



Survey and Mapping ANZAC Sector Gallipoli Peninsula 1915

By Peter Jensen





Background

- 4 August 1914 – war declared – France/Belgium front, Australian force of 20,000 promised
- 31 October 1914 – Ottoman Empire joined Germany and closed the Dardanelles
- November 1914 – AIF and NZEF departed Australia for England
- December 1914 – AIF and NZEF disembarked in Egypt
- November – March 1915 – British Navy failed to open Dardanelles
- February 1915 – British War Council decided (!) to commit military force to help Navy force Dardanelles
- February 1915 – ANZAC formed and started planning military campaign around Dardanelles





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- January-April 1915 – Turks improved defences of Gallipoli Peninsular with German assistance and evacuated many civilians mostly Greeks
- 25 April 1915 – ANZAC started campaign in surprise predawn attack mid-Gallipoli Peninsula. Stopped less than 2 miles from Z Beach – field commanders recommended withdrawal. British and French attack south at Cape Helles faired no better
- 20 December 1915 – force withdrawal after few gains
- 1916- 1919 Dardanelles Royal Commission, senior commanders were less than honest with advice of intelligence available for campaign planning – mapping was used as a scapegoat for poor planning by the high command

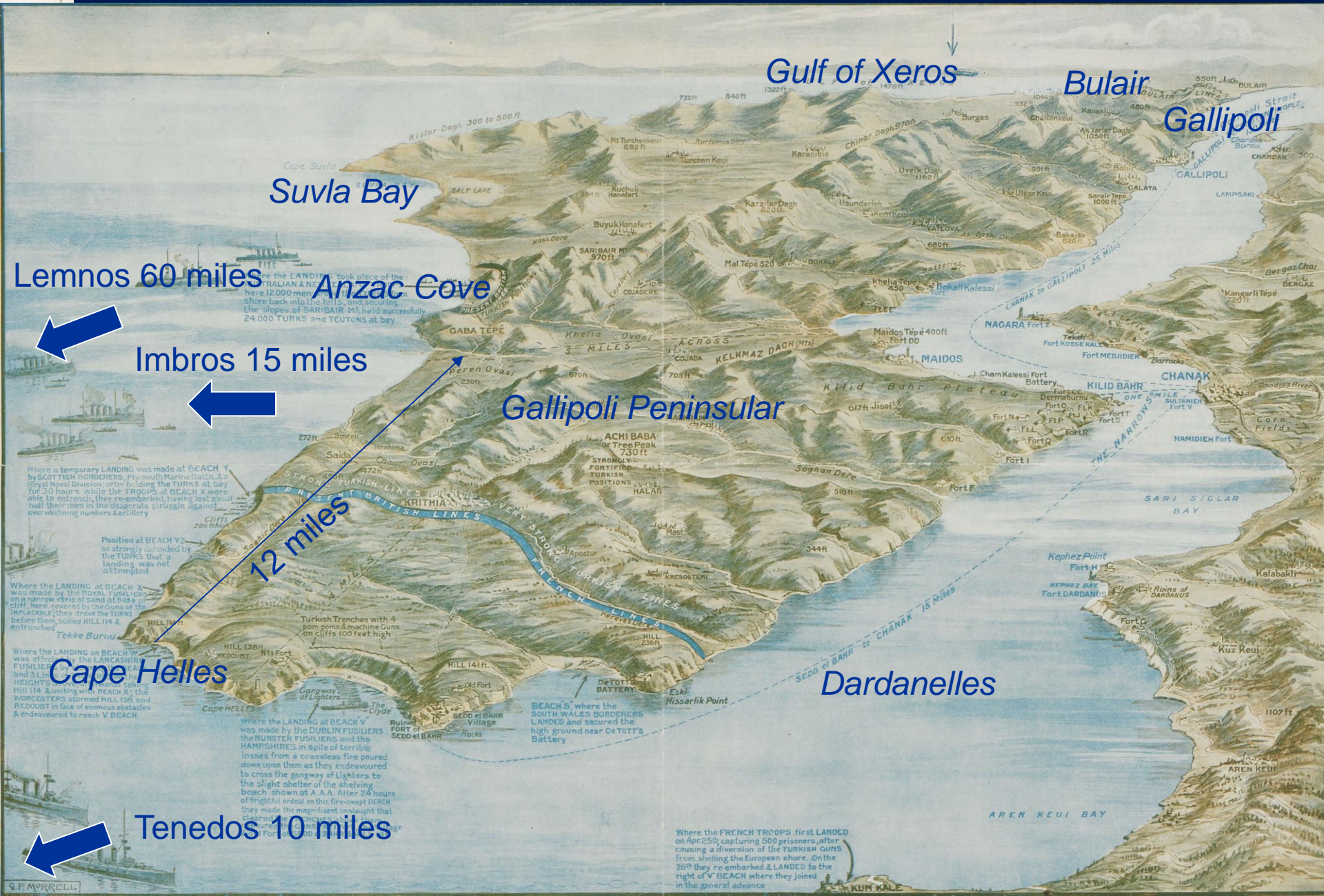


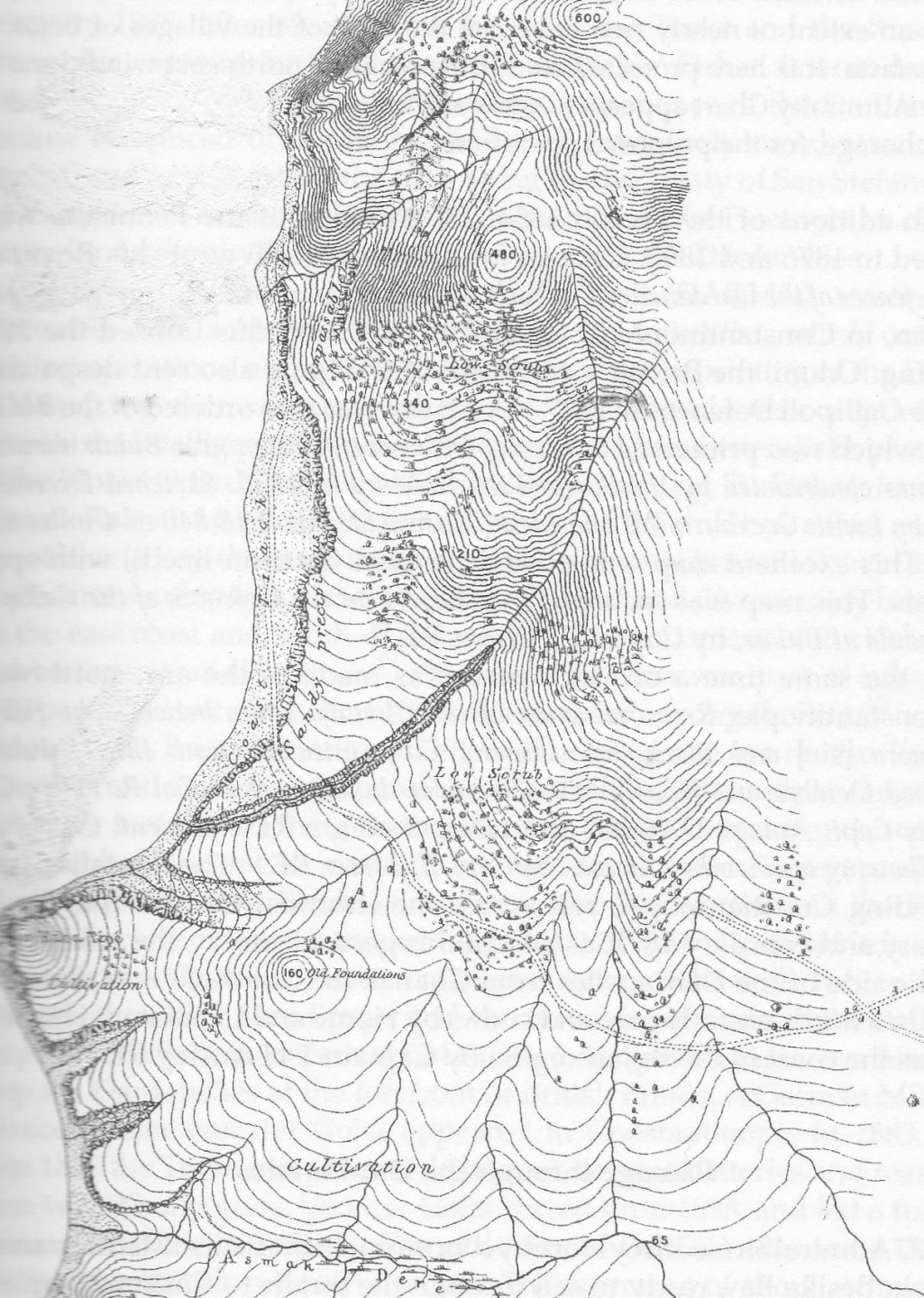


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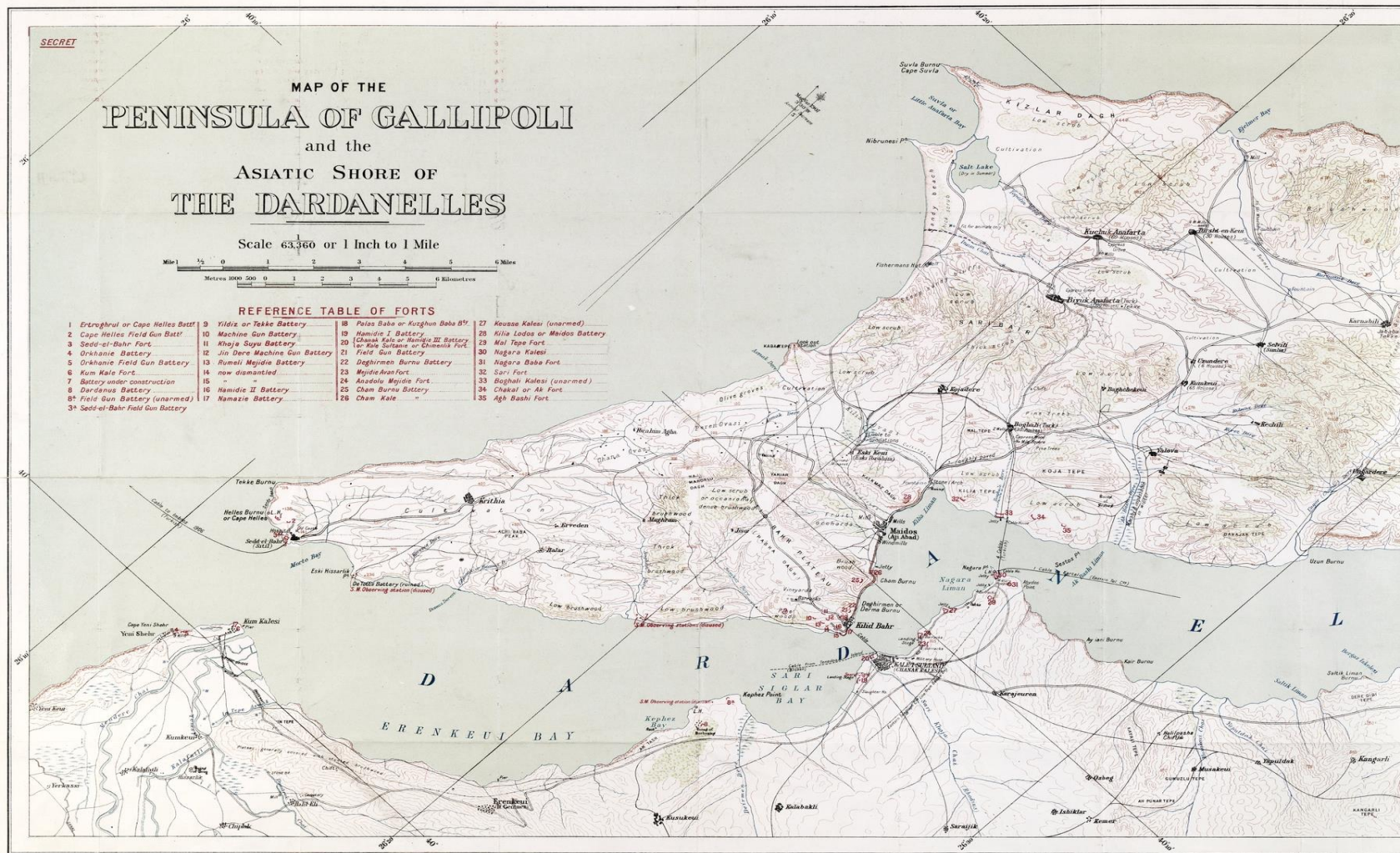
Gallipoli Peninsular





1876 scale 1 inch to 1
quarter of a mile
reconnaissance map
from field surveys by
Captain CE Grover,
Royal Engineers, 10 foot
contour interval – part of
his appreciation of how
to seize and hold the
Gallipoli Peninsula. The
ANZAC plan was
essentially Grover's

1908 – 1 inch to 1 mile map 1:63,360



REFERENCE

Chausade	Drift (Chf)	Farm
Road suitable for wheeled traffic	Dike	Mountain
Mule track	Dere	Valley with Stream
Highway	Kios	Town
Height in feet above sea level	Liman	Harbour
Burnu	Cape	Takke
Chai	Stream	Repe
		Hill

Approximate contours at 100 feet vertical interval
Hill patterns on Asiatic Side are shown by Roman lines only

1908 – 1 inch to 1 mile map 1:63,360



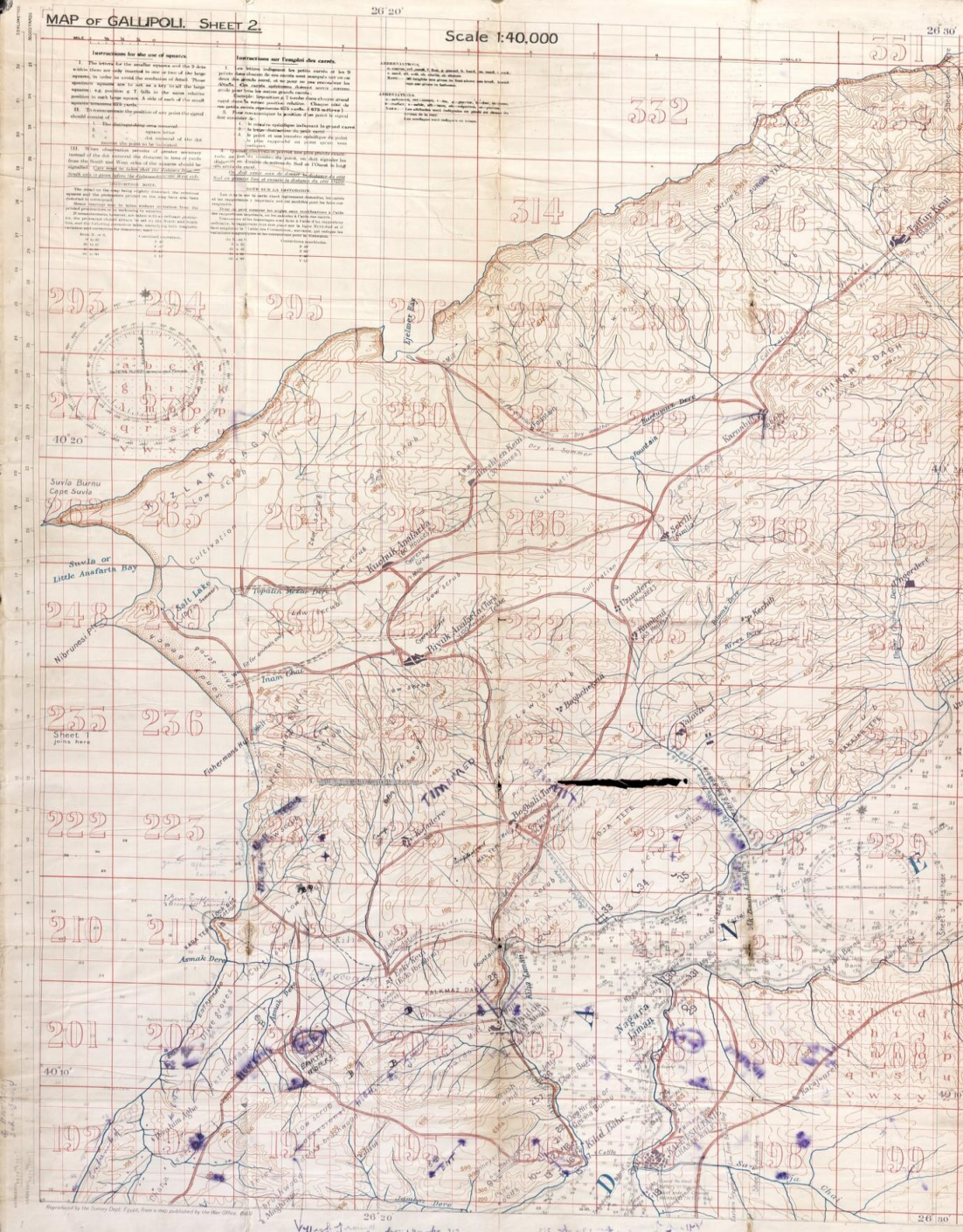
“Here, at present, Gallipoli looks a much tougher nut to crack than it did over the map in your office”
– General Hamilton, Commander in Chief Mediterranean Expeditionary Force to Lord Kitchener, Secretary for War – 18th March 1915 –
after reconnaissances by ship



Timeline – survey and mapping

- August 1914 – British Geographic Section General Staff arranged for the Survey of Egypt to map Middle East theatre
- February – March 1915
 - Survey of Egypt – Director General Mr Dowson, produced operations map 1:40,000
 - GHQ MEF Maps Officer Lieutenant Nicholas
 - GHQ Egypt Maps Officer Lieutenant Lawrence
 - ANZAC Printing Sect formed in Egypt – Mr Cairns
- Early April 1915
 - ANZAC and GHQ MEF Printing Sect from Egypt to Imbros Is
 - Royal Navy Air Service – air reconnaissance
 - No dedicated survey element in ANZAC
 - ANZAC units prepare their own landing maps





First operations map

**Derived from 1908 1 mile map from
1854 French 1:50,000 10m contours**

Scale 1:40,000

100 foot contour interval

Naval 675 yard grid (1/3 nautical mile) and aligned true north – early gunfire support by Navy

Compass rose with magnetic variation

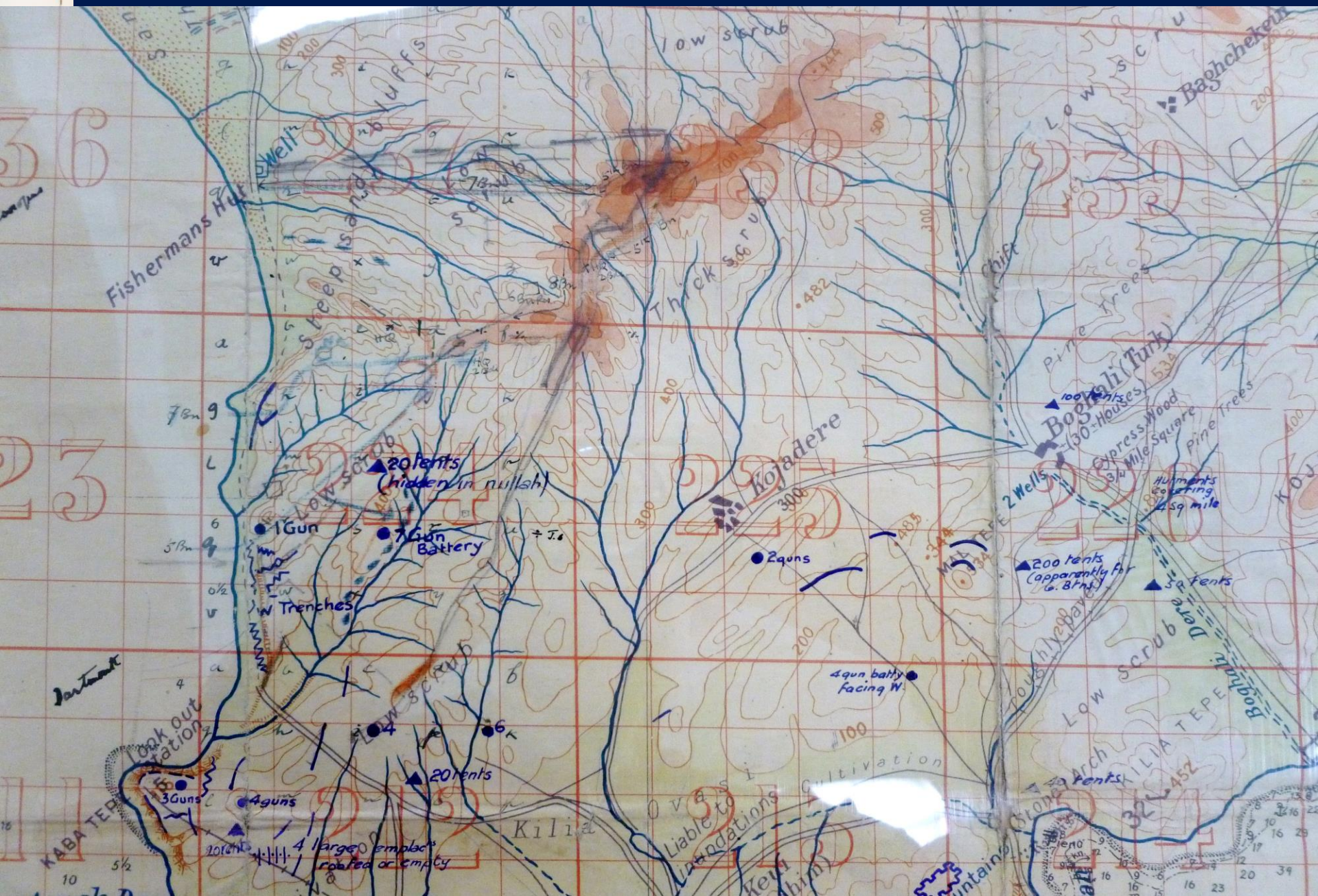
Naval chart soundings and landing places

Feature names from 1 mile map transliterated from Turkish

Purple overprint cultural update

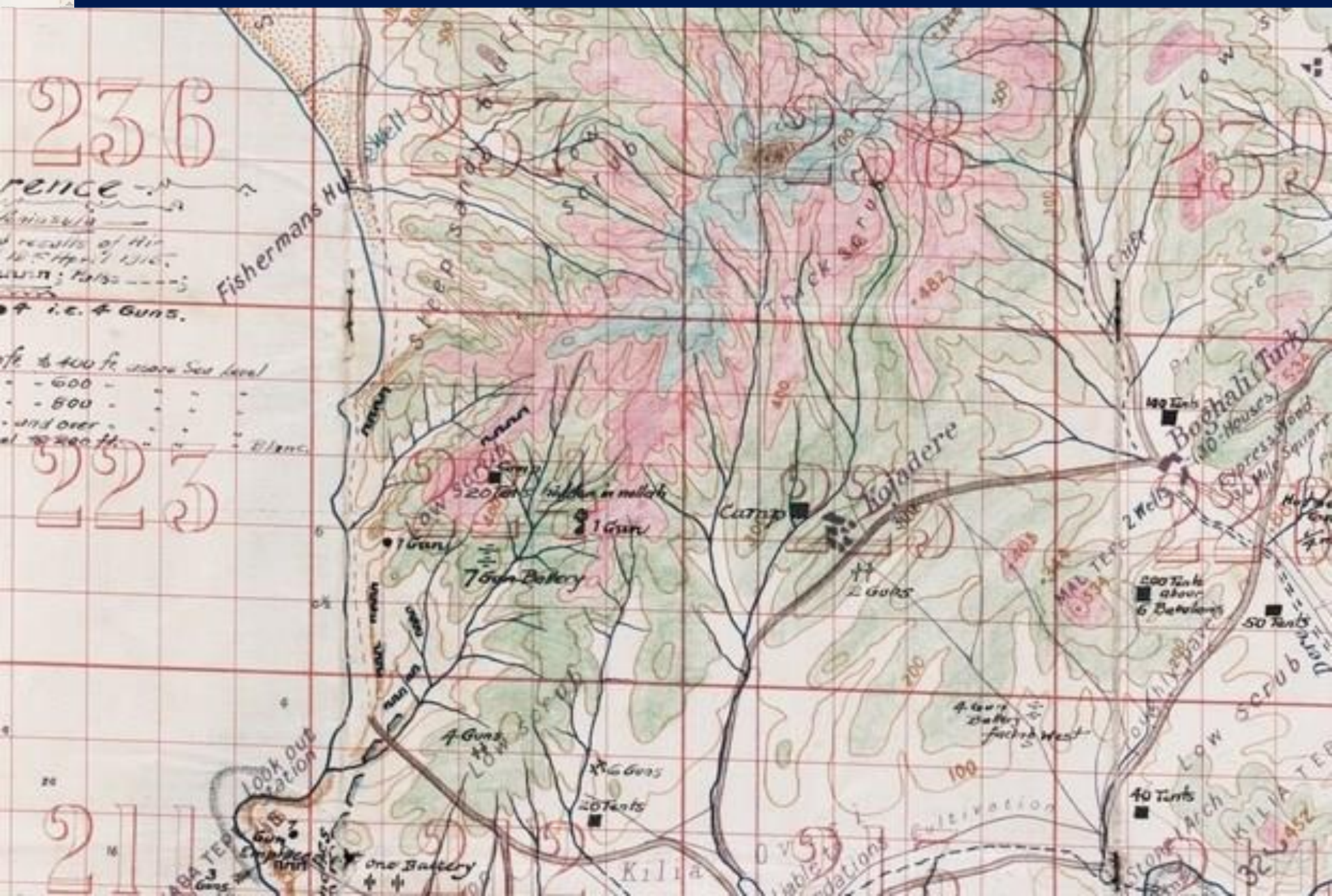
notes about distortions introduced and use with protractors to measure bearings

ANZAC sector - intelligence at 18th April





New Zealand Brigade landing map





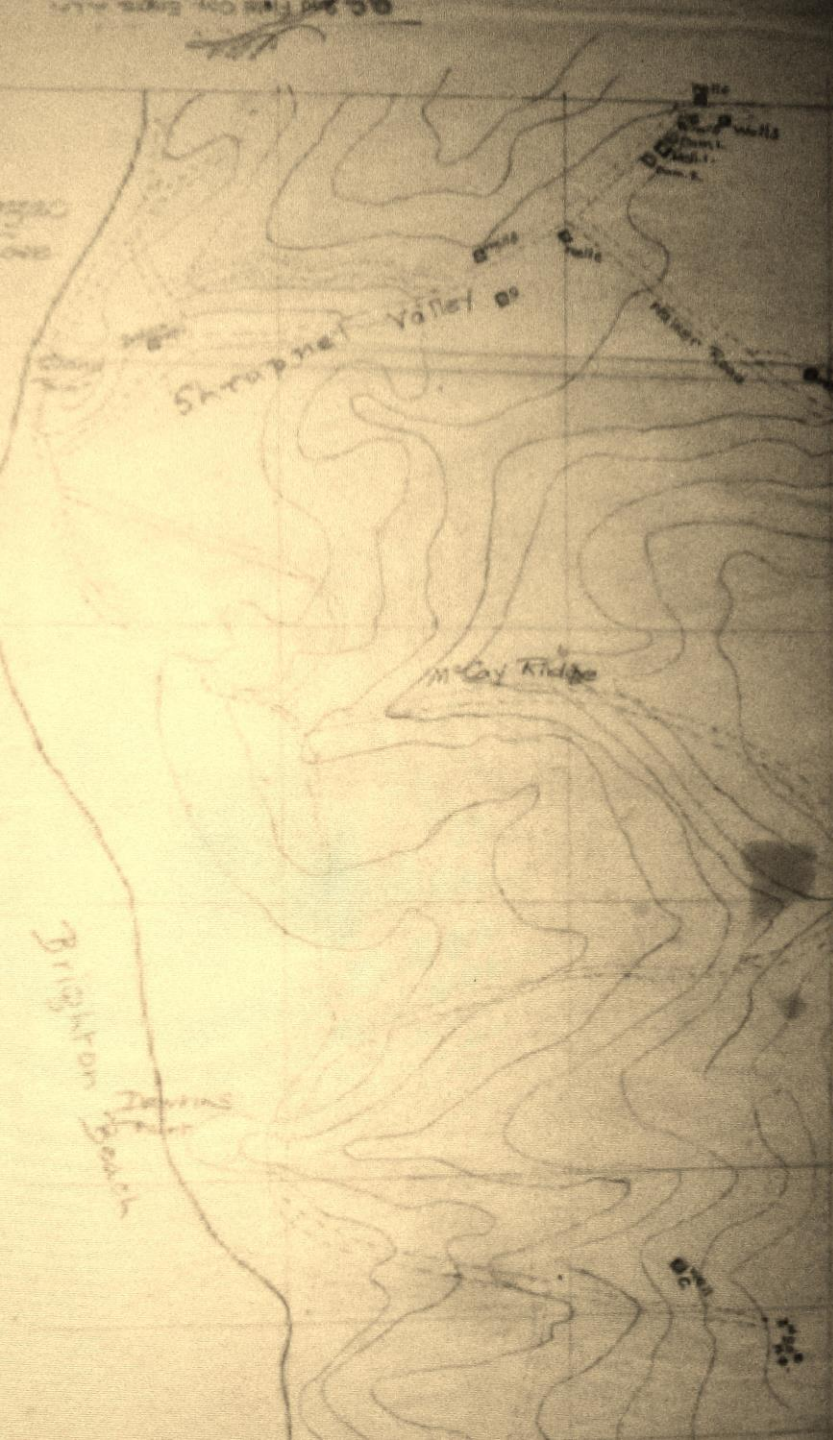
- 25th April - *“For military operations the country is difficult in the extreme. The map issued gives a general idea of the topography but is inaccurate in the detail”* - Major-General Bridges Commander 1st Australian Division



Survey and mapping developments after landings

- adhoc surveys, plans and diagrams to satisfy unit requirements using surveyors and draughtsmen wherever they were
- use of captured Turk maps
- utility of air photography
- appointment of survey officer to coordinate work across all sectors
- production of a new operations map
- appointment of an ANZAC survey officer
- surveys linked to others in the sector and to the other sectors
- compilation of large scale trench maps of ANZAC and Turk areas

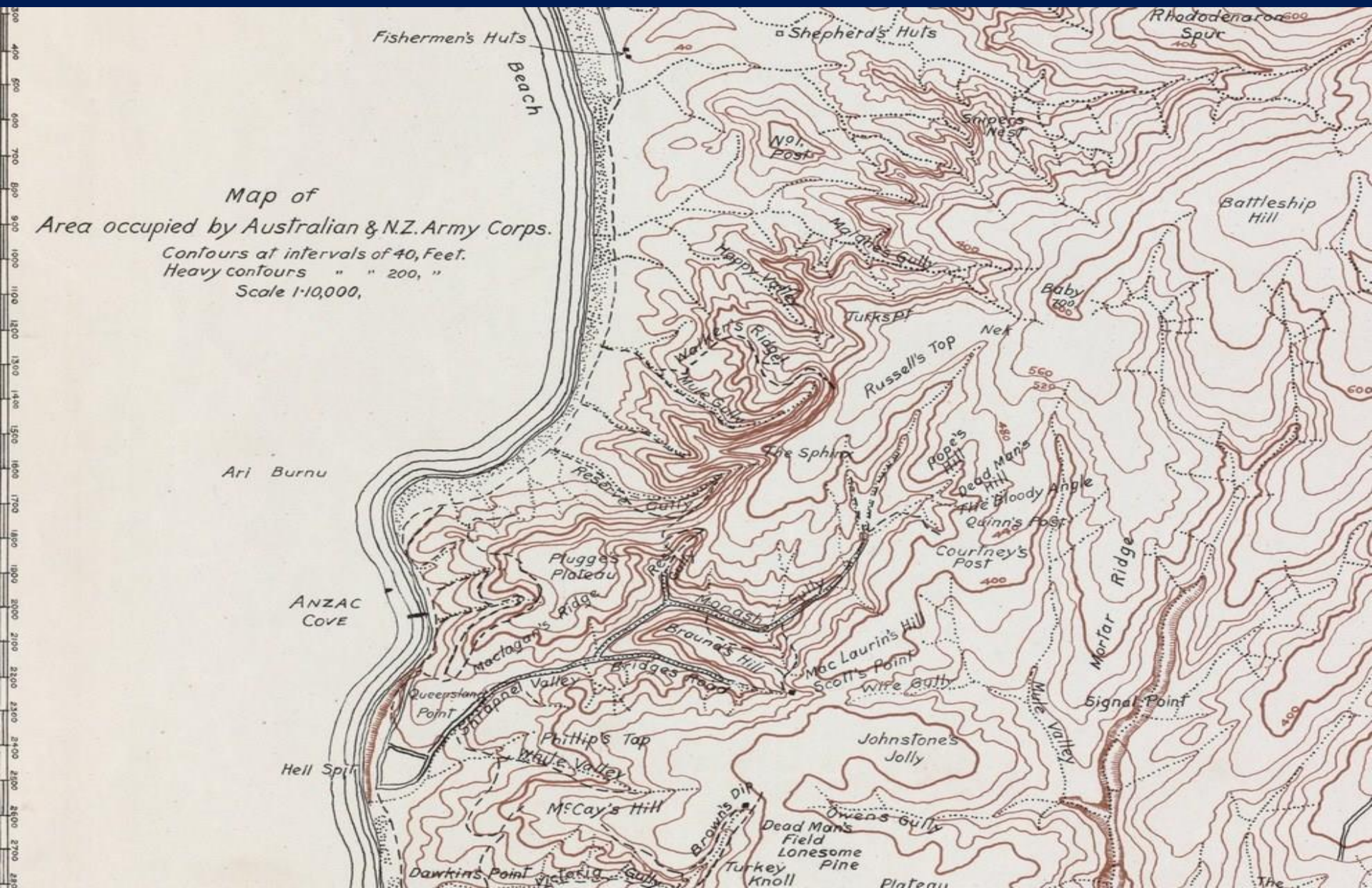
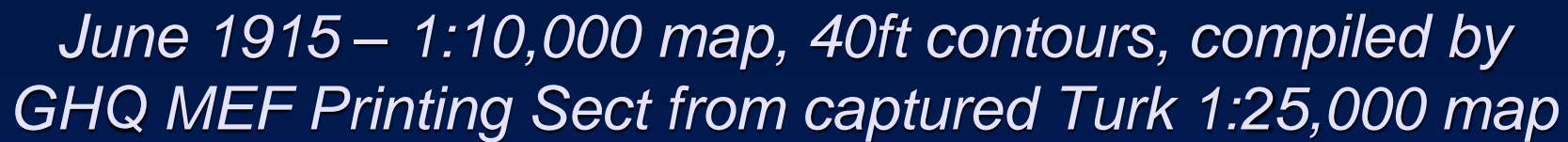




- 29th April – plan of 2nd Aust Field Company Engineers water supply system Hell Spit and Brighton Beach south of Anzac Cove



- 19th May – Turk map captured by Australians, scale 1:25,000, 10m contour interval, completed after landings





Timeline – survey and mapping

- June
 - establishment of GHQ MEF Survey and Map Section
 - responsible for coordination of survey and mapping of all of Gallipoli
 - appointment of Captain Nugent, British topographic surveyor and artillery officer having been in the Helles sector since 25th April





*Mid-May 1915 - RNAS photography of firing line, loan French camera,
focal length 30cm, format 120x170mm, fiducial marks, flying height
7,000 ft*



RC04259

AUSTRALIAN WAR MEMORIAL



July 1915 – 1:10,000 ANZAC and Turk trench diagram from air reconnaissance and air photos





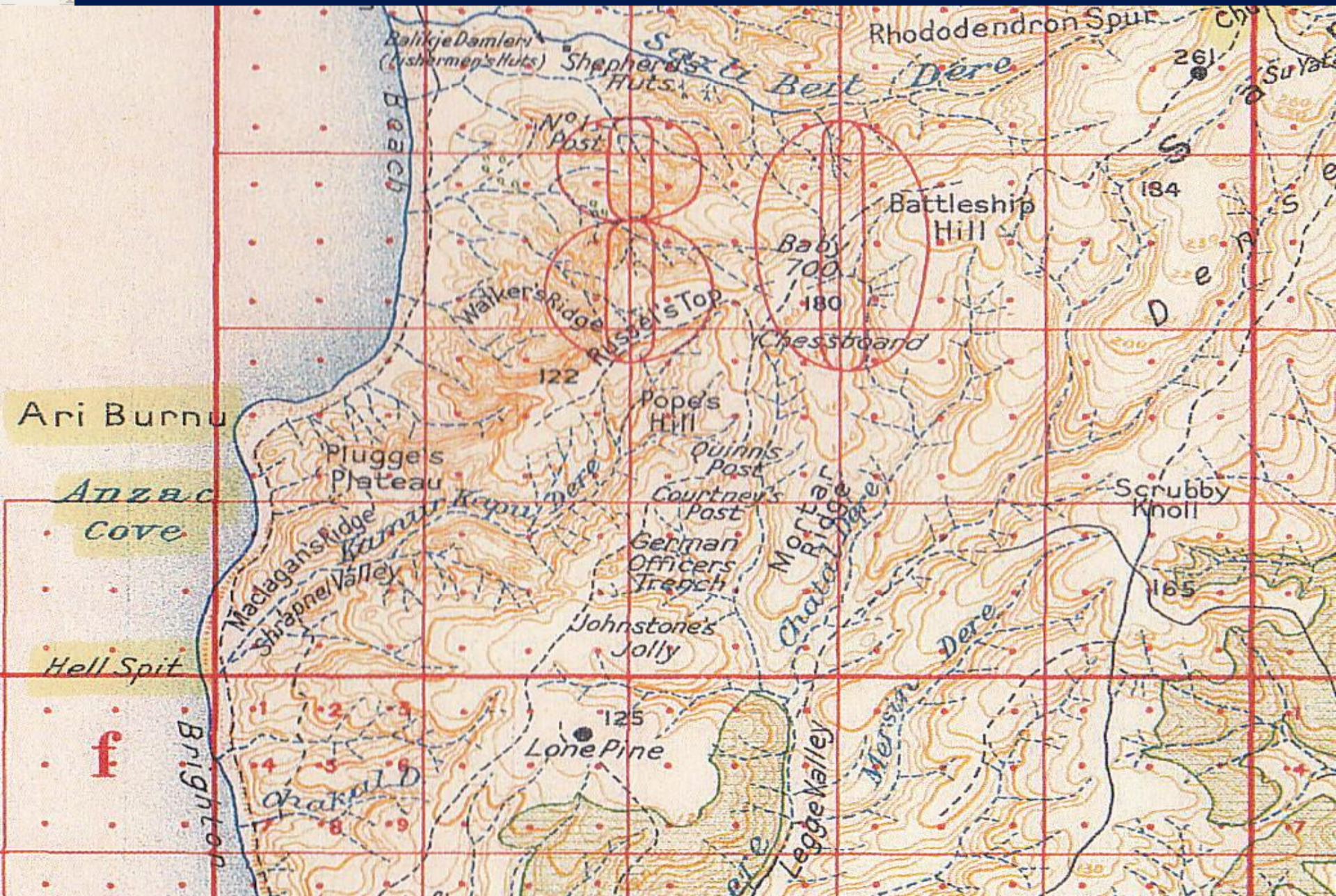
Timeline – survey and mapping

- 31st July - for the August offensives (Lone Pine, The Nek, Chunuk Bair, Hill 971, British landing at Suvla)
 - new operations map scale 1:20,000
 - approved by GHQ only after continuous urgings of Nugent and Nicholas
 - retained names in common use (eg Hill 971 although the revised height was 1000 feet)





New operations map – effective midnight 31st July





Timeline – survey and mapping

- September - December
 - ANZAC appoint one officer to coordinate survey and mapping, Major Newcombe, RE topographic surveyor
Officer Commanding 4th Aust Field Company
Engineers
 - survey assistance from Survey of Egypt
 - engineer and infantry unit surveyors and draughtsmen improve trench, tunnel and mining surveys and plans/maps
 - new trench maps series scale 1:1,800 (1 inch to 50 yards) on the campaign wide grid





Survey and mapping methods

- Engineer plans scale 1:180 (1 inch to 5 yards) to 1:360 (1 inch to 10 yards)
 - compass, surveyors tape and inclinometer surveys connected to surveys through the firing line
- Other special purpose diagrams at scale 1:720 (1 inch to 20 yards)
 - reduction of 1:360 plans



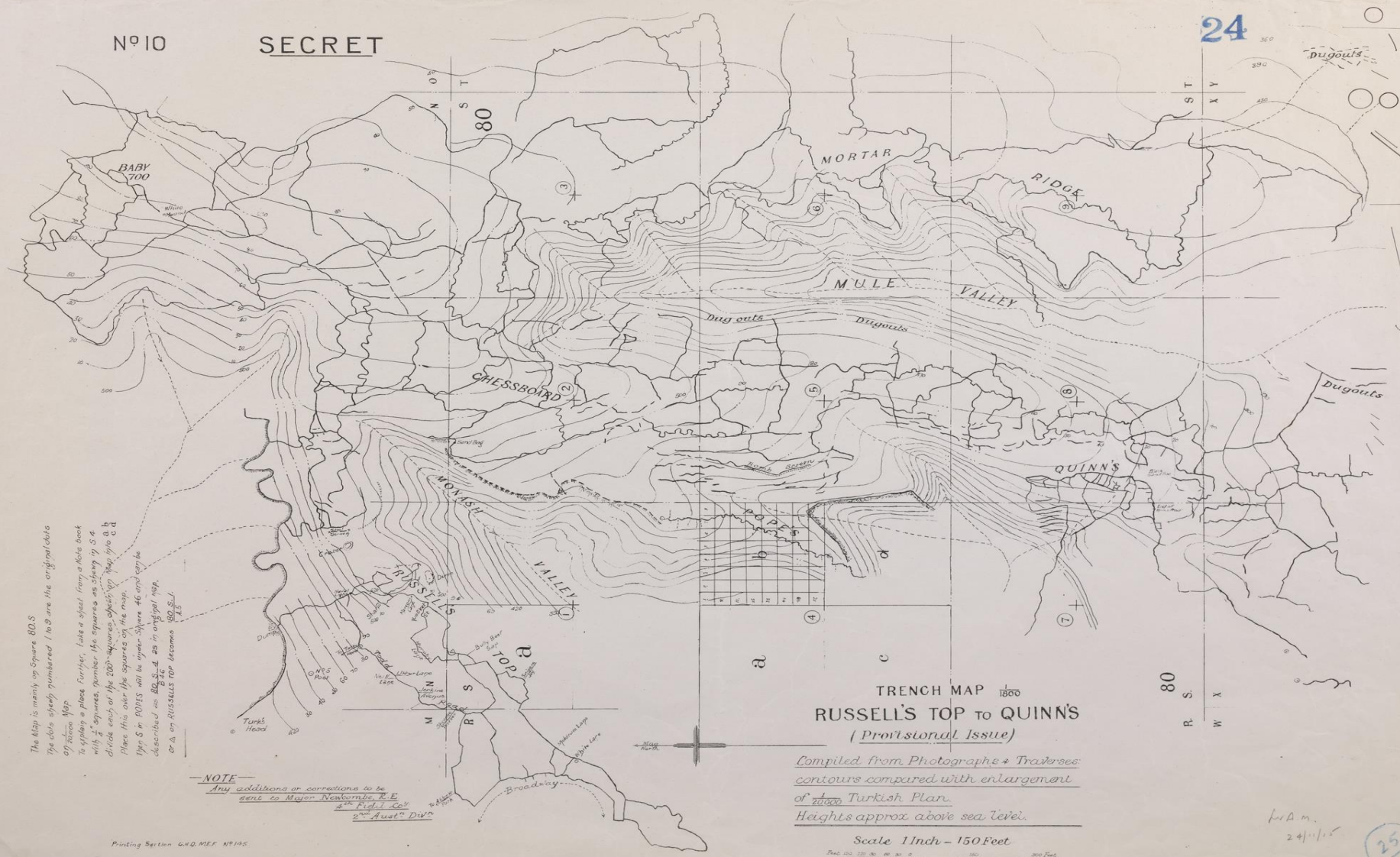


Survey and mapping methods

- Trench maps scale 1:1,800 (1 inch to 50 yards)
 - all larger scale plans brought up to date and reduced to 1:1,800
 - field surveys of ANZAC area connected to other Gallipoli areas
 - plane-table (small board and telescopic legs) intersections from triangulation and tacheometer points, of conspicuous features identifiable on air photography in the Turk area, sometimes using precision periscopes
 - 20 foot contours from Turk 10 metre contours, with 10 foot contour infill of Turk areas using Abney level
 - 1:20,000 operations map grid with supplementary grid to report coordinates direct to 12.5 yards
 - these methods became the standard and integrated with operations maps in France/Belgium 1916/1918



October – Trench Map series 1:1,800 – field survey and air photography





Mapping after the evacuation

- ANZAC evacuated by 20th December 1915
- Turkish War Office mapping 1916 – the scale 1:25,000 topographic maps were enlarged to produce a series at scale 1:5,000 for Turkish graves and memorials works and military history projects
- In February 1919 these 1:5,000 maps were offered to the Imperial War Graves Commission and to the Australian Gallipoli Mission then working on recording the history of the campaign – “to solve the riddles of Anzac” - Charles Bean



Conclusion

- not all available topographic information was used in the campaign planning, nor was the lack of it the cause of the campaign failure
- topographical information essential for ANZAC was collected through – collaboration with other Services and Allies, best use of available knowledge and skills, innovative survey methods, rapid adoption of new air photography technology, adaption of captured maps, organisational improvements
- *“Mapping the ANZAC sector was extremely difficult because of the rugged, tangled terrain and limited perimeter, any attempt at forward mapping using normal ground survey techniques would be greeted with ferocious sniper and shrapnel fire” Chasseaud and Doyle 2005*



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Total Gallipoli casualties: 129,000
dead all nations including 8,709
Australians and 2,701 New
Zealanders; 25,000 Australians and
New Zealanders wounded/prisoners

Lest We Forget