin square =  $9.566476$   
 \* 24 - 0 - 0  
 Apparent Time at Place  $12-48.6$       Equation of Time  
 Mean Time at Place  $5-11-50.1$   
 G.M.T.  $4-38-46.2$       Longitude in Time =  $33-39$       Longitude =  $33-39$

$\dagger$  When no Log. Sin. sq. table is available, the hour angle can be found as follows: Take the sum of the four Logs. as above and divide it by 2; the result is the Log. Sin. of half the hour angle in degrees; from the table of Log. Sin. take out the Arc corresponding thereto, and multiply it by 2; convert the Arc into time, and the result will be the hour angle.

Photocopy of Archive Material  
RGS-IDG Collections

Figure 4.4 – Azimuth. By Sun or Star with the Theodolite. (RGS GLB/1)

at RGS/ GLB/1

Photocopy of Archive Material  
RGS-IBG Collections

**AZIMUTH.**  
**BY SUN OR STAR WITH THE THEODOLITE.**

Sun or Star	Lat. ( $\phi$ ) . . . . .	° ' "	R.O.
Page in Angle Book	Approx. Long. . . . .	H. M. S.	
Place	Bar. . . . .		Mag. Bearing } °
Date	Ther. . . . .		of R.O. }

$\tan \frac{A}{2} = \sqrt{\sec s \sec (s - p) \sin (s - \phi) \sin (s - h)}$  and  $s = \frac{h + \phi + p}{2}$

A = Horizontal Angle between the Elevated Pole and the Sun or Star. h = True Alt.

In this formula the latitude ( $\phi$ ) should be taken with the positive sign whether N. or S. and the Polar Distance ( $p$ ) is then to be reckoned from the Elevated Pole.

**ELEMENTS.**

Refraction due to Alt. =	"		
Corr. for Bar. . . . .	± =		
Corr. for Ther. . . . .	± =		
Refraction . . . . .	=		
Hor. Par. (page I., N.A.)	x		
Cos. alt. . . . .	=		
∴ Parallax in Alt. . . . .	=		

Omit with M.T. Chron.	G.S.T. of G.M.N. (page II., N.A.) . . . . .	H. M. S.
	Corr. for Long. at 9.36 sec. per hour (or Accen. table 23 Paper) (+ W. - E.)	=
	L.S.T. of L.M.N. . . . .	=
	Mean of Times (Angle Book) . . . . .	=
	∴ Sid. Int. from L.M.N. . . . .	=
Omit with M.T. Chron.	Retardation or M.T. Equivalents (Table in N.A.)	h. m. secs.
	∴ L.M.T. of Obsn. (If M.T. Chron. used this is taken direct from Angle Book.)	=
With Sun Obsn. only.	Long. E. (-) or W. (+) . . . . .	± =
	G.M.T. of Obsn. . . . .	=
	∴ Int. from G.M.N. in hrs. . . . .	=

**COMPUTATION.**

From Angle Book . . . . .	° ' "
Mean Obsd. Alt. . . . .	=
Corr. for Refraction . . . . .	= -
Corr. for Semi-diam. ± =	
Corr. for Parallax . . . . .	= +
True Alt. (h) . . . . .	= 40-6-37
Latitude ( $\phi$ ) . . . . .	= 27-31-0
Polar dist. (p) . . . . .	= 58-29-29
	(2) 163 12-6
	81-36-3

Decl. ( $\delta$ ) at G.M.N. (N. or S.) . . . . .	± =	5-29-29 S
Hourly Var. (page I., N.A.) x Int. from G.M.N. . . . .	± =	+ 5-0
Decl. ( $\delta$ ) of Sun. or * at time of Obsn. . . . .	± =	5-24-29
		90 00 00
∴ Polar dist. (p) . . . . .	=	95-34-29

Note.—"p" is reckoned from elevated pole, ∴ if  $\phi$  and  $\delta$  are of different names "p" will be negative and  $p = 90 + \delta$ .

95-34-29  
81-36-3  
13-58-26

81-36-3  
27-31-0  
54-5-3  
81-36-3  
40-6-37  
41-29-26

s = 81-36-3  
s - p = 13-58-26  
s -  $\phi$  = 54-5-3  
s - h = 41-29-26

Log. Sec. = 10.835443  
Log. Sec. = 10.013047  
Log. Sin. = 9.908421  
Log. Sin. = 9.821123  
2) 10.578094  
Log. tan.  $\frac{A}{2}$  = 70.289047  
 $\frac{A}{2}$  = 62 47-51 2

832  
715  
+7  
517  
488  
29

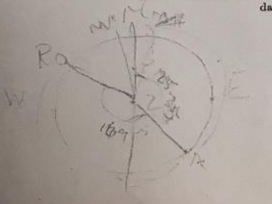
95-34-29  
86-28-41  
7-5-48

86-28-41  
27-31-0  
58-57-41

86-28-41  
49-51-2  
36-36-48

Angle between R.O. and \* (or Sun) (from Angle Book) = 169-4-0  
∴ Azimuth of R.O. from Elevated Pole = 294-39-42

† Note.—Azimuth for Geodetic purposes should be measured from the South (by West). It is best ascertained from the above data by consideration of a figure showing the relative positions of Star, Pole and R.O.



360  
299  
61  
294-39-42  
299-6  
4-20-18 W

(14)

Figure 4.5 – Letter from John Keltie to Gertrude Bell 1914. This letter demonstrates that Mr Addison was the principal draughtsman of the map, ‘Mr Addison, the principal draughtsman, he will do everything that is necessary’ (RGS CB8). This letter also demonstrates the request of the Royal Geographical Society for Gertrude Bell to lecture.

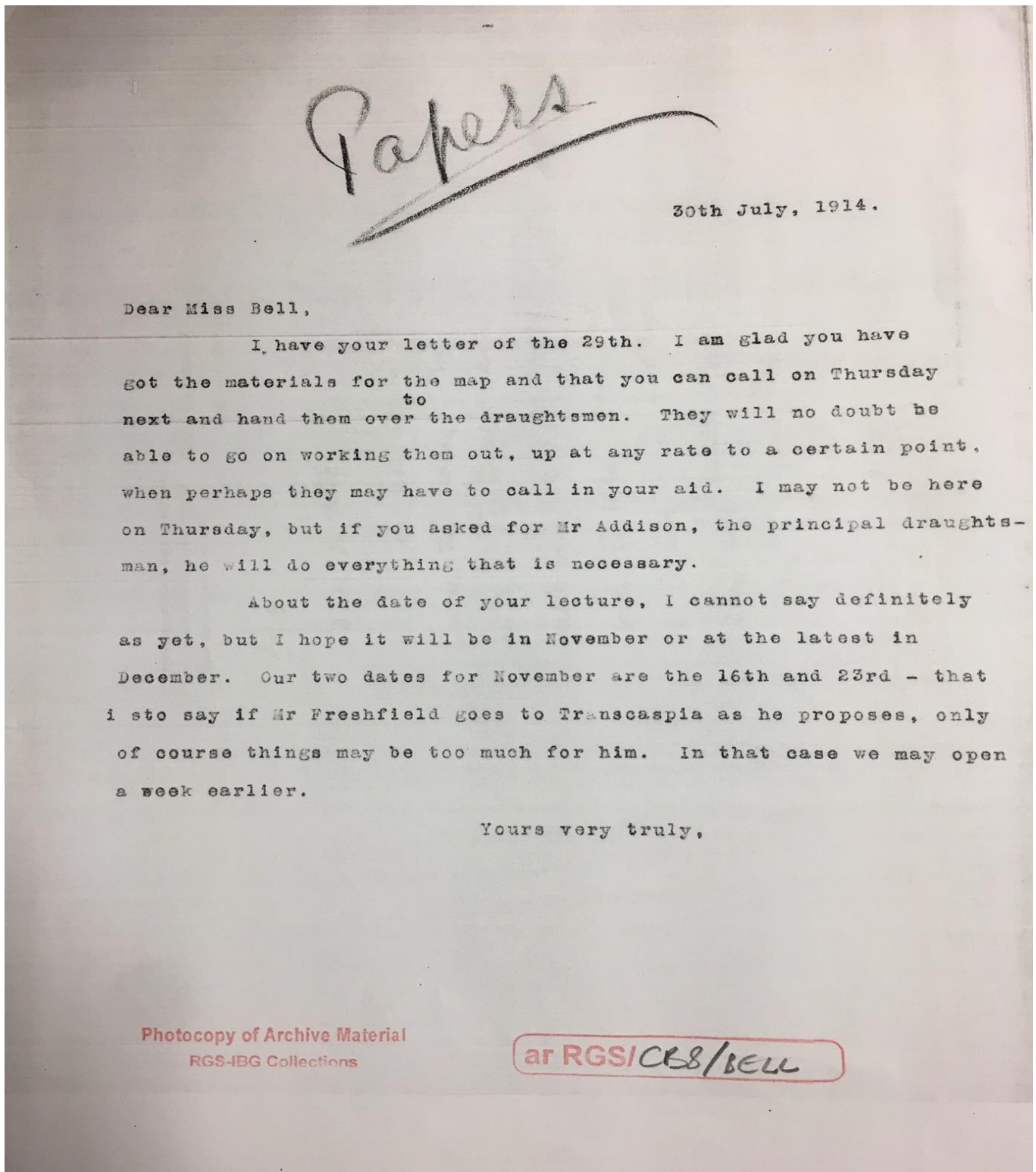


Figure 4.6 – Extract from *The Times of India* demonstrating Gertrude Bell being admitted as a Fellow in 1913, (*The Times of India* 1913, 5).

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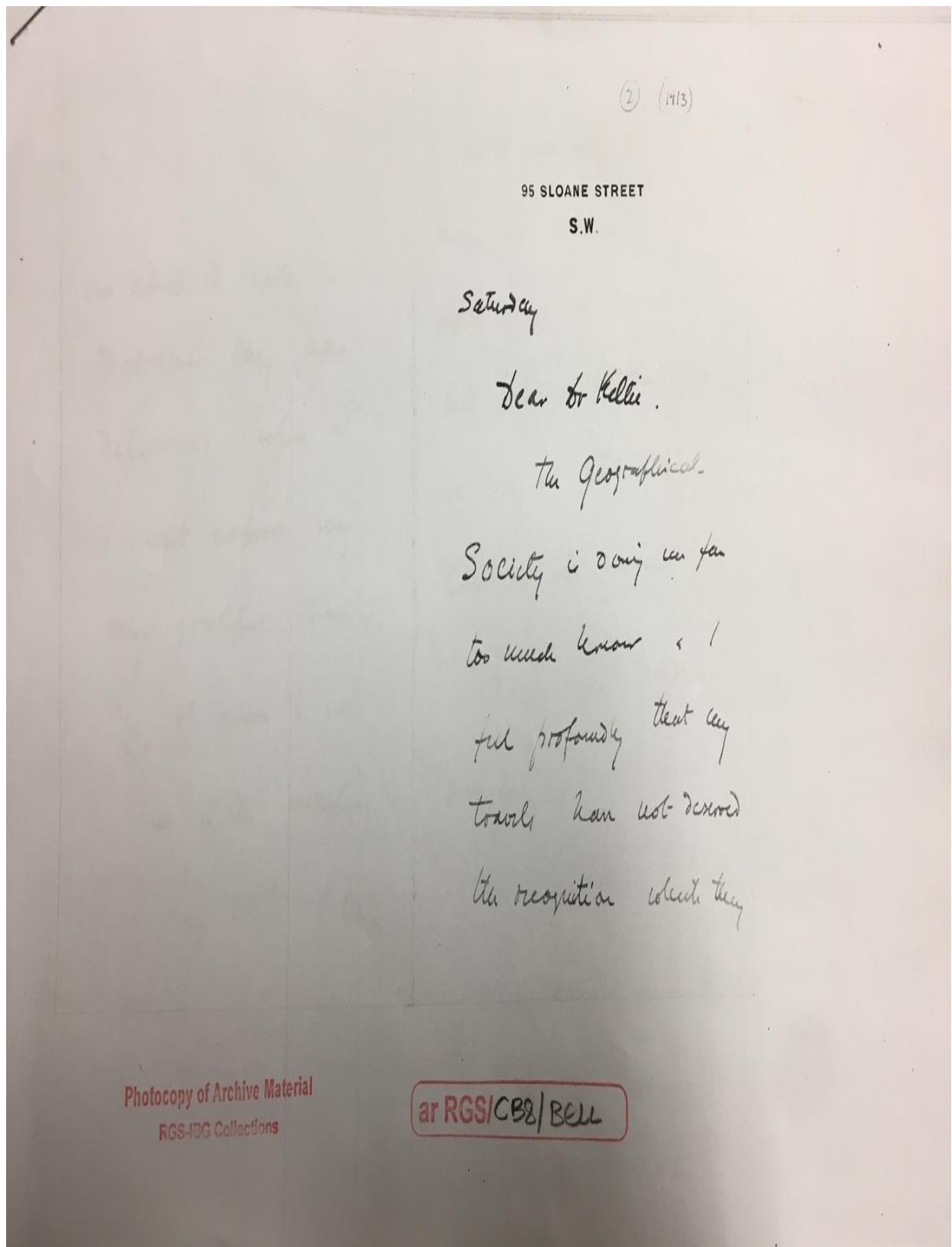
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## ROYAL GEOGRAPHICAL SOCIETY.

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The recent decision of the Royal Geographical Society to admit women as Fellows has been quickly acted on. Out of the following 26 who have just been elected Fellows, 16 are women:— Mrs. John Annan, Miss Emma C. Bell, Miss Gertrude Bell; George G. Brown, Rear-Admiral Montagu Edward Browning, Mrs. Annie Candler, Miss Christie, Carlos B. Cisneros, H. J. Elwes, Charles B. Fawcett, Miss Katherine Feilden, Mrs. Mildred S. Fox, Miss Mabel Fraser, Captain J. L. Grinlinton, Miss Amabel J. Head, Mrs. Longstaff, Percy C. Oswald, Mrs. Henry Paget, Lieut.-Col. Alexander Pringle, I.A., Miss Ariadne Rodocanachi, Mrs. W. E. Scott, Jordan H. Stabler, Miss Susette M. Taylor, Mrs. Olive S. M. Temple and Miss Vaughan.

Figure 4.7 – Letter from Gertrude Bell to John Keltie 1913 – Gertrude Bell states ‘the geographical Society is doing me far too much honour’ (RGS CB8). This perhaps introduces Gertrude Bell’s anxiety over her gender.



4.8 – Letter from Gertrude Bell to Arthur Hinks August 26<sup>th</sup>, 1915 (RGS CB8). Gertrude Bell has been requested to review the Gazetteer – this demonstrates the reliance on the intelligence community of Gertrude Bell's knowledge. This letter also demonstrates Gertrude Bell's preoccupation with her work at the Red Cross, which hinders her ability to contribute geographic knowledge for the Society.

found that it was  
not possible. I have  
been at my Red Cross  
job for over 10  
months. I am worn  
out of it, not for so  
much as a Sunday.  
One can go on, but  
one cannot do anything  
besides. I hope you  
will understand that I  
am not making excuses.

It is mental, rather than  
physical energy which  
reaches a realisation its  
limit.

May I, nevertheless, most  
unhesitatingly ask a kindness  
of you? A man who is  
drawing up the Indian  
Geog. Gazetteer of Arabia  
has sent me the article  
on Hajil to read. It is  
very good, needs little  
amendment but he  
has not got the Gazetteer



4.9 – Letter from Gertrude Bell to John Keltie in 1915 (RGS CB8). In this letter Gertrude Bell expresses her gratitude to the Society. This letter also addresses the invisible functionary Mr Ashley, where it states ‘I was so very grateful to Mr Ashley for coming around to do some map mounting for me.

New Telephone No.—GERRARD 3616.

*Papers*

**BRITISH RED CROSS**  
—AND—  
**ST. JOHN AMBULANCE.**

**ENQUIRY DEPARTMENT  
FOR  
WOUNDED AND MISSING**

12 April, 1915.

**20, ARLINGTON STREET,  
S.W.**

Arthur R. Hinks Esq.  
Royal Geographical Society,  
Kensington Gore,  
S.W.

Dear Mr Hinks,

I am in London but I might just as well not be, as far as you or anybody else, outside the Wounded and Missing Office, is concerned. I am in this office from 9 a.m. till 7-30 p.m. seven days a week, and I see no likelihood of the hours being shortened. Under these conditions I need not explain to you that I cannot lecture to the Geographical Society. You must please forgive me; ~~as~~ it is absolutely all I can do to get through my work. I see nobody and go nowhere.

I was so very grateful to Mr Ashley for coming round to do some map mounting for me. He is getting through it with extraordinary celerity. Will you be very kind and let me know what I owe the Society for this job when it is finished? I could not have got it done so well or so quickly elsewhere.

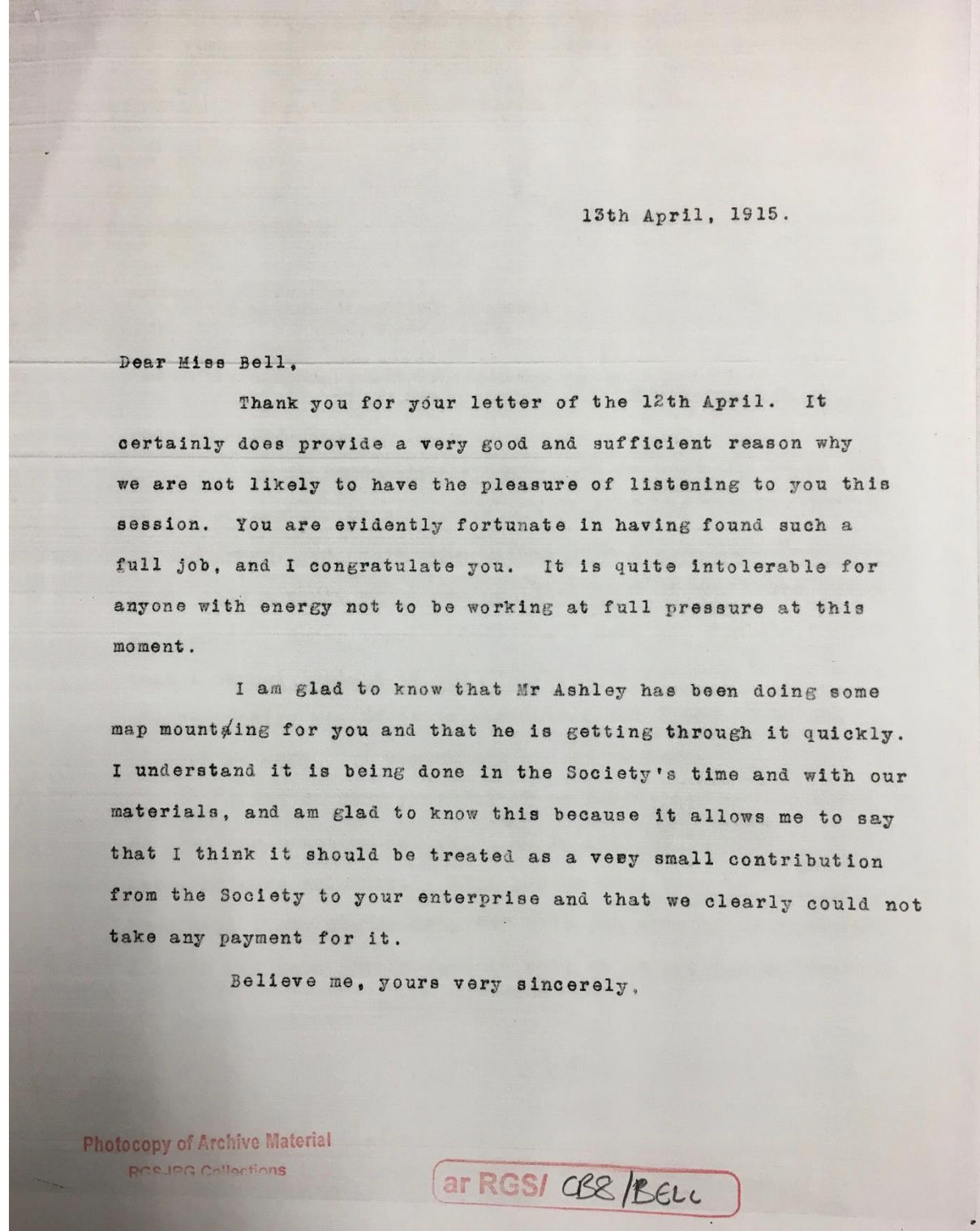
Yours sincerely,

*Gertrude Bell*

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at RGS/ CB8/BELL

Figure 4.10 – Letter from John Keltie to Gertrude Bell in 1915 (RGS CB8). In the letter the Royal Geographical say that their work on Gertrude Bell’s map was a ‘contribution to her enterprise’ yet it was also a contribution to their *enterprise* – the 1:1 project.



13th April, 1915.

Dear Miss Bell,

Thank you for your letter of the 12th April. It certainly does provide a very good and sufficient reason why we are not likely to have the pleasure of listening to you this session. You are evidently fortunate in having found such a full job, and I congratulate you. It is quite intolerable for anyone with energy not to be working at full pressure at this moment.

I am glad to know that Mr Ashley has been doing some map mounting for you and that he is getting through it quickly. I understand it is being done in the Society's time and with our materials, and am glad to know this because it allows me to say that I think it should be treated as a very small contribution from the Society to your enterprise and that we clearly could not take any payment for it.

Believe me, yours very sincerely,

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ar RGS/ CB8 / BELL

4.11 – Letter from John Keltie to Gertrude Bell 1915 (RGS CB8). In this letter John Keltie makes reference to the map's contribution to the 1:1 project.

30th August, 1915.

Dear Miss Bell,

I have not been at all surprised that I did not hear from you, for I heard from other people how intensely you are occupied with your war work, and that, of course, has the only place in your mind at present.

Reeves is away for a couple of days, and I am delaying the reply to your enquiry in order to get the information from him rather than the draughtsmen.

You will be interested to hear that we are concentrating as much power as possible upon working up the observations of Captain Shakespear and of yourself in order that we may be able to finish the map of Arabia which has been in hand for sometime. We hope also in the course of a few months to cover the whole of this area upon the scale of 1/M. When the compilation of the sheets is finished I shall hope that you will be able to spare an hour to look at them. That will not be for some months yet.

With best wishes for the success of your work,

Believe me,

yours very sincerely,

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ar RGS/CB8/BELL

4.12 – Letter from John Keltie to Gertrude Bell 1914 (RGS CB8). This letter demonstrates the war lectures of Hilaire Belloc and Viscount Bryce.

22nd September, 1914.

Dear Miss Bell,

In case you should call in the afternoon to-morrow when I shall probably be away I leave this note to say that Addison is prepared to go into the matter of your map with you.

We have had to make some re-arrangement of our dates, partly owing to the war. The President has got Hilaire Belloc to give us a war lecture on the 9th November, and Viscount Bryce has chosen the 23rd as the date of his long promised lecture, so that if it is still convenient to you we should take your paper on the 7th December.

Yours very truly,

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ar RGS/ CB8/ BELL

Figure 4.13 – Letter from Gertrude Bell to John Keltie 1914 (RGS CB8). Here Bell is asking when the date of her lecture will be.

know?

What is the date  
that you have fixed  
for my lecture?

Yours sincerely

Gertrude Bell

1914 (4)

STATIONS, TRENHOLME BAR & WELBURY, N.E.R.

TELEGRAPHIC ADDRESS, HUBEL, ROUNTON.

TELEPHONE, NO 2 EAST HARLSEY.

ROUNTON CRANCE

NORTHALLERTON

del. July 30. 14.

July 29

Dear Dr Keltie,

I have now all the  
materials for my  
map - the last  
arrived only 10 days  
ago. But I think  
it would be a  
great deal of

Figure 4.14 – Letter from John Keltie to Gertrude Bell 1914 (RGS CB8). This demonstrates the Society's request for Gertrude Bell to publish in their journal.

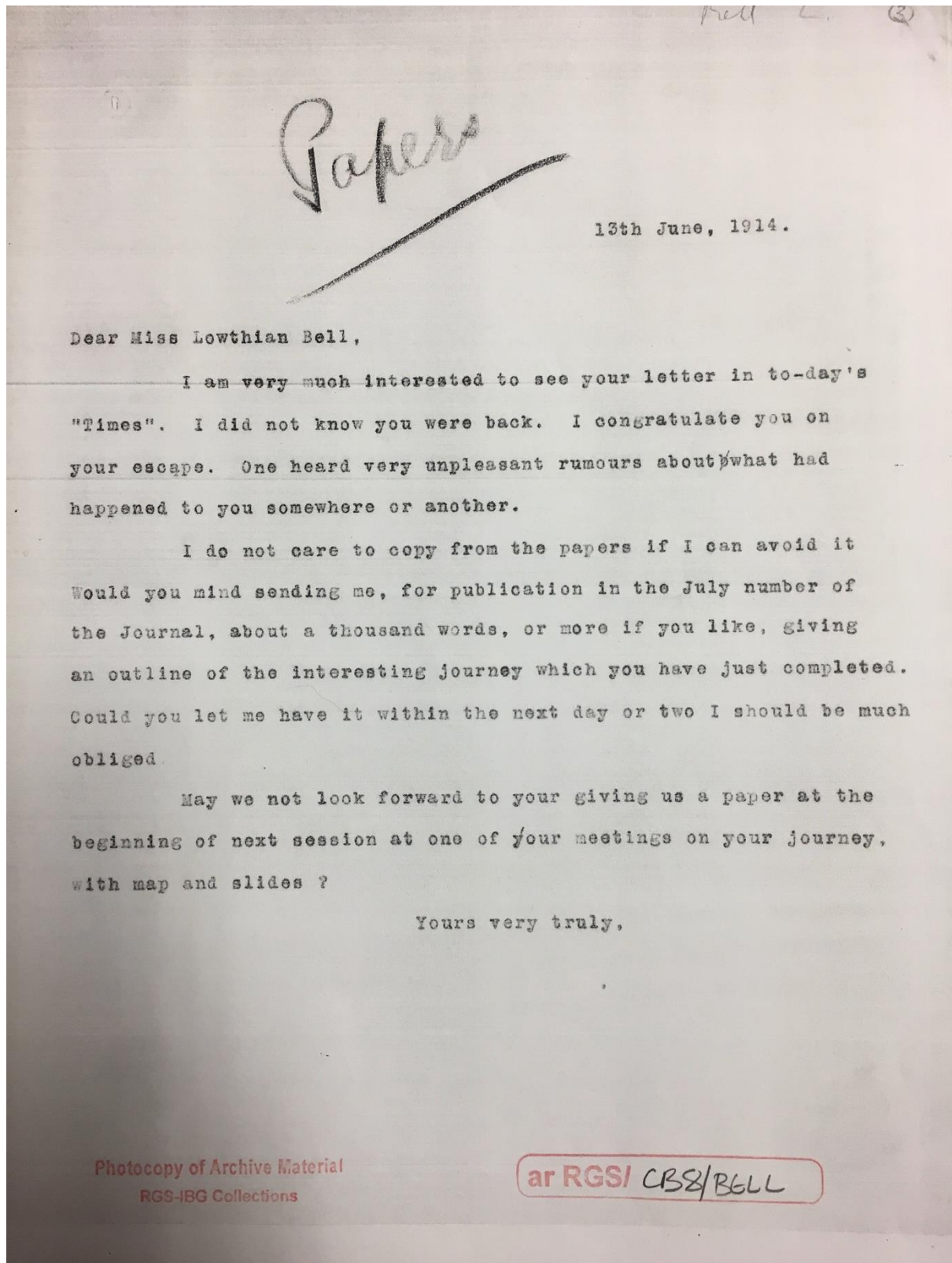


Figure 4.15 – Letter from John Keltie to Gertrude Bell in 1914 (RGS CB8). This letter demonstrates the expectation of Colonel Sykes to publish a paper and his failure to do so.

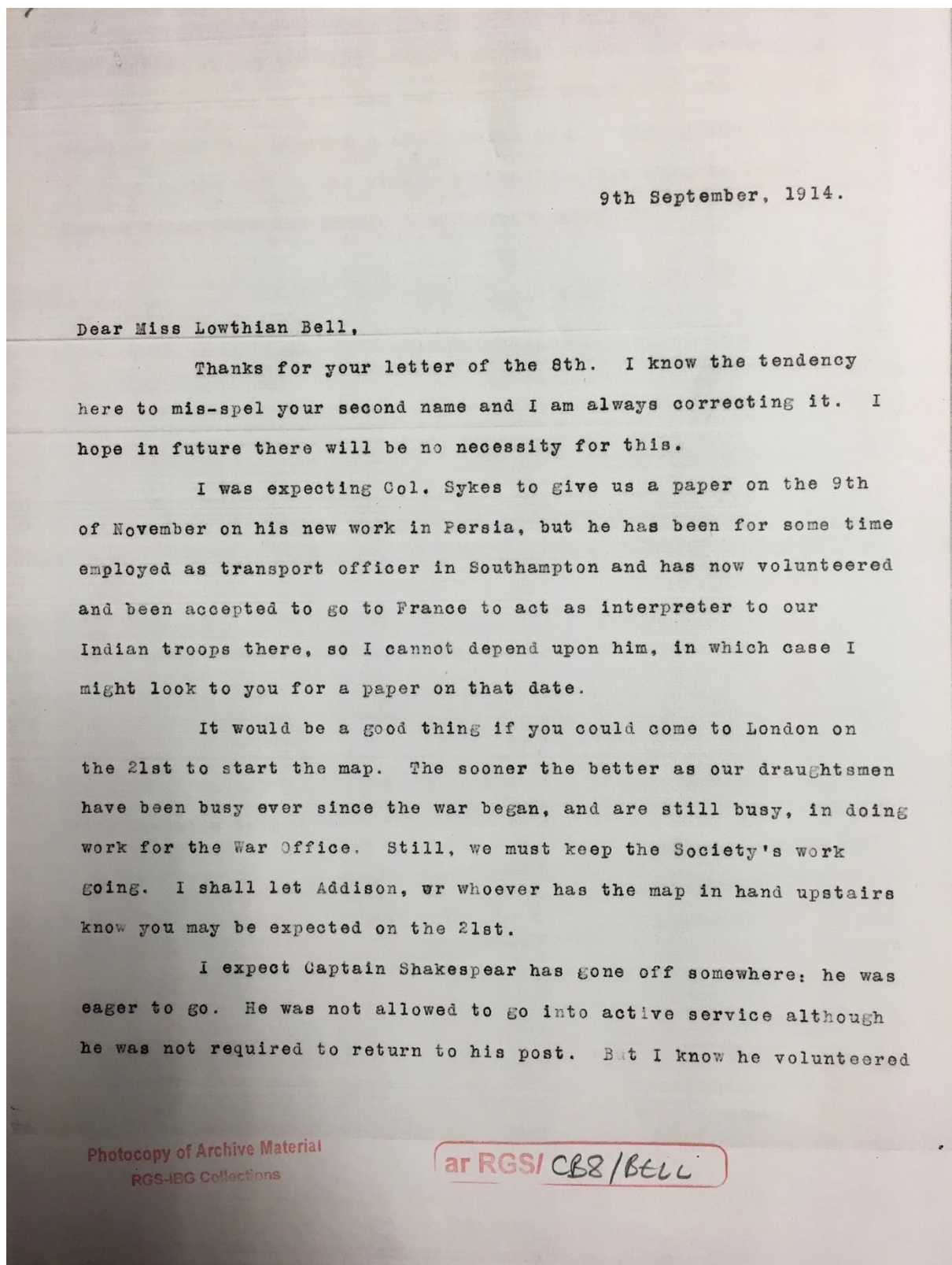


Figure 4.16 – Letter from John Keltie to Gertrude Bell 1915 (RGS CB8). This letter demonstrates the failure of De Filippi to produce a paper for the Society.

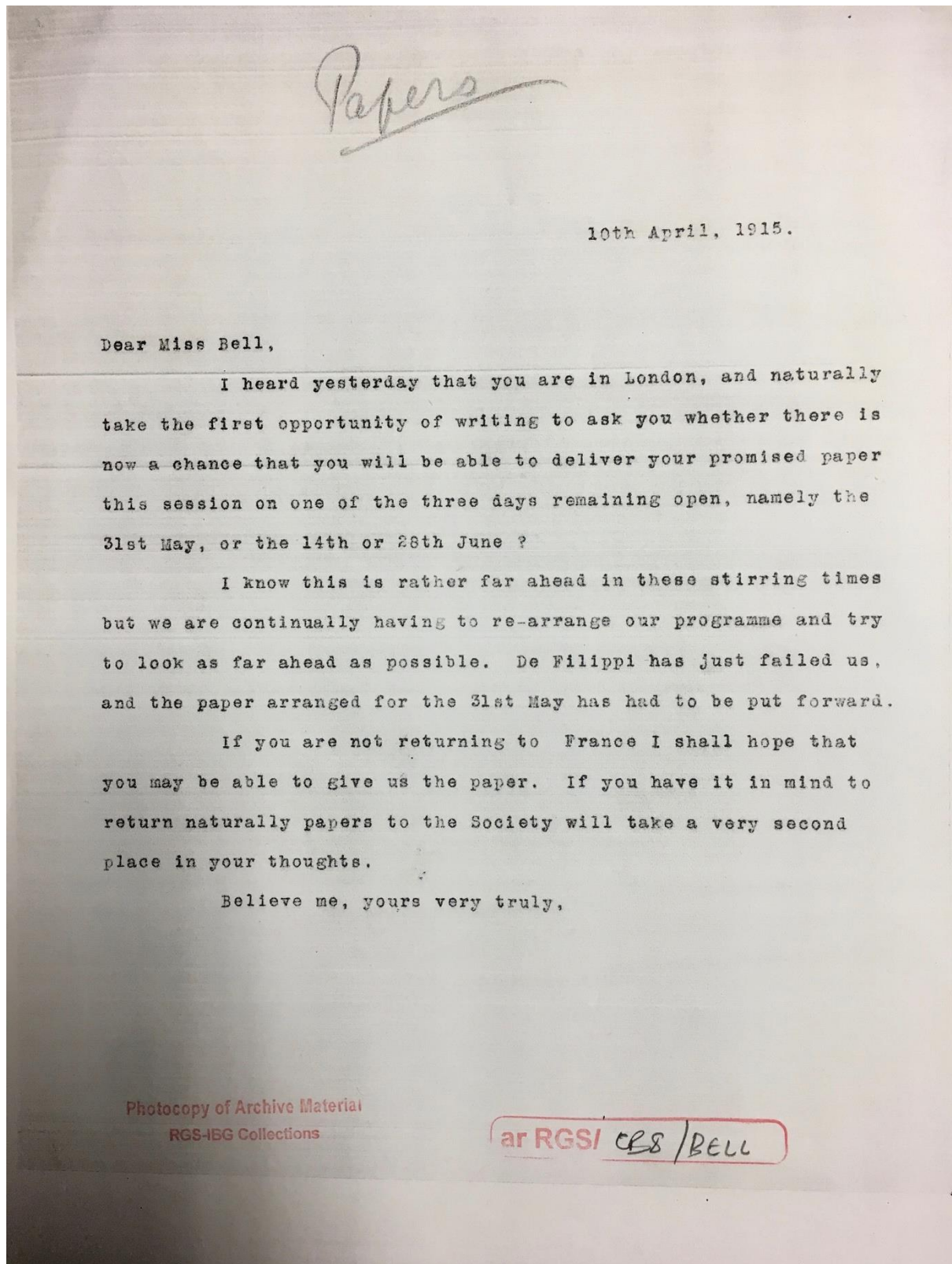




Figure 5.1 – Gertrude Bell’s manuscript map of her 1913 to 1915 journey (RGS NO6). This demonstrates Gertrude Bell’s note on ‘hazard hills’, ‘water holes’ and ‘sandy regions’ – the important strategic observations. This photograph also demonstrates Gertrude Bell’s uncertainty in the correct place-names by the question-marks positioned by several of her corrections.

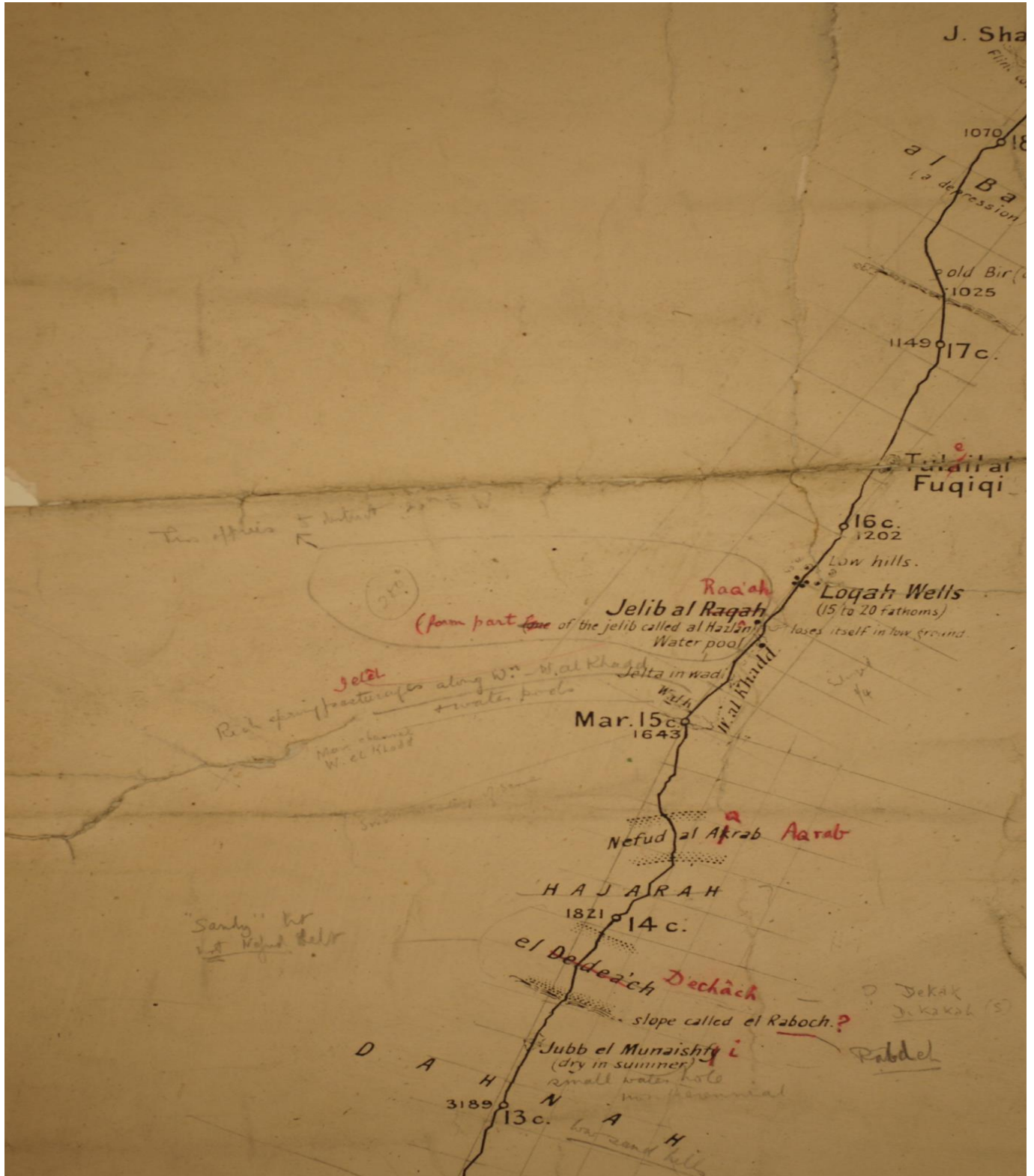




Figure 5.3 – Gertrude Bell's manuscript map (RGS N06). Gertrude Bell makes note, 'there is a mistake here, surely Helqûm was NE of my camp at 1653, not S.W (GB)'. Note in this photograph Douglas Carruthers in black states, 'was put as 'Turkey Asia' but authority unknown', this demonstrates the work of another invisible functionary.

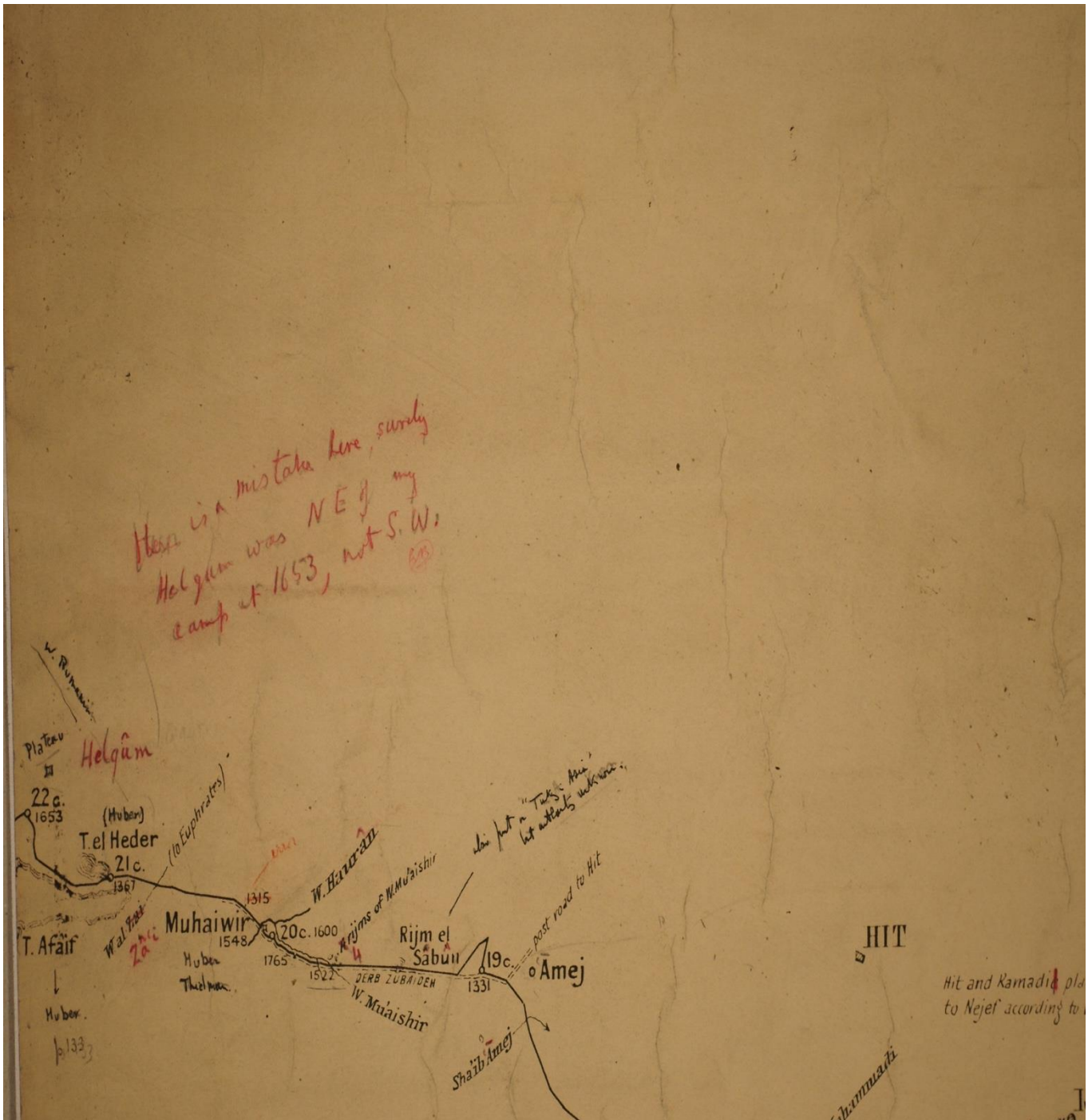


Figure 5.4 – Gertrude Bell’s Manuscript Map (RGS N06). This demonstrates Carruthers inking-in of Gertrude Bell’s corrections to place-names, for example ‘Swaifly’ to ‘Swaifleh’ stressing their importance. The map also demonstrates, at the top in blue, ‘W11-150 water good & abundant’, possibly written by Captain Shakespear who also helped compile the 1:1 million project for the Royal Geographical Society. At the bottom Gertrude Bell’s note states ‘See Doughty – was ruined village’.

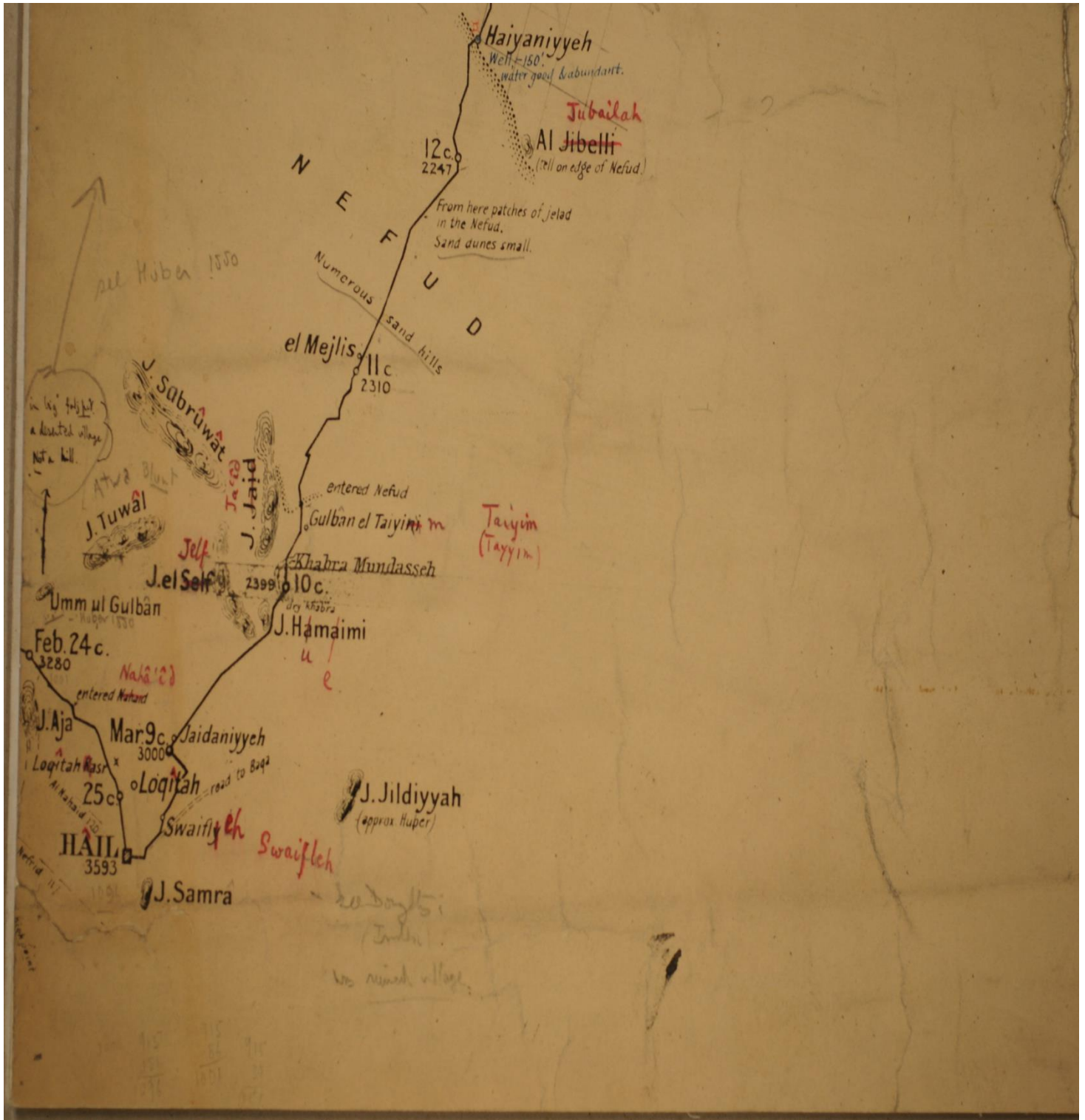
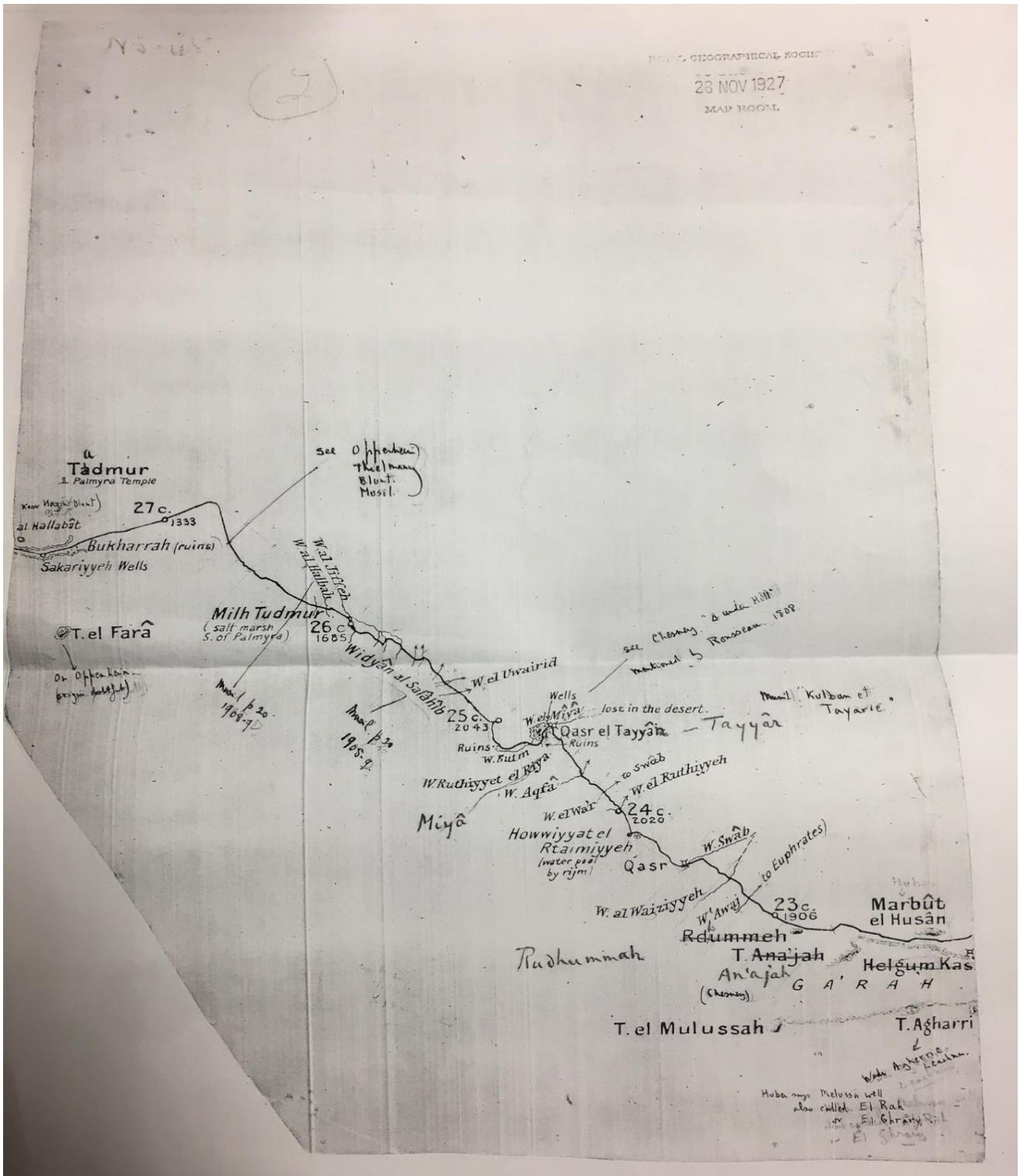


Figure 5.5 – Gertrude Bell’s Manuscript Map On the map Gertrude Bell makes a reference which states ‘See Chesney ‘under Hill mentioned by Rousseau 1808’, this demonstrates Gertrude Bell’s reliance on other sources for the spelling of Arabic place-names. The map also demonstrates the references to Western explorers; ‘Musil p. 20 108-9’. At the bottom right corner Gertrude Bell states ‘at T. Agharri ‘Huber says Melussa well also chilled El Rah El Ghrary’. This section of the map also makes reference to Lady Anne Blunt ‘Kasr Hazih’.



5.6 – Gertrude Bell’s Manuscript Map RGS N06. A note inked-in blue, possibly by Captain Shakespear, states ‘Huasa Well-about 3 miles N. of Camp 29’. On the map it also states, ‘Name see Musil (Hijaz)’.

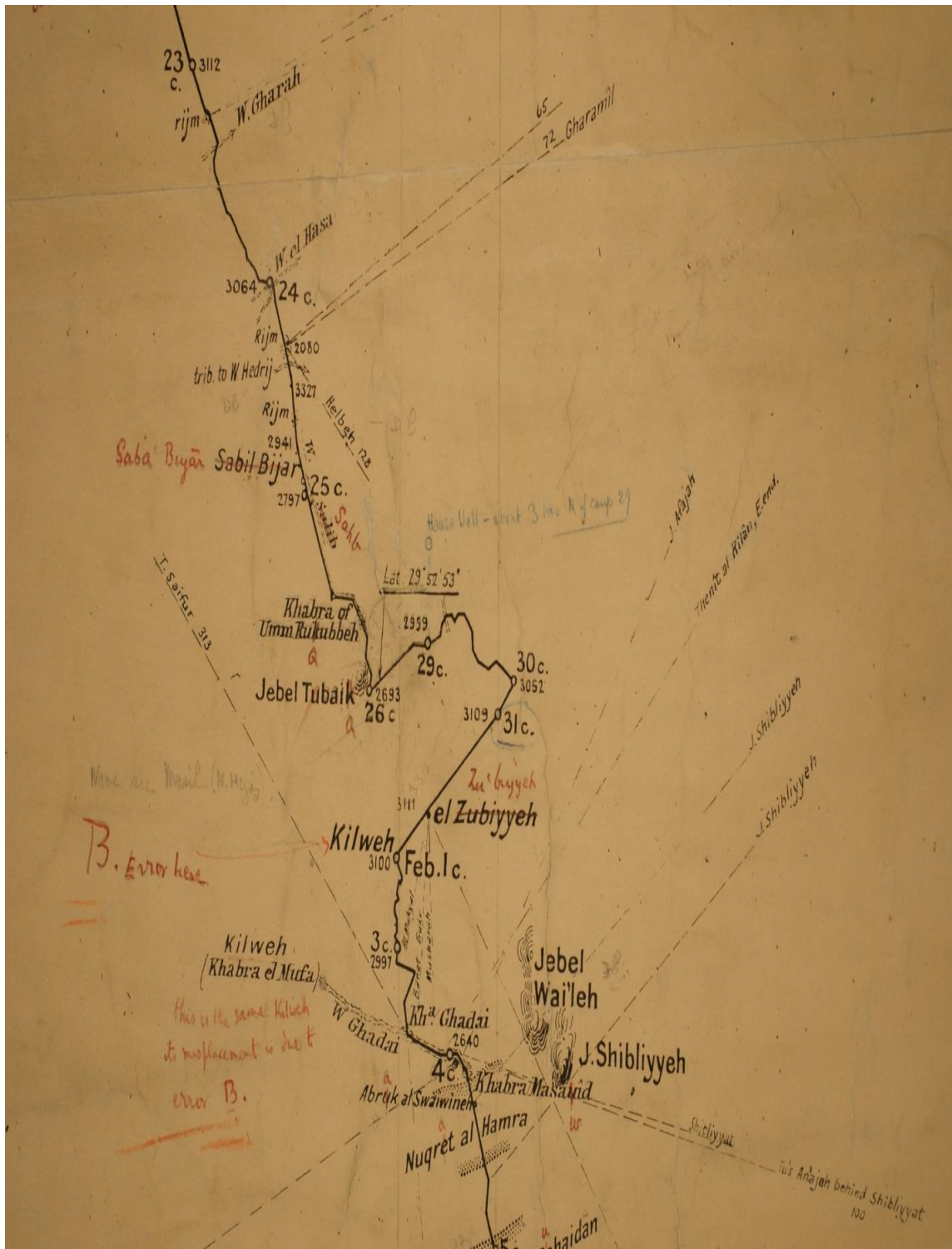


Figure 5.7 – Letter from Gertrude Bell to Arthur Hinks (RGS CB8). This letter demonstrates Douglas Carruthers' involvement, as Map Curator, in the production of the map. 'will you please thank the Carruthers for this letter, I'll write to him next week about a number of things'

comprehensive tribal analysis  
of the Baghdad Vilayat.  
Will you please thank  
the Carruthers for this  
letter. I'll write to him  
next week about a number  
of things.

Yours very sincerely

Gertrude Bell

Baghdad May 31

26  
(1918?)  
Recd. 8 JUL 1918  
Am  
File

Dear Mr Hinks  
I telegraphed in answer to  
your telegram & was I'll write  
in answer to your kind letter of  
18 March which has just reached  
me - you scarcely realize the  
length of our forts, but I hope  
you were then in May, 27  
to receive the medal for me.  
Did you convey my grateful  
thanks to the Council? Oh  
Dear I wish I could feel  
I had 'really deserved such  
honour'. How puffed up  
I should be. The bronze  
was metal with indec

Figure 5.8 – Manuscript Map RGS N06. Here it states, ‘Corrections in Red are Miss G. Bell’s original corrections inked in by D. Carruthers July 1917’ and states, in ‘In black DC’.

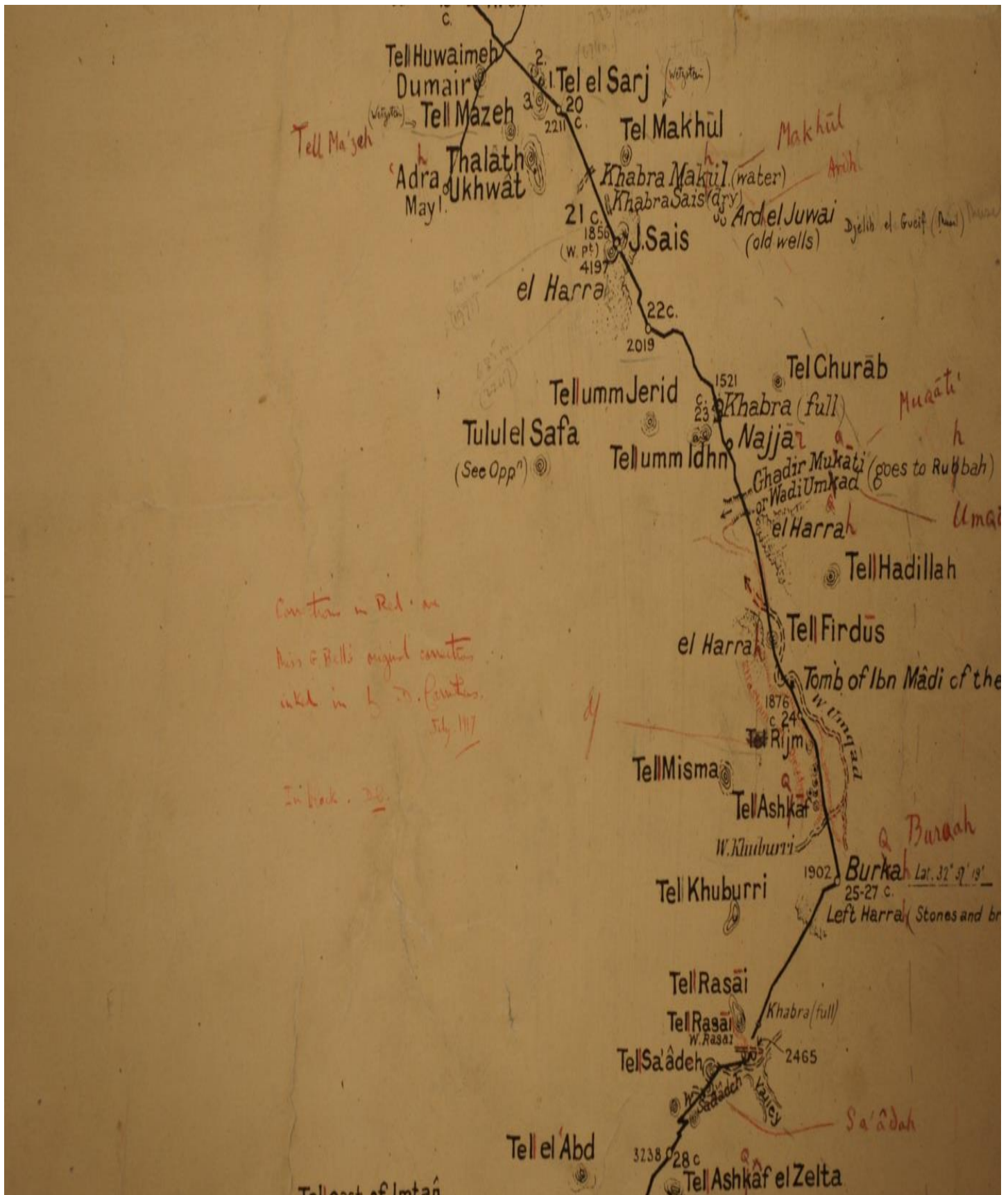






Figure 5.10 – Manuscript Map RGS N06. This demonstrates another note stating that the corrections in red are those of Douglas Carruthers. This section also demonstrates Gertrude Bell's correction 'greatly exaggerating' in regard to the topography depicted.

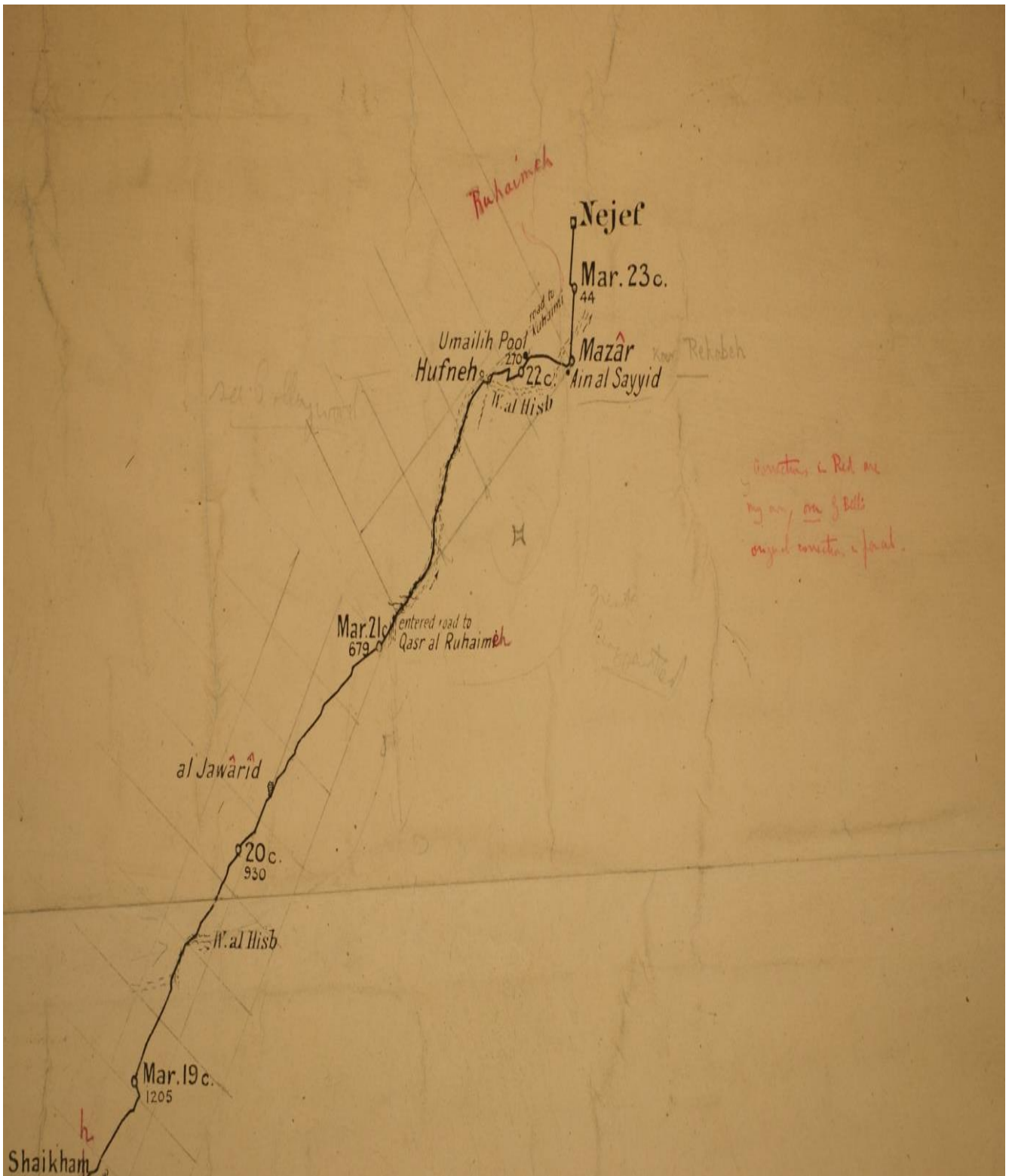






Figure 5.13 – Douglas Carruthers' map (Carruthers 1910, 248).



Figure 5.14 – Douglas Carruthers' map (Carruthers 1910, 249).

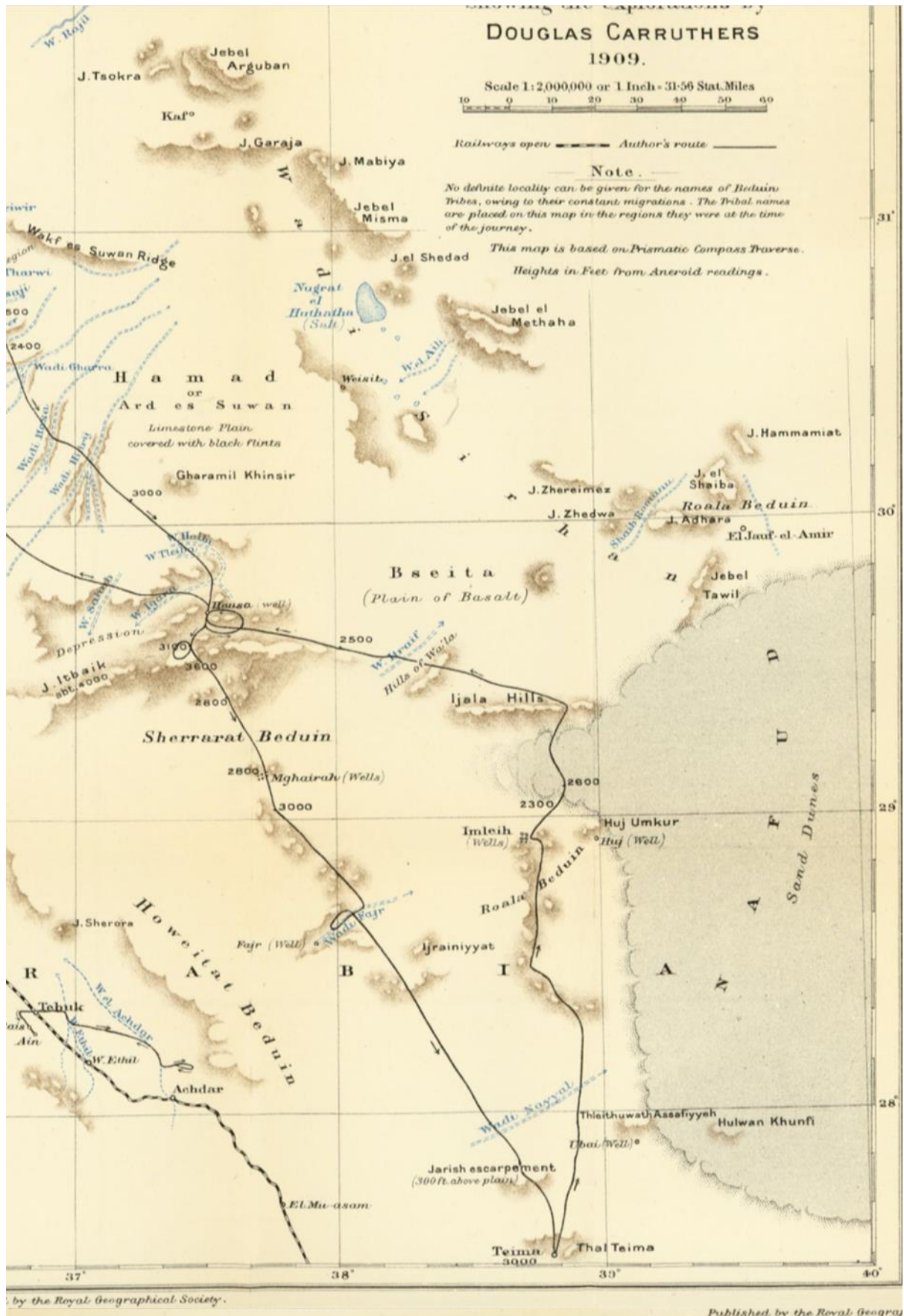


Figure 5.15 – This is a picture of Alois Musil’s Sketch Map of his exploration to Northern Arabia (*The Geographic Journal* 1910, 580).

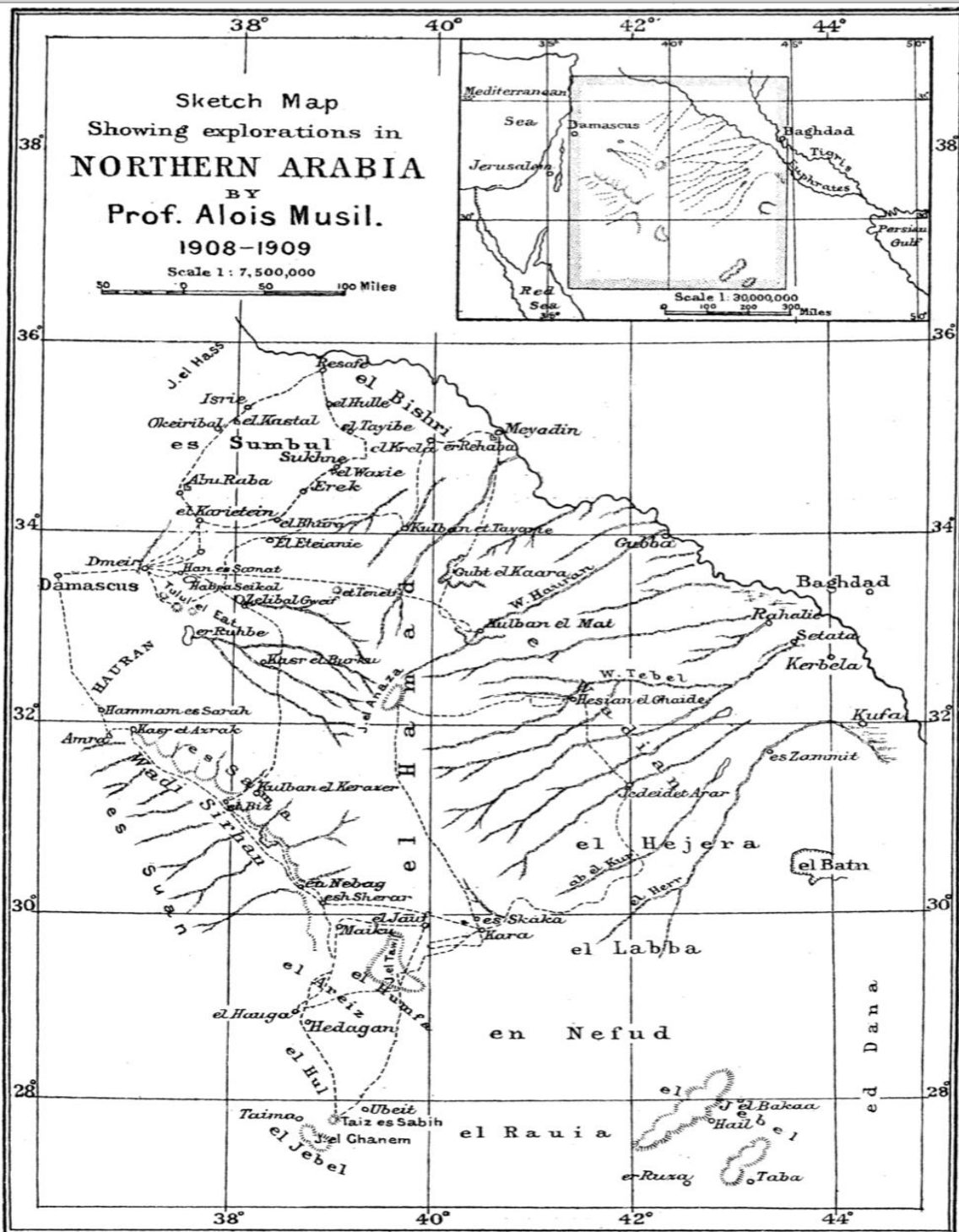






Figure 5.17 – Gertrude Bell's Manuscript Map RGS N06. Gertrude Bell quotes Lady Anne Blunt here in the map 'Blunt p 202' from *A Pilgrimage to Nejd* (1881).

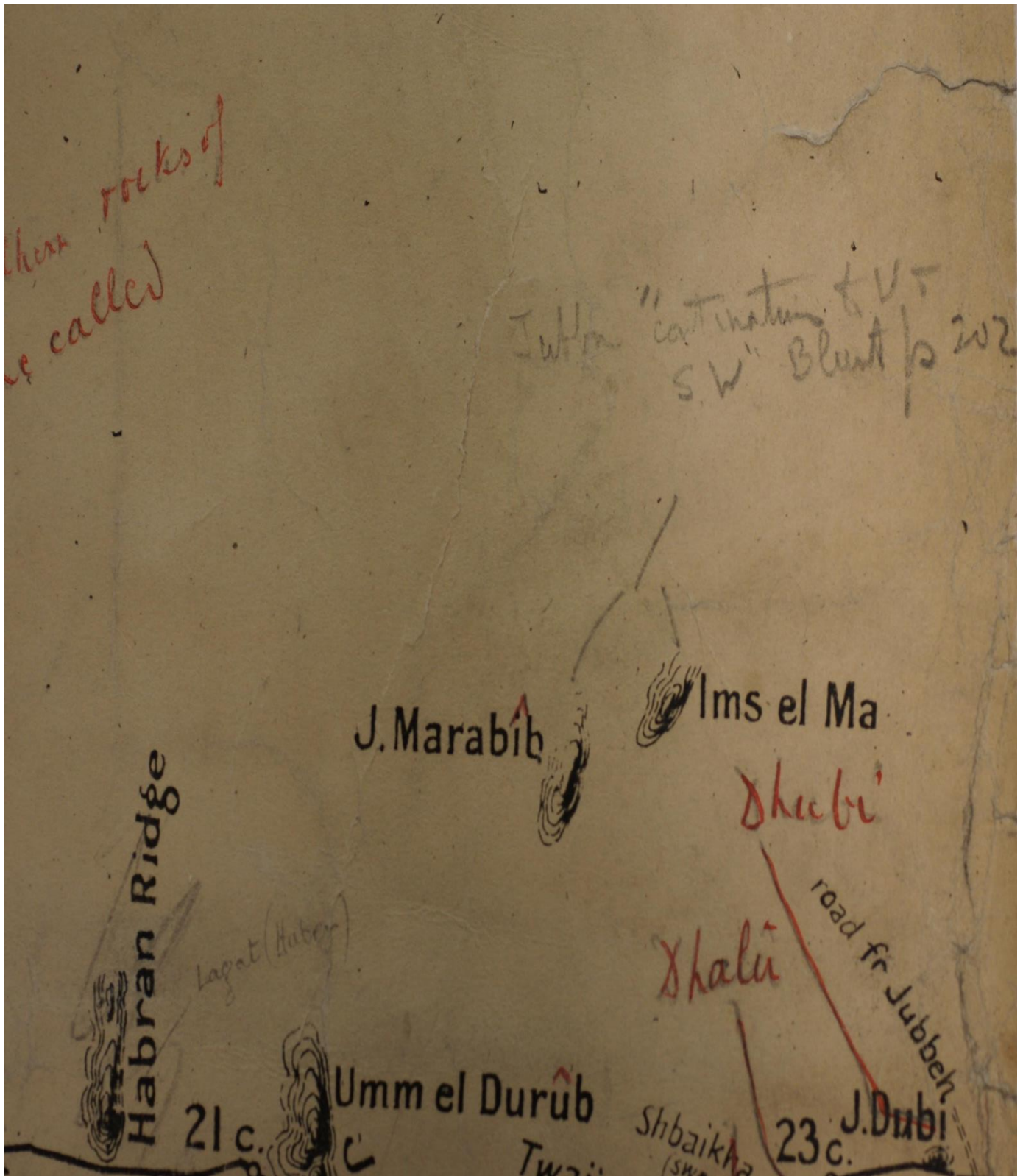
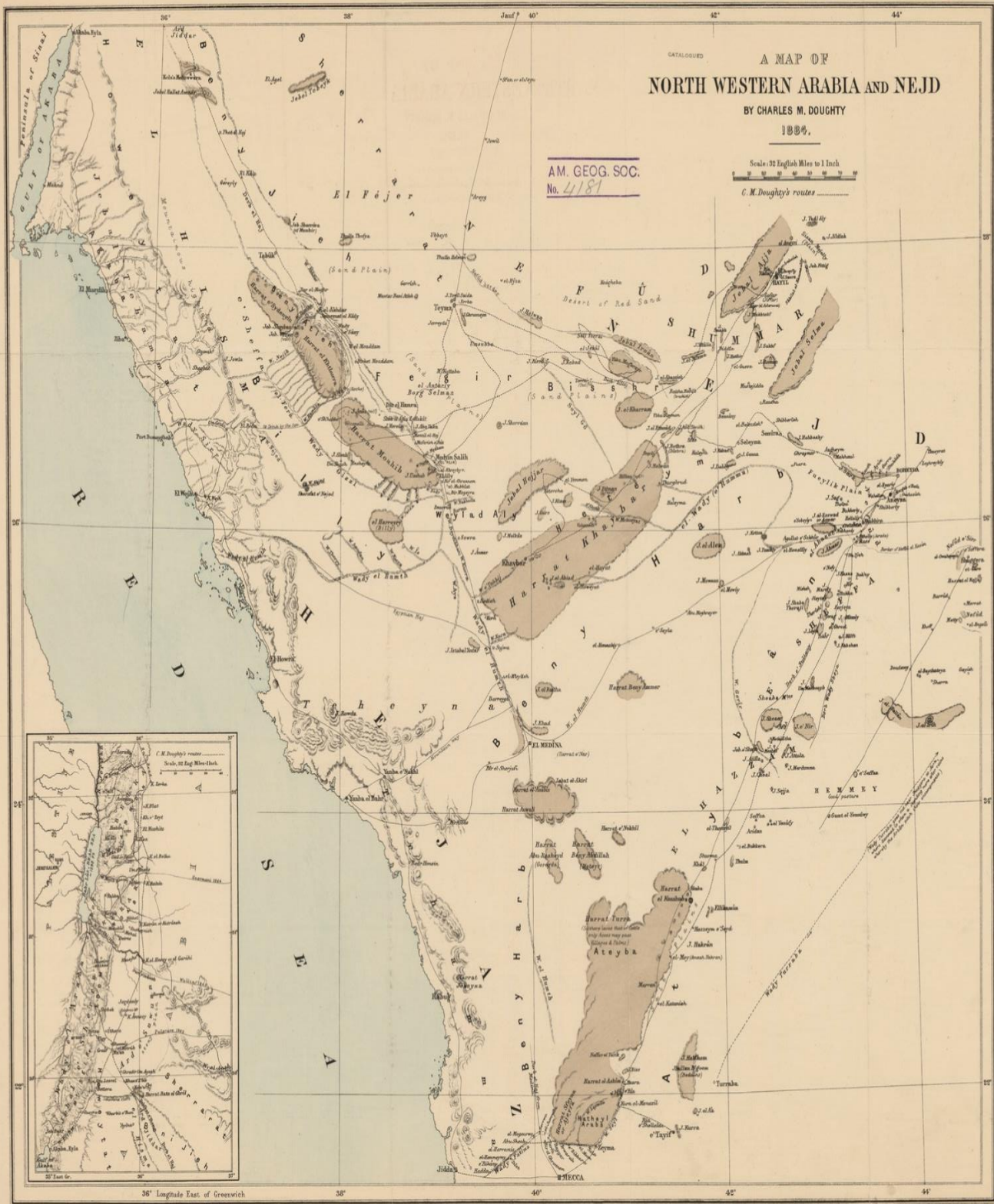


Figure 5.18 – This is Charles Doughty-Wylie’s map of ‘North Western Arabia and Nejd’, produced for the RGS in his *Travels in Arabia Deserta* in 1883 (Collection – American Geographical Society Library Digital Map Collection: University of Wisconsin-Milwaukee Libraries).



416  
A-1884

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Figure 6.1 – Photograph of Gertrude Bell’s ‘indispensable’ guide Fattuh – Jay Abdo (GBA, Newcastle University Library, Photographs X\_018–Album X, 1913-1914).



Figure 6.2 – Photograph of Gertrude Bell’s caravan – camels and men in Adrah – Syria 1913, fundamental for facilitating her geographic knowledge and provided her safety (6.2 GBA Newcastle University Y\_001 – Y Album 1913).



Figure 6.3 – In this newspaper article it states that Gertrude Bell had travelled ‘save by a few servants’ (*The Times of India* 1927, 14).

**GERTRUDE BELL**

*The Times of India* (1861-current); Nov 18, 1927; ProQuest Historical Newspapers: The Times of India  
pg. 14

# GERTRUDE BELL.

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Figure 6.4 – This photograph demonstrates Gertrude Bell in feminine dress (GBA Newcastle University Library Y\_379 – Album Y, 1913-1914).



Figure 6.5 – This photo also demonstrates Gertrude Bell in feminist dress, demonstrating Gertrude Bell was able to balance practicality with propriety (GBA Newcastle University Library Album X – X\_018 Tyubayq 1913-1914).

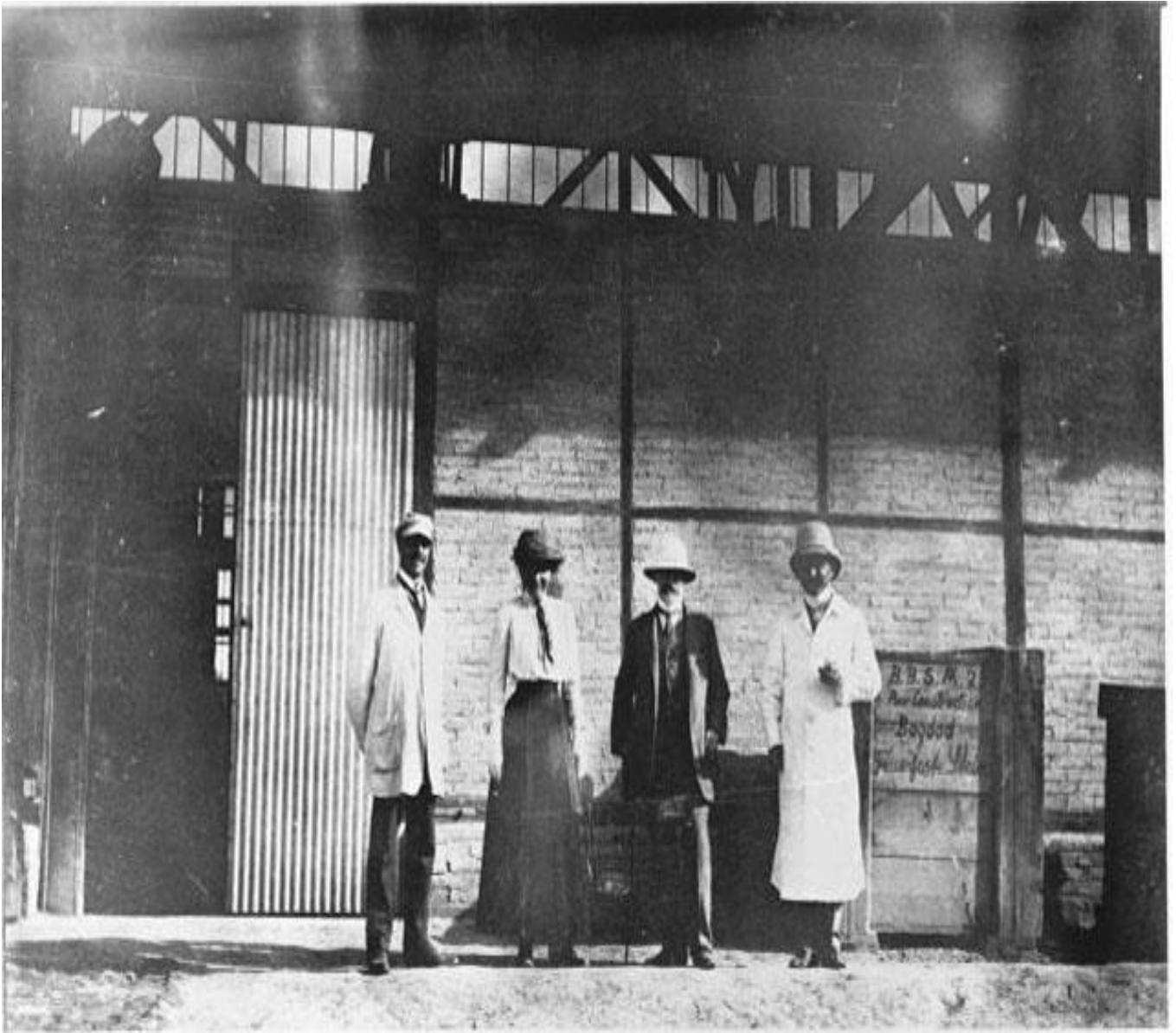




Figure 6.6 – Photograph of Gertrude Bell's camels on her journey (GBA, Newcastle University Library, Photographs X\_018–Album X, 1913-1914).



Figure 6.7 – This is an extract from *The Times of India* 1918, which states ‘written by persons with special knowledge of the subjects dealt with’ (*The Times of India* 1918, 2).

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1914 – seven autograph letters to Keltie and eight transcript carbon replies from him

1915 – one autograph letter and four typescript carbon replies from Keltie (?think)

1916 – one autograph letter to Hinks and one typescript carbon from ? Hinks

1918 – two autograph letters to Hinks, two typescript carbons from Hinks

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