The North African Campaign was the US Army's entry into the European ground war. One of the assets the senior Allied leaders had was a British secret known as Ultra - the ability to read German's highest level radio transmissions. It is one thing to steal enemy information; it is another matter to make use of the information. A study of how the Allies made use of Ultra information at seven key points during the Campaign showed that, on the whole, very good use was made of the information. There were
Item 20. (Continued)

also errors. Between the good use and the poor use of Ultra, excellent lessons for future commanders in similar situations were displayed. The first lesson is that decrypts of this nature provide accurate RAW information that must be properly analyzed and compared with other sources. Second: Ultra information can give capabilities and probabilities but not intentions. Again analysis is the key. The last major lesson is that the best of intelligence is no substitute for good command strategy and tactics.
THE EFFECT OF ULTRA ON THE WORLD WAR II NORTH AFRICAN CAMPAIGN

INDIVIDUAL STUDY PROJECT

by

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The North African campaign was the US Army's entry into the European ground war. One of the assets the senior Allied leaders had was a British secret known as Ultra - the ability to read Germany's highest level radio transmissions. It is one thing to steal enemy information; it is another matter to make use of the information. A study of how the Allies made use of Ultra information at seven key points during the Campaign showed that, on the whole, very good use was made of the information. There were also errors. Between the good use and the poor use of Ultra, excellent lessons for future commanders in similar situations were displayed. The first lesson is that decrypts of this nature provide accurate RAW information that must be properly analyzed and compared with other sources. Second: Ultra information can give capabilities and probabilities but not intentions. Again analysis is the key. The last major lesson is that the best of intelligence is no substitute for good command strategy and tactics.
The spelling of the North African cities varied in the sources consulted i.e. Bizerta and Rizerte; Fondouk and Fondouck. In my text I have used the spelling I found most common. In the case of maps I made no attempt to change the mapmakers spelling.
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CHAPTER 1

BACKGROUND

Decisive battles have been lost, by land and by water, in the air and in debating with each other, because the adversary had a better method of keeping his correspondence.

On Sunday, 8 November 1942, US and British troops stormed ashore near Casablanca, Oran and Algiers in what was then French North Africa. The United States Army had entered the war against Germany and Italy on a 700 mile invasion front! Compared to the later campaigns in the European Theater this first American endeavor was small, only one corps committed to the later battle for Tunisia. But it was the first and, as such, it was a vital learning experience.

One of the elements the senior American commanders and intelligence officers had to learn was how to employ the British secret weapon, Ultra - the ability to read Germany's highest level radio transmissions. A secret so great that it was not entrusted to personnel below Army level and very few at higher level. This had been accomplished by devising a system to decipher the German encoder; a machine known as Enigma. A note of caution must be entered regarding Britain's capability. While Enigma coders were employed by the Germans for their high level radio transmissions, various agencies each had several different nets. Each net used different machine settings. Further, these settings were frequently changed. Thus the British, and later American helpers, had to break several codes. Since the settings were often changed, the codes had to be constantly rebroken. Thus Ultra was not a one time breakthrough but a never-ending cyclo of breaking and rebreaking the codes. It is one thing to read the enemy's mail; it is another to do something with the purloined information. Just how well the Allies used Ultra in the North
African Campaign is the purpose of this paper.

The study will focus on the campaign at seven critical points: (1) the invasion, (2) the race for Tunisia, (3) Operation SATIN, (4) the Battle of Kasserine, (5) the Battles of Mademine and Mareth, (6) interdicting enemy supplies and (7) the final Battle for Tunisia. The approach will be to determine Ultra's influence on the key decisions in each of these critical phases of the campaign. The study's conclusions will analyze all seven phases.

The reader will see that the more experienced British had more confidence in Ultra, a confidence that was usually, but not always justified. The Americans were a little more cautious, especially in the beginning. Ultra's record in this campaign was therefore vital to proving its worth later on. The reader will see that Ultra's record in North Africa was very good indeed. However, it was not flawless and part of the learning experience was the need to crosscheck information with other, less lofty intelligence sources. There was also the problem, for both Allies, to learn how to put the information to best advantage.
CHAPTER I

FOOTNOTES

CHAPTER 2

THE INVASION

Where Ultra Was Right But We Did Not Completely Listen

"All depends on the accuracy with which our ... leaders can foresee correctly the reactions of the French and Spanish forces."

Captain Harry C. Butcher, Naval Aid to Eisenhower

Afterwards it all looked so simple. At the time it was different. Called Operation Torch, the invasion of North Africa was a military gamble. The air distance from Casablanca to Oran is 460 miles; Oran to Algiers, 240 miles. Bone (now Annaba), the other landing site considered, is 260 miles east of Algiers (see Map 1). Thus, if any of the landing forces got into trouble they would be on their own making the operation subject to defeat in detail.

The choice of invasion sites was driven by three factors: (1) the amount naval support available, (2) the desire to seize Tunisia quickly, and (3) the American desire for a port on the Atlantic coast. The shipping problem had nothing to do with Ultra. The Allies calculated that they had sufficient shipping to support three landings and this capability was only reached by delaying the landings until 8 November 1942.²

Once it was determined that three landings could be made, Oran and Algiers were quickly accepted as two of the sites for a host of military and political reasons. The tug was over the third site. The British wanted to seize Bone near the Tunisian border. From there, they reasoned, Tunisia could be quickly overrun before the Germans and Italians could react. They argued seizing Tunisia and trapping the Axis forces in North Africa was the purpose of the whole operation. Ideally, the Allies would have loved to have gone straight into Tunisia but lack of air cover precluded such a bold stroke.³

The British Oran-Algiers-Bone plan was daring but offered the best chance of
MAP 1

THE INVASION

Department of Military Art and Engineering, USMA, Summaries of Selected Military Campaigns, p. 125. [Hereafter Summaries.]
taking Tunisia rapidly. It also had American advocates including Eisen-
hower, the American overall commander. Eisenhower feared November weather
conditions at Casablanca. 4

The American Chiefs of Staff would not agree to the Bone site
and overruled Eisenhower. Washington insisted on Casablanca-Oran-Algiers
for geographic and logistical reasons. All three British sites were inside
the narrow strait of Gibraltar. Neutral but Axis leaning Spain controlled
both sides of the Strait. Spanish guns aided by German air could quickly
close the Strait and neutralize the famous British held "Rock". Britain's
own commander at Gibraltar, LTG Sir F. Mason-MacFarlane conceded the
accuracy of the American argument. 5 With the Strait closed the Allied
supply line would be cut. On the other hand, Casablanca offered a good port
outside this chokepoint. It boasted a 16 foot wide all weather road to
Oran plus a 1500 ton-a-day-capacity railroad. 6 In summary, the decision
was between the military objective, Tunisia, which meant Bone or the secure
supply line which meant Casablanca. The debate keyed on the question of
Spanish neutrality!

The British were convinced Spain would stay neutral and their
rationale was Ultra intercepts. The British Joint Intelligence Sub-Committee
(JIC) of the Chiefs of Staff (COS)* issued its appreciation of the Spanish
situation in regard to a North African landing on 7 August 1942. Based on
Ultra information it pointed out that Spain's dependence on the Allies for
essential imports such as oil would force the Franco government to "resist
German pressure to move against Gibraltar unless it was backed by force." 7

*Official British abbreviations. When used, abbreviations will
be the ones of the country in question. The only exception will be military
rank. In all cases military rank will be current US abbreviations.
The report went on to say that such a force could only be formed by a time-consuming withdrawal of troops and equipment from Russia. Ultra had previously noted that German troops stationed on the Spanish frontier had been withdrawn. 8

While the American Eisenhower subscribed to the British plan, England’s united front became unraveled. The British Ambassador to Madrid wrote the COS on 29 August that Spain would be under "very great temptation" to close the Strait of Gibraltar if the action would cut the Allied life line. 9 The Chief of the Imperial General Staff weakened the British position when he indorsed the Ambassador’s position conceding it would be unsound to by-pass Morocco and questioned the availability of air cover at Bone. 10 Thus the die was cast; it would be Casablanca-Oran-Algiers. Logistics and a fear of Spanish intervention had triumphed over the objective, Ultra notwithstanding. In fact, the American Chiefs were so "scared to death that they would come down" that they would insist on a division being kept near the Spanish Moroccan border until the final weeks of the campaign. 11 This despite Ultra’s 13 November 1942 intercept of a German message that Hitler would not enter Spain. 12

The next pre-invasion problem was with the French in North Africa. The area was officially neutral under the control of Vichy, France. The naval forces were first rate. While the army and air forces had mostly obsolete equipment, they were still formidable. In Morocco, France had 55,000 troops with over 200 armored vehicles; in Algeria, 50,000 troops and 170 APV’s. 13 Against this array Patton would land approximately 34,000 men at Casablanca while the combined assault force for Oran-Algiers was but a little larger. 14 The 300-400 French aircraft were concentrated in Morocco with about half being Dewoitine 520's a plane superior to
carrier-borne Navy fighters. A cloak and dagger scheme to get French leaders to offer only taken resistance and then rejoin the Allies was being worked out through the US Envoy to Algiers, Mr. Robert Murphy. Mr. Murphy was under instructions not to reveal the landing date until the last moment but the fact that an invasion was coming had to be told early on. The danger was that one wrong Frenchman would learn the secret and tell the Germans. This was Ultra's challenge. Its monitoring of various German nets showed that Murphy selected his conspirators wisely - the French never told.

On the afternoon of 23 October 1942, US warships and transports steamed out of Hampton Roads, Virginia. During the next 24 hours over 100 ships moved out of harbors all along the East Coast for a rendezvous at sea. Similar scenes had been taking place in England since the 22d - TORCH was on!

And now the wait began. At listening centers around Europe and at the Bletchley Park nerve center, the keepers of the Ultra secret studied German transmissions to determine the key questions. Did the Germans know? Were they reacting?

The Ultra answer was loud and clear. The enemy did not know and when they found out they did not know how to react. The Western Task Force under ADM Hewit and MG Patton sailed right up to the coast of Morocco undetected!* In fact, the local French Commander initially refused to surrender on the grounds that "we had only a raiding party because they had not detected a large fleet." The forces entering the Mediterranean

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*On 5 November the Italian consul in Punta Delgada reported to his naval attache in Lisbon that an American convoy had passed the Azores heading towards Africa but there was no indication of destination or purpose.
had to be detected, the question was what would be the Axis reaction. Actually, they were spotted five times commencing on 31 October. There were also a series of reports originating from Portugal to Turkey. The projected landing sites they reported were just as diverse, from Dakar to Italy. Ultra gleefully reported on 7 November that the German high command had decided that the convoys were either going to resupply Malta or try a landing "in the Tripoli-Benghazi area or in Sardinia or Sicily." 

At his command post on Gibraltar, Eisenhower breathed a sigh of relief. The Allies had pulled it off and Ultra had told them!
CHAPTER 2

FOOTNOTES

1. Harry C. Butcher, CAPT, USN, My Three Years With Eisenhower, P. 82.

2. Ibid., P. 38.


4. Ibid., P. 79.

5. Butcher, PP. 59-60.

6. Ibid., P. 111.


8. Ibid., P. 277.

9. Ibid., P. 471.

10. Ibid.

11. Transcript of Interviews of Thomas T. Handy, GEN (Ret), Handy Papers, Section 4, P. 4.


16. Robert Murphy, Diplomat Among Warriors, PP. 104-107.

17. Transcript of Interview of David W. King, 24 February 1948. Mr. King was US Vice Counsel and agent-in-charge of intelligence at Casablanca in 1942. I do not believe he was privy to the Ultra secret but he was being told about the contents of German traffic regarding this matter.

18. Ibid.


20. Ibid., PP. 480-1
CHAPTER 3

THE RACE FOR TUNISIA

Where The Ultra System Errored But Corrected Itself

The chief requirement from intelligence in these stages was that it should predict enemy reactions to a major Allied initiative; this was an unaccustomed task and one in which reliability could not be guaranteed. Historian Francis H. Hinsley

Now that the Allies were ashore, their objective remained the cutting off of Rommel by taking Tunisia, the border of which lay 300 miles to the east. The plan called for taking Tunisia 28 days after the landings. It was keyed on getting there before the Germans and Italians could intervene in force. It was truly a race to see who could get there first with the most. British intelligence, based heavily on Ultra, told Eisenhower the Allies could. It was wrong.

Before discrediting the Ultra System, we should see how it went wrong. To do that we must first take a quick look at the British military bureaucracy. Ultra codebreaking was done by the Government Code and Cipher School (GCCS) headquartered in Bletchley Park. They determined who needed the decrypts and forwarded the raw information. High level analysis was done first by the Joint Intelligence Staff (JIS). JIS worked for the Joint Intelligence Sub-Committee (JIC) of the Chiefs of Staff (COS). JIC took the JIS input, massaged it and gave it to another COS element, the Joint Planning Staff (JPS) who published the British equivalent of operations orders/plans. In the terms of an American joint staff, JPS is the J-3 and 5; JIC, the J-2; and JIS, the Current Intelligence Analysis Section.

When TORCH was first envisioned, it called for an early October 1942 invasion. JIS wrote an intelligence estimate based on an October landing that stated the Germans had two options. The first was to write off North Africa because Germany/Italy could not intervene effectively, especially...
if we moved rapidly toward Tunisia. The second said Hitler might intervene any way on the grounds he had to do something. JIC sent two papers to JPS; one dated 3 August and one dated 7 August. The 3 August paper pointed out that after 1 November the Germans would have more troops available because of planned refitting withdrawal from the Russian front and the fact that their fear of a cross-channel invasion would be over for the winter. The 7 August paper was a rewrite of the JIS estimate. It picked the no intervention option from the JIS paper to emphasize. It placed German reinforcement capability at 14,000 lightly armed troops by air within two weeks and another complete division by sea in four to seven weeks. It was JPS that prepared and sent the official estimate to Eisenhower and the TORCH chain of command. JPS downgraded the two week force to 8-10,000 "of low category and without motor transport." It stated the seaborne division would take six to seven weeks. While the estimate stressed the need for speed in seizing Tunisia, there was no estimate of enemy capabilities should the invasion be delayed until November. More importantly, when the invasion date was changed, an event well known to the staff, no revised estimate was submitted. Further, a 6 October JIC estimate let stand the August appreciation. Thus the Allies chain of command went into the race for Tunisia with faulty intelligence based on good Ultra data - location, availability of troops, etc., but with slipshod analysis.

The Allies began the race on 9 November, the same day that Ultra reported that Marshal Petain had authorized the Axis to enter Tunisia in force. Once again in the business of providing raw data that was of value in itself, Ultra again started to payoff. On 11 November Ultra intercepted a Field Marshal Kesselring order for a German parachute battalion to seize Bone airfield. Reacting ahead of the enemy, US C-47's dropped British
paratroopers on this key all-weather air strip on the 12th.9

Most of the Ultra news, while accurate, was disquieting. The enemy buildup was going much faster than anticipated. GCCS reported the first tanks arrived by sea on 12 November.10 On the 20th, Ultra listed 10,000 troops and 50 tanks in country with 15,000 troops and 80 tanks enroute. Reports of 23/24 November revealed Tiger tanks had arrived.11 Whereas the experts had projected four or six to seven weeks for a seaborne operational division, the 10th Panzer entered the battle on 20 November.12

British LTG Kenneth A.N. Anderson led the Allied forces into Tunisia on 16 November. The following afternoon his men made first contact with a German-Italian tank column on the coast road 60 miles west of Tunis. For the next two weeks his mixed bag of American, British and French troops struggled against the enemy and the elements to reach Tunis. They came close. They drove within 15 miles of their goal before enemy air and the mud checked them. By the end of the month Anderson realized he had to pull back and reorganize.13

For the next several weeks Eisenhower talked about a renewed drive while the Axis buildup and the rains stymied his forces. Finally, on 24 December, Eisenhower bowed to the elements and called off the race.14

Ultra had provided good raw data but it had also provided a lesson. A lesson that two months hence would be written in blood further south. Ultra could provide the raw information but mortal man had to decide what it meant!
CHAPTER 3

FOOTNOTES

2. Harry C. Butcher, CAPT. USN, My Three Years With Eisenhower, P. 37.
3. Hinsley, P. 467.
4. Ibid., PP. 465-468.
5. Ibid.
6. Ibid., P. 468.
7. Ibid., P. 473.
8. Ibid., P. 484.
11. Ibid., P. 501.
12. Ibid.
There is considerable debate going on as to whether Rommel will defend or give up Tripoli... He may give it up... (and) come a-hellin' toward Tunisia.  
CAPT Harry C. Butcher, Naval Aid To Eisenhower

When General Eisenhower called off LTG Anderson's attack Christmas Eve 1942, he did not give up hope of taking offensive action somewhere. Southern Tunisia offered dry ground and weaker resistance. The Allied commander immediately planned to exploit the thinly held gap between von Arnim's Fifth Panzer Army opposite Anderson's First and Rommel's German-Italian Panzer Army currently being chased across Libya by Montgomery's British Eighth Army. The plan, initially outlined by Eisenhower on 28 December 1942, called for MG Lloyd R. Fredendall's newly formed US II Corps to attack in late January along the line Gafsa-Gabes-Sfax (see Map 2). The plan was not without its dangers. Fredendall's inexperienced 38,000 man force would be out on a limb with a supply line extending back to Tebessa. Anderson agreed to make secondary attacks in an endeavor to pin down GEN von Arnim.²

The operation thus hinged on two questions. Von Arnim's strength vis-a-vis Anderson's and Rommel's ability to shake loose from Montgomery. If von Arnim was strong enough to hold Anderson and at the same time bring strong forces to bear against Fredendall, the attack could be blunted. If Rommel could get free, he could put his well trained Afrika Korps against a force of novices in good tank country. Naturally, the Allies turned to Ultra for the answers.

Ultra disclosed Fifth Panzer Army's steady build up to approximately 75,000 troops by the end of January. Determining armor strength
presented a challenge. Between 17 December and 27 January, Fifth Panzer transmitted no tank summaries. However, strength was deduced from intercepts of daily unloading reports from the ports of Bizerta and Tunis. This approach told the Allies, Fifth Panzer had 200 tanks when a 28 January summary decrypt gave the true figure as 194 including 11 Tiger tanks. Such information had to increase Allied confidence in Bletchley Park's work. Anderson had ample strength to handle this force or, if von Arnim shifted large forces south, the British commander had the power to take advantage of the situation despite the weather.

Rommel's command was another matter. On 13 January 1943, Enigma discovered the German field marshal was going to send 21st Panzer Division to Sfax and two days later Ultra reported the division was on the move. This placed Eisenhower in a quandary. He wanted to launch II Corps but not against a strong force of veterans. After all, Fredendall's strike force was a multi-nation grouping of limited experience that had not worked together. Its main elements were US 1st Armored Division, US 26th Combat Team, 1st British Parachute Brigade (minus) and all the ill-equipped French Constantine Division. This force, with 213 medium tanks, should be able to handle one good, worn down German division but what if more arrived? The Combined Chiefs of Staff were at that time meeting at Casablanca. GEN Sir Alan Brook, Chief of the Imperial General Staff, questioned the risks involved. However, it was GEN Harold Alexander, Montgomery's superior, who dropped the bombshell. He stated that Eighth Army would be halting at Tripoli around the time II Corps was scheduled to attack. Eighth Army would be so low on fuel and supplies that not only would it be unable to pin down the enemy but might well be temporarily immobilized. Alexander did
have some encouraging news provided the port of Tripoli could be quickly reopened. In that case, Eighth Army would be at the southern border of Tunisia during the first week of March.9

Eisenhower cancelled Operation SATIN at a commander's conference on January 18.10 Just how much influence Ultra had on the decision is hard to tell. Ultra historian Francis H. Hinsley believes a lot,

(it) is safe to assume that this intelligence (21st Panzer) did much to persuade the conference to cancel II Corps projected advance. 11

Oddly, he cites the unclassified work of official US military historian George F. Howe as his source. Howe and Eisenhower, writing before Ultra was revealed, both attribute the decision to Alexander's report.12 It is my conclusion that Ultra played a confirming role but that it was Alexander's report that was the deciding factor. This conclusion is reinforced by the fact, as we will later see, when Montgomery was able to attack, Eisenhower launched II Corps on a similar mission.
CHAPTER IV

FOOTNOTES

1. Harry C. Butcher, CAPT. USN, My Three Years With Eisenhower, P. 236.

2. George F. Howe, Northwest Africa: Seizing the initiative in the West, PP. 350-252.


5. Hinsley, P. 579.

6. Howe, P. 352.

7. Ibid., fn, P. 354.

8. Ibid., P. 353.


11. Hinsley, P. 579

12. Ibid, fn 31; Howe, P. 353; Eisenhower; P. 136.
CHAPTER 5

KASSERINE

Where The Ultra System Failed

It was clear that at Kasserine the Americans had faced enemy forces superior to themselves both in numbers and experience.

MG Sir Kenneth Strong
Eisenhower's G-2 After Kasserine

"No one doubted that the enemy would attack again in central Tunisia; the only question was where." Yes, the question was where and on this question, the Ultra system failed. Because it failed, the Americans were surprised and beaten in the first stage of Kasserine. The Allies knew an attack was coming but faulty intelligence, based on Ultra, caused Allied forces to be deployed for an assault elsewhere. Thus, the German attack through Faid Pass on Sidi Bou Zid took the defenders by surprise.

Before looking at why the system failed, we must first view the overall situation and intelligence operations just before the battle (see Map 3). In a series of small scale operations throughout January 1943, GEN von Arnim gained control over the Eastern Dorsal, the last mountain barrier defending Tunisia. Many of these attacks were directed against the brave but poorly equipped French IX Corps. This caused US and British units to be sent to the French sector in a fire brigade role. While necessary, these moves especially hurt the new American divisions since it caused piecemeal commitment often under other than parent division control. On 25 January, Eisenhower attempted to improve command and control by placing IX Corps and US II Corps under LTG Anderson’s First Army. Meanwhile, Rommel pulled back into Tunisia and commenced to rehabilitate the old French Mareth Line. Montgomery, with the veteran British Eighth Army, was miles away unraveling his supply problems. Both sides were preparing for the critical next round and their intelligence staffs were studying their reports.
THE WAR IN NORTH AFRICA
AXIS INITIATIVE
Situation, 14 February 1943, and
Operations Since 1 January

MAP 3 SITUATION EVE OF KASSERINE

Vincent J. Esposito, West Point Atlas of American Wars,
Map 84b, World War II.
looking for clues as to enemy vulnerabilities and intentions.

Ultra was the Allied higher level radio intelligence system vectored against users of Enigma machines. A second radio-intelligence operation was aimed at lower level traffic. It was known simply as Y. In addition, there were the usual other sources; air reconnaissance, POW interrogation, patrol reports, etc. The job of directing the intelligence effort at Eisenhower's headquarters belonged to British Brigadier Mockler-Ferryman. He had previously been Chief of Intelligence at Headquarters, Home Forces, in England where he became introduced to Ultra.\(^4\) Mockler-Ferryman's two and half years with Ultra may have brought him to rely on it a little too much. In fairness to this officer, it must be noted that a series of events just before the battle hampered intelligence efforts. The reorganization that placed American and French units under First Army has already been mentioned. Allied air elements were also reorganized at this time. Finally, Eisenhower established his advanced command post at Constantine in mid-January. Its small size precluded bringing all intelligence personnel forward from Algiers. This split Mockler-Ferryman's staff.\(^5\)

Be that as it may, non-Ultra intelligence efforts were not stressed. For example, only two photo reconnaissance missions were flown over the II Corps area during the period 13 January - 14 February.\(^6\) While it is true that German air activity required escorts for such missions, with a known major enemy attack pending it is inconceivable that more were not flown. Especially in view of the fact that MG Fredenall was apparently requesting flights.\(^7\) It will be shown later that ground patrol efforts were ignored.

It was not that Ultra had stopped providing information that caused
the problem. On the contrary, Ultra was providing a significant number of intercepts. Despite initial problems, from December through January Bletchley Park was breaking Fifth Panzer Army's Enigma code at army level and above (Allied code Bullfinch). Up until the end of January '43, they were also breaking Rommel's counterpart settings (Chaffinch). A change in German organizations at the end of January caused difficulties with both Bullfinch and Chaffinch but this was offset by the early January cracking of the Rome-Panzer Army Five Enigma (Herring). Further, intelligence had broken nearly every German Air Force code in the area.

As early as 26 January the Allies had a 24 January Field Marshal Kesselring message ordering preparations for an attack towards Tebessa. A series of intercepts by 8 February told of Operation KUSKUCKSEI to be carried out by 10th and 21st Panzer Divisions attacking west and southwest of Kairouan, i.e. on a line Fondouk-Pichon (see Map 4). A secondary attack towards Gafsa was also being considered. An 11 February decrypt of 1 February message located 10th Panzer at Sbikha, 25 miles northwest of Kairouan. Directional finding equipment located this division even closer to Kairouan on the 12th. Mockler-Ferryman totally believed this information, so much that on 13 February, when Ultra notified Allied headquarters that the attack would commence the next day, he entered into the intelligence summary that the Germans would attempt "the capture of Ousseltia and Pichon and the passes west of the Ousseltia plain."

Before discussing whether Allied intelligence should have realized the attack was coming through Faid Pass and not Fondouk, let us first reconstruct what happened. I have been referring to von Arnim's and Rommel's forces because until after the battle they were two separate commands. As German generals they were under Field Marshal Kesselring in
Rome but the whole Axis African theater was controlled by the Italian Chiefs of Staff or Commando Supremo, also in Rome. Von Arnim desired to implement Operation KUSKUCKSEI but to do so he required Rommel's 21st Panzer. Rommel did not agree with the plan. To settle the argument Kesselring met with von Arnim and Rommel on 9 February. Out of this meeting two plans evolved. FRIHLINSWIND, an attack by 10th and 21st Panzer Divisions through Faid Pass to destroy the Americans at Sidi Bou Zid, and MORGELUFT, a follow-up attack again with 21st Panzer plus a battle group from Rommel's forces to capture Gafsa. 14

Now to the question of whether Allied intelligence should have detected a change in plan. No less an authority than British MG Sir Kenneth Strong, Mockler-Ferryman's replacement as G-2, states,

(a)ccurate reports of the strength and direction of the impending attack had been sent from the front but it appears that they had been discounted both at First Army Headquarters and Allied Force Headquarters, as being an exaggeration on the part of green and untired troops.

Ultra itself helped, reporting on 12 February that 21st Panzer was still in the Faid areas as of the 10th. However, Eisenhower's G-2 staff dismissed this on the grounds that it was probably a staging area before moving further north. 16 Allied intelligence appears to have been greatly influenced by German Air Force decrypts that planes were staging out of Kairouan to support the forthcoming offensive. In doing so, Mockler-Ferryman and his people overlooked the fact the Kairouan had the only good airfield to support either Foudouk or Faid. 17 The most telling reports that were ignored were those of BG Paul Robinett, Commander of CCB, 1st Armored Division. This leader of 1st Armor's most experienced force was stationed opposite Foudouk in the French sector. He repeatedly sent back reports in the days preceding the attack that his deep penetrating patrols were finding
no signs of an enemy attack. He dumbfounded Eisenhower with this information during an Eisenhower visit to his headquarters on 13 February, too late for Eisenhower to react.\textsuperscript{18}

Caught flat-footed by the location of the assault, units of 1st Armored Division took a pounding. MG Orlando Ward, because large portions of his division had been ordered elsewhere by higher headquarters, had only a meager reserve of "minor detachments of light tanks" initially available.\textsuperscript{19} Once again, accurate reports on the enemy were sent to Allied Headquarters but dismissed as the "exaggeration of green, untired troops."\textsuperscript{20}

Concurrently, Allied intelligence somehow overlooked Bletchley Park message CX/MSS/2118/T13 sent to Ultra personnel in Africa the evening of the 14th. This decrypt outlined Operations FRUHLINSWIND and MORGELUFT!\textsuperscript{21} Despite these clues the Allied high command elected as late as the evening of the 15th to hold the all important CCB opposite Fondouk.

February 15th was the real disaster day at Sidi Bou Zid. Because the high command persisted in its belief that Sidi Bou Zid was a feint, it allowed the commander of 1st Armored to counterattack with inadequate forces. MG Ward struck back with the weak elements of CCB that he could muster. He best describes what happened.

It was the failure of the American counter-attack which necessitated the retreat to Kasserine .... The question at once arises why so important an attack was made by a single tank battalion supported by a single battery of artillery. The answer is two fold (sic). Due to an erroneous estimate of the situation the main German attack was expected through Pichon-Fondouck (sic) Pass to the north rather than through Faid Pass, and Combat Command "B", which, at the time, was the most experienced unit of the 1st Armored Division, was deployed near Maktar to meet this expected attack. It only hastened to the south to cover the retreat of the Division after the battle at Sidi Bou Zid had been lost. Secondly, contrary to the expressed wishes of the Division Commander, the 1st Armored Division was deployed in a thin line over an 80-mile front.
Stunned, the Allies pulled back to the line Sbeitla-Feriana. On the 17th these positions were abandoned, 1st AD concentrating south of Tebessa.

At this point the Axis split command arrangements emerged to haunt them over what to do next. The resulting four corner radio debate between von Arnim, Rommel, Kesselring and Commando Supremo allowed Ultra to save the day. After taking Sbeitla, von Arnim sent 10th Panzer northeast toward Fondouk; 21st operated in the Sbeitla-Kasserine village area while Rommel brought the bulk of his panzer battle group north from Feriana to the entrance of Kasserine. Rommel wanted to push west towards the Allied supply base at Tebessa, then north towards Le Kef. This plan required von Arnim's 10th Panzer which the Fifth Panzer Army Commander would not yield. Rommel appealed to Kesselring. Ultra eavesdropped.

The debate took time giving the Allies a chance to rush reinforcements into the area. The 18th was squandered by the Axis. Late on the 18th, Rommel received permission to make the attack but the order, coming through Commando Supremo, specified an advance via the Thala-Sbiba to Le Kef with just a flank guard to be pushed toward Tebessa (see Map 5). He also got control of 10th Panzer but it was now a day's march away.

Rommel pushed his battle group into Kasserine Pass on the 19th. Its mission was to clear the pass for the 10th's drive on Thala. Alerted by the Y intercepts, the Americans were pushed back but still held portions of the pass. 21st Panzer attacked on the 19th towards Sbiba but was stopped late in the afternoon by a combined US-British force that had arrived the previous day.

With the 10th Panzer back Rommel prepared for an all out effort on the 20th, the same day GEN Harold Alexander assumed control of Allied
KEY
CS Comando Surpermo's Order
R Rommel's Plan

MAP 5
THE FOLLOW-UP PLANS
ground operations. Alexander had Ultra on his side. Although Commando Supremo's 18 February order would not reach him until midnight of the 20th, Ultra did provide sometime after midnight of 19/20 February the German Air Force orders to support the ground attack towards Le Kef on the 20th. Equally important, this order made no mention of an attempt to take Tebessa. With this information "there never was much doubt" where to concentrate. Deployed correctly at last, the Allies crushed the 10th and 21st Panzers' thrusts as well as the flank protection attack to the west during three days of fighting.

At 2130 hours on the 22nd, Commando Supremo transmitted to Rommel authorization to withdraw. Within brilliant speed England had the decrypt on the air to Africa at 0145 of the 23rd! However, despite prodding from Eisenhower, Fredendall, in a move that probably helped cost him his job, failed to take advantage of the situation and counterattack.

The battle was over. The Allies had won, but the finger pointing would go on for years. Eisenhower left little doubt as to whom he blamed for the initial failures. "The G-2 error was serious. After the battle I replaced the head of my intelligence organization at AFHQ."

The lesson was also clear. Ultra was still the great source of intelligence. There were also other sources and they too, had to be collected and evaluated!
FOOTNOTES


7. Howe, P. 400.

8. Hinsley, P. 582.


15. Strong, P. 111.


23. Esposito, Map 85: World War II.
27. Hinsley, P. 591.
28. Ibid.
29. Eisenhower, P. 143.
CHAPTER 6
MEDELINE AND MARETH
Where Montgomery Learned a Lesson In The Use Of Ultra Information

It is difficult not to feel that the authority of Ultra...combined with Montgomery's well-found contempt for the defensive will of the Italians to make him feel that an abrupt assault by his infantry, supported by generous gunfire, would "bounce" the...enemy into rapid retreat.

Historian Ronald Lewin

After Kasserine, there was a brief pause. The Allies awaited the Tunisian arrival of Montgomery's veteran British Eighth Army and the Axis reorganized. On 23 February 1943, a sick and soon to leave Africa, Field Marshal Rommel became overall commander of Axis troops; now called Army Group Afrika. Von Arnim finally came under his command. Italian GEN Messe resumed command of the Italian-German First Army facing the British Eighth, while the Afrika Korps became the control headquarters for the Army Group's reserve.

Rommel immediately issued orders for a spoiling attack against Montgomery before Eighth Army could mass in front of the Mareth Line. The plan directed First Army to make an encircling attack on 4 March with 10th, 15th and 21st Panzer Divisions at Medenine. But the Ultra decrypters were working rapidly. The two messages outlining the plan were sent by Rommel on 26 and 27 February and decrypts were in Eighth Army's hands by the 27th and 28th respectively.

At the time the British had only a division at Medenine with no plans to be there in force before the 7th of March. Armed with Ultra's warning, Montgomery rushed XXX Corps forward. When Rommel finally attacked on 6 March with 160 tanks and 200 guns, he was crushed "by 400 tanks, 350 field guns and 470 anti-tank guns." Three days later, a sick Erwin Rommel
left Africa never to return. Von Arnim moved into the top slot.  

Montgomery now prepared to smash the Mareth Line while Allied intelligence had fits. British prisoners and captured documents from the Madenine battle revealed to the Germans that Montgomery had received advance details of the attack. However, they soon breathed a sigh of relief as Ultra intercepts showed that the enemy had no idea Enigma had been compromised.

The Mareth Line was a twenty-five mile defensive belt originally built by the French but improved by the Axis. Among the improvements was converting the Zigaou Wadi into an anti-tank ditch and adding several minefields. Its flanks were anchored on the left at the Gulf of Gabes and on the right by the Matmata Hills (see Map 6). There were two defects in the position. First, it could be turned by a pass through the southern hills at El Hamma, forty miles to the rear. Second, there was the growing danger that the revitalized US II Corps, now under the soon to be famous LTG George Patton, would crash through the Eastern Dorsal to the Gulf of Gabes and cut off the defenders from the Fifth Panzer Army. General Messe's defense was probably the best available under the circumstances. He placed his Italian infantry in the line with German infantry units dispersed among them as stiffening units. The mobile reserve consisted of the German Afrika Korps (10th, 15th and 21st Panzer) and the Italian Centauro Division. Ultra reported before the battle that these four divisions had only 196 tanks versus Montgomery's 623. To make the odds even better, Patton struck three days ahead of Eighth Army to pin down 10th and Centauro Divisions.

Montgomery had a wealth of Ultra and other information available when planning his 20 March attack including the French Garrison Engineer at
Summaries, p. 126. NOTE: GEN Messe commanded Axis troops in the battle.
Mareth. In fact, "Montgomery was better informed about Mareth than the Germans about the Maginot Line in 1940."\textsuperscript{1} And well he should have been, the most detailed report Rommel sent while in Africa was a description of the Mareth Line dispositions. Naturally, Ultra was listening.\textsuperscript{12} Incredibly, Montgomery elected to make the main attack a frontal assault while the flanking attack through the pass was the supporting effort. As fellow Britisher Ronald Lewin writes in disgust,\textsuperscript{13}

\begin{quote}
(I)t remains for his definitive biographer to unravel what nobody as yet has satisfactorily explained - why, with this wealth of knowledge, Montgomery chose to begin with direct assault in the northern defenses of the Line itself instead of pressing from the start with the flanking movement far inland on which he was compelled to fall back when the frontal attack, ill-conceived, ill-prepared and ill-fated, ended in total failure.
\end{quote}

The 23rd was a day of bad and good news for the Eighth Army Commander. He had to acknowledge that XXX Corps' frontal assault was beaten. The good news was from Ultra. It had clearly established that the enemy 10th and Centauro Divisions where fully committed fighting US II Corps' drive on Maknassy. That night the British leader changed his plan and ordered heavy reinforcements to LTG Freyberg's flanking corps. On the evening of the 25th Ultra was reporting Axis retreat orders. At 1345 the next day, Ultra broke a von Arnim transmission saying he could not stand against the British at the Akarit position because of pressure from Patton.\textsuperscript{14} On the 28th Ultra disclosed the 15th and 21st Panzer Divisions were falling back from El Hamma. The same day decrypts revealed a desperate enemy supply situation, one stating "a few hours might make all the difference."\textsuperscript{15} Armed with this wonderful intelligence the victor of "El Alamein again did the unexpected - he stopped for a week to tidy things up and resupply.\textsuperscript{16} When he renewed the advance on 6 April GEN Messe skillfully withdrew to the
Ultra had saved Eighth Army from an embarrassing setback by warning Montgomery of the Medenine attack. It, and other sources, had given the British leader the enemy defensive plan for Mareth on a platter. Yet, despite this information - or maybe because of it - Montgomery attempted a reenactment of El Alamein rather than use his mobility advantage in a flanking attack against the Axis rear. A mobility advantage which was enhanced by an American attack to pin down half the enemy's armored divisions. Finally, with Ultra reporting the enemy hanging on the ropes from supply shortages, the British commander paused and let his opponent survive the round. The lesson is clear! Intelligence can only provide the information, the commander must know what to do with it.
CHAPTER 6
FOOTNOTES


3. Ibid., P. 594.

4. Ibid., P. 595.


6. Hinsley, P. 596.


8. Hinsley, P. 598.

9. Howe, P. 528.

10. Esposito.


15. Ibid., P. 602.

16. Ibid., P. 603.

17. Ibid.
CHAPTER 7

INTERDICTING AXIS SUPPLIES

Where Ultra Scored Its Greatest Success

"It was a hand-to-mouth situation with a partly filled hand at that."

Historian George F. Howe on the Axis supply situation

Before looking at the final battle of the campaign it is important to look behind the lines to see Ultra's greatest service and the key reason for the Axis defeat - the inability to sustain the forces in the field. As the Allies closed in on Tunisia from two directions in early 1943, the Axis took stock of just what would be required to hold their bridgehead. GEN von Arnim calculated that an active, offensive minded defense would necessitate 140,000 tons of supplies per month. COL Heigel, Chief of Supplies and Transportation for the Army Group, set the minimum monthly total at 86,000 tons. Factually, the largest total tonnage to reach Africa in any one month was 36,326 for January 1943. The Axis were literally starved out of Africa thanks to Ultra.

Right after losing the race for Tunisia, Eisenhower turned his attention to the supply war, reporting on 6 January 1943, that unless Axis supplies "can be materially reduced the situation both here and in Eighth Army area will deteriorate without a doubt." A month later he stated "the termination of the Tunisian campaign depends on the extent to which we can disrupt enemy lines of sea communications."

Sea lines were definitely the key. Even though the Germans committed their huge six engine Me 323 "Gigants" to ferry supplies, air shipments comprised less than one sixth of all tonnage. The main sea shipments came out of the large Italian port of Naples with Palermo the secondary staging area.

January 1943 saw the first major effort at interdiction. It was the
month Twelfth Air Force organized a special force for attacks on shipping. However, bad weather that month limited effectiveness. The Royal Navy was checked by the German Air Force and extensive minefields. 7

Things picked up in February when Ultra gave the Allies the necessary information to sink the THOSHEIMER, the enemy's largest fuel tanker. 8 Still the overall results for this month were also poor. 9

It was not that Ultra was not providing the necessary information. It was. Ultra "gave advance notice of the movements and routes of almost all the ships." 10 It also provided ship's cargoes and daily unloading reports from the ports of Bizerta and Tunis. 11

In March the Allied Headquarters received a British specialist staff on Axis supplies. 12 This facilitated the campaign. Although the Germans received 29,267 tons of supplies, 13 the price Ultra information extracted was fifty percent of their shipping versus only twenty percent in February. 14 More importantly, the specialist staff had found the enemy's Achilles heel - fuel. By judicious target selection based on Ultra only thirty percent of Krieg's fuel shipments reached Africa. 15 Desperate, the Germans turned to air resupply bringing a quarter of March's supplies by plane. 16

April brought the crusher. Operation FLAX used Ultra information to go after Axis cargo planes. Before the month was out the Germans lost 157 of 263 aircraft 17 including 16 of 21 Me 323's in one day. 18 The operation also destroyed better than 250 Italian transports. 19 Facing destruction of his air transport fleet, Air Marshial Goering, on 25 April, ordered the cessation of daylight flights. This order saved planes but it also greatly reduced Tunisian air deliveries.

Sea deliveries also fell to Ultra's excellent schedule reports.
The Germans reported 29 ships sunk and two damaged for the month of April. Hinsley gives an excellent example of Ultra's value in this phase of the battle; Ultra having disclosed details of a five-ship convoy that was due in Tunisia on 6 April, . . . one of the ships (a tanker carrying 2000 tons of fuel) was sunk before the convoy had collected, a second ship was torpedoed soon after the convoy sailed, two others were blown up off Bizerta, and the arrival in Bizerta of the single survivor was delayed till 17 April.

The April totals for the Axis were grim. Of 34,206 tons sent by sea, 18,690 made it while 15,516 went down. For the entire month, the Germans received a total of 23,017 tons by air and sea and the Italians an additional 6,216 tons. Not even half of the minimum requirement!

The above figures tell only part of April's story. Enigma transmission decrypts showed that the average daily unloadings at the Tunisia ports dropped from 1300 tons at the start to 700 at month's end. The fuel situation became especially acute because the Allies were concentrating on it. Only thirty percent made it. On 10 April, Ultra reported a Field Marshal Kesselring message stating the African command required 400 tons of fuel a day, it received an average of 271 tons. On April 29th the German Air Force reported via Enigma that it could no longer operate its Tunisian radar because no one could supply the required 35 gallons of gas a day. Another intercept of the same day revealed Army Group Afrika's ground units had enough fuel to move distances varying between six and 37 miles. It was at this time that von Arnim warned that his command faced "a complete supply breakdown" if the situation did not immediately improve. On 4 May, Ultra reported that the enemy supply situation had deteriorated to the point that Army Group could no longer assure delivery of basic supplies to the troops.

It was on 4 May that British destroyers, tipped by Ultra, sank
the CAMP BASSO off Cape Bon while the supply ship was enroute back to Italy. It was the last Axis supply ship to land supplies in Tunisia. The following day Ultra provided the information which allowed the US Air Force to sink the SAN ANTONIO, the last enemy supply ship to try to reach Tunisia. 34

The Allies commenced their final drive in North Africa secure in the knowledge that their highly vaunted enemy was already logistically beaten and virtually unable to use the German Army's best tactic, maneuver. It was Ultra that had provided the information to cause the dilemma.
CHAPTER 7
FOOTNOTES

2. Ibid., PP. 511-513.
3. Ibid., P. 682.
5. Ibid.
6. Howe, P. 682.
8. Ibid.
9. Ibid.
10. Ibid., P. 575
11. Ibid., PP. 575-576.
12. Ibid., P. 574.
13. Howe, P. 682.
15. Ibid.
17. Hinsley, P. 609
20. Ibid.
22. Hinsley, P. 608
23. Howe, P. 682.
24. Ibid.
26. Ibid., PPL 607-608.
27. Ibid., P. 607.
28. Ibid., P 609.
29. Howe.
31. Ibid.
32. Ibid., PPL 611-612.
33. Ibid., P. 612.
34. Ibid.
CHAPTER 8

THE FINAL DRIVE

Where Ultra Provided Reassuring Information

"As the enemy braced himself to meet a resumption of the Allied attack, he found his capabilities seriously reduced."

Historian George F. Howe

The Allied plan for the final drive called for the main attack by Anderson's First British Army with supporting attacks by Montgomery's British Eighth, now Bradley's US II Corps and Koeltz's French XIX Corps (see Map 7). (Bradley and Koeltz were operating under Alexander's Army Group at this point.)

Montgomery struck first on 19 April 1943, at Enfidaville. Not only did this attack have to be abandoned after ten days of frustration but, as Ultra soon reported, it failed to pin down the armor formations supporting Messe's First German-Italian Army. Ultra advised GEN Alexander, Eisenhower's ground commander, that these divisions were massing with other units for a spoiling attack on First Army. However, forewarned by Ultra and other intelligence sources, this German 22 April spoiler was checked within hours by Anderson's troops. The rest of the Allies launched their assaults on 22 and 23 April. Some gains were made especially in Bradley's II Corps, but nowhere did the Axis line break.

By the end of the month Alexander realized that he would have to strengthen his First Army if he was to achieve a decisive breakthrough. He revised his plan transferring British 4th Indian Infantry and 7th Armored Divisions from Montgomery to Anderson. The movement started on 30 April. His plan was to have IX Corps assault with these divisions plus two others on a tight 3000 meter front. Although German radio intelligence detected the transfer of the
MAP 7

THE FINAL DRIVE

Summaries, p. 127.
divisions, the Ultra-created fuel shortage made the information meaningless. Von Arnim tried to shift forces opposite the breakthrough area but a lack of fuel made the attempt only partially successful. Thus, behind a 600-gun artillery preparation and the most devastating air attack yet launched in Africa, the British IX Corps ... rolled forward at 0330, 6 May. Axis forces collapsed along the entire front. The question now was, would the enemy try a Dunkirk at Cape Bon. Ultra quickly supplied the needed intelligence. Bletchley Park was able to provide the British Navy with the location of Axis minefields in the area. This permitted the Royal Navy to throw a strong destroyer cordon around the area. An 8 May decrypt of a message from the Japanese Ambassador to Italy disclosed that Mussolini himself told the Ambassador that an evacuation was not possible. Other decrypts of the same date further revealed that many troops were withdrawing on foot for lack of fuel. Thus, the ability to quickly retreat into Cape Bon and organize a new line of defense did not exist. This information allowed Allied Headquarters to confidently state on 11 May, "a major withdrawal into Cape Bon is not indicated." In fact, Enigma decrypts showed that a mere 632 officers and men escaped the debacle. Around 275,000 surrendered. Ultra had underestimated the size of the enemy by close to 75,000. This almost caused a POW feeding problem for the Allies. Ironically, Ultra indirectly solved the problem. Because Blechley Park decrypts had allowed the Allies to successfully interdict Axis fuel shipments, large quantities of enemy rations were still standing on the docks for want of transportation. These stocks enabled the victors to feed their prisoners.
CHAPTER 8

FOOTNOTES


3. Ibid.


8. Ibid.

9. Ibid.

10. Ibid.

11. Ibid., P. 614.

CHAPTER 9

CONCLUSIONS

"Ultra Had An Enormous Hunting-Ground"

Historian Ronald Lewin

We have looked at the use of Ultra in seven key periods during the North African Campaign. Thus, the study is not all encompassing even for this campaign. However, since these were important phases during the time when operations were under American overall control much can be learned. These lessons should be of value to commanders in future wars where intelligence is able to break the enemy's high level codes.

First let us review Ultra's and the Allies' box score, if you will, in the seven operations. Ultra's greatest success was in the logistics struggle. It was vital to choking the enemy out of Africa. It gave Allied intelligence just about everything the chain of command needed to know. The supplies and equipment that had been delivered. The items that were critically short. The ship cargoes and sailing schedules.

Running a close second was the invasion itself. Ultra assured the Allies the enemy did not know about the invasion beforehand. When the Mediterranean convoys were spotted, Ultra again put Allied minds at ease by discovering the Axis misjudged the probable destinations.

At the other end of the spectrum is Kasserine, Ultra missed the point of attack because the enemy changed the plan at the last moment. Even so, Ultra correctly predicted the date of attack and the objective of the follow-up attack.

The commander of British Eighth Army at Medenine and Mareth is a special case. In both battles Ultra gave excellent information. At Medenine its advance warning allowed Montgomery to reinforce in time to win a smashing victory. At Mareth it provided detailed information regarding
the strength and location of the Axis forces including the fact that German units were intermingled with Italian formations to stiffen them. Yet the Allied commander received an initial bloody nose because he chose a frontal assault anyway.

Ultra confirmed Alexander's report that Rommel would give Montgomery the slip and be back in Tunisia in time to deal with II Corps' attack toward Sfax. This caused Eisenhower to cancel Operations SATIN. An attack that could have caused the inexperienced American troops more damage than Kasserine.

The race for Tunisia showed some of the limits of Ultra. In the absence of decrypts telling enemy plans it could not predict enemy intentions. Once the enemy started broadcasting his moves, Ultra clearly portrayed the Axis build-up.

In the final battle for Tunisia, Ultra was almost an interested observer. By already winning the supply battle it had reduced Army Group Afrika to a hopeless skeleton. Nothing could save the Germans and Italians from collapse. Still it provided reassuring intelligence regarding the evacuation fears.

The first lesson learned is that decrypts provide accurate RAW information. It must be properly analyzed and cross-checked against other sources. At Kasserine the Allies were surprised because this was not done. The Ultra intercepts were accurate at the time they were sent but the enemy commanders changed their plan and intelligence ignored clear warnings that the point of attack was different from where Ultra had indicated. It is interesting to note that Operation SATIN was correctly called off when Ultra reported veteran Afrika Korps troops were already in the attack area and Alexander confirmed that Montgomery could not keep the pressure on Rommel.
The second lesson is that the raw information of the Ultra type can give capabilities and probabilities BUT not intentions. The reports depicting the enemy's steadily worsening logistical situation, especially fuel, indicated he was incapable of undertaking large scale attacks over a long distance. Ultra could not, in the absence of decrypts so stating, tell whether the enemy would mass his limited resources and gamble he could get away with a bold move. The decision to try to hold Tunisia in November 1942, the 19-22 February 1943 attacks towards Le Kef and the famous 1944 Ardennes Offensive are prime examples. Intentions can only be guessed at by ever vigilant intelligence staffs using all the information from all available sources.

The third lesson is that the best of intelligence cannot be a substitute for good command strategy and tactics. The tactics of Mareth have been summarized. In this light, even the decision to land at Casablanca does not appear too wrong. True, the odds were great that the Germans would not have entered Spain. A landing at Bone probably would have ended the campaign sooner. Still, the invasion was a calculated risk with mainly green US troops as it was. Going for Bone would have meant another day's sailing in the Mediterranean. Who knows, another day and another convoy may have caused Kesselring or somewone else to see the light and start counter-actions or put effective pressure on the French to resist.

No single element wins or loses a war but some contribute more than others to the victory or defeat. In North Africa, Ultra made a very great contribution and the Allies, who, far more often than not, made effective use of its information. Thus, the inescapable conclusion - the people of Bletchley Park made a huge contribution to the victory without ever seeing the battlefield!
CHAPTER 9

FOOTNOTES

SELECTED BIBLIOGRAPHY

1. Books


Department of Military Art and Engineering, USMA. *Summaries of Selected Military Campaigns*. West Point, NY: 1956.


2. Papers/Transcripts of Interviews


3. Reports

National Security Agency. Reports received by US War Department on use of Ultra in European Theatre World War II (SRH-037). Fort Meade, MD.

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